REVISED January 19, 2018

Exhibit BGM-5r
Dockets UE-170485/UG-170486
Witness: Bradley G. Mullins

BEFORE THE

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION Complainant, v. AVISTA CORPORATION d/b/a AVISTA UTILITIES Respondent.	)	DOCKETS UE-170485 and UG-170486 (*Consolidated*)

EXHIBIT BGM-5r

ELECTRIC ATTRITION STUDY

WASHINGTON ELECTRIC ATTRITION ALLOWANCE STUDY

Year 1: Calculation of Attrition Allowance Revenue Requirement (May 1, 2018) **(* Revised 1/19/2018)**
Test Period: Twelve Months Ending December 31, 2016
(000's of Dollars)

Line No.	Description	(a) Attrition Allowance Balances	(b) Revenue Growth Factor	(c) Attrition Allowance Study Results	
1	2018 Rate Base	$ 1,397,320	1.010260	$ 1,383,129	
2	Proposed Rate of Return			7.08%	
3	Net Operating Income Requirement			$ 97,926	
4	2018 Net Operating Income (at 2017 rates)	$ 104,255	1.010260	$ 103,197	*
5	2018 Rate of Return (at 2017 rates)			7.46%	*
6	2018 Net Operating Income Deficiency (Surplus)			$ (5,271)	*
7	Gross-up Conversion Factor			0.61941	
8	2018 Attrition Allowance Revenue Deficiency			**$ (8,509)**	*
9	2018 Total General Business Revenues (at 2017 rates)			$ 497,184	
10	Attrition Allowance 2018 Revenue Requirement			$ 488,675	*
11	Percent Revenue Requirement Change (vs. 2017)			**-1.71%**	*

WASHINGTON ELECTRIC ATTRITION ALLOWANCE STUDY

Year 2: Calculation of Attrition Allowance Revenue Requirement (May 1, 2019) **(* Revised 1/19/2018)**
Test Period: Twelve Months Ending December 31, 2016
(000's of Dollars)

Line No.	Description	(a) Attrition Allowance Balances	(b) Revenue Growth Factor	(c) Attrition Allowance Study Results	
1	2019 Rate Base	$ 1,397,320	1.014664	$ 1,377,126	
2	Proposed Rate of Return			7.08%	
3	Net Operating Income Requirement			$ 97,501	
4	2019 Net Operating Income (at 2017 rates)	$ 104,210	1.014664	$ 102,704	*
5	2019 Rate of Return (at 2017 rates)			7.46%	*
6	2019 Net Operating Income Deficiency (Surplus)			$ (5,203)	*
7	Gross-up Conversion Factor			0.61941	
8	2019 Attrition Allowance Revenue Deficiency (at 2017 Rates)			$ (8,399)	*
10	Less: 2018 Incremental Revenues	$ 8,509	1.00440	$ 8,546	*
11	Incremental 2019 Revenues			**$ 147.470**	*
12	2019 Total General Business Revenues (at 2018 rates)			$ 499,351	*
10	Attrition Allowance 2019 Revenue Requirement			$ 499,498	*
11	Percent Revenue Requirement Change (vs. 2018)			**0.03%**	

WASHINGTON ELECTRIC ATTRITION ALLOWANCE STUDY

Year 3: Calculation of Attrition Allowance Revenue Requirement (May 1, 2020) **(* Revised 1/19/2018)**
Test Period: Twelve Months Ending December 31, 2016
(000's of Dollars)

Line No.	Description	(a) Attrition Allowance Balances	(b) Revenue Growth Factor	(c) Attrition Allowance Study Results	
1	2020 Rate Base	$ 1,397,320	1.019068	$ 1,371,175	
2	Proposed Rate of Return			7.08%	
3	Net Operating Income Requirement			$ 97,079	
4	2020 Net Operating Income (at 2017 rates)	$ 104,164	1.019068	$ 102,215	*
5	2020 Rate of Return (at 2017 rates)			7.45%	*
6	2020 Net Operating Income Deficiency (Surplus)			$ (5,136)	*
7	Gross-up Conversion Factor			0.61941	
8	2020 Attrition Allowance Revenue Deficiency (at 2017 rates)			$ (8,292)	*
10	Less: 2018 Incremental Revenues	$ 8,509	1.00881	$ 8,584	
11	Less: 2019 Incremental Revenues	$ (147)	1.00440	$ (148)	*
12	Incremental 2020 Revenues			**$ 143.821**	*
13	2020 Total General Business Revenues (at 2019 rates)			$ 493,082	*
14	Attrition Allowance 2020 Revenue Requirement			$ 493,226	*
15	Percent Revenue Requirement Change (vs. 2019)			**0.03%**	

Cost of Capital
Washington - Electric System
Twelve Months Ending December 31, 2016

Capital Structure

Component	Capital Structure	Cost	Weighted Cost
Total Debt	51.60%	5.19%	2.68%
Common	48.40%	9.10%	4.40%
Total	100.00%		7.08%

Base Escalation Years	1
Include Depreciation	0
Include O&M	0

Revenue Conversion Factor
Washington - Electric System
Twelve Months Ending December 31, 2016

Line No.	Description	*Factor*
1	**Revenues**	*1.000000*
	Expense:	
2	Uncollectibles	0.006578
3	Commission Fees	0.002000
4	Washington Excise Tax	0.038479
5	Total Expense	*0.047057*
6	Net Operating Income Before FIT	*0.952943*
7	Federal Income Tax @ 35%	*0.333530*
8	**REVENUE CONVERSION FACTOR**	*0.619413*

2018 ELECTRIC ATTRITION ALLOWANCE REVENUE REQUIREMENT CALCULATION (Revised 1/19/2018, Highlighted in Yellow)

Line No.	$000s / Description	Establish Attrition Base: 2016 Restated Results (BGM-3)	(less) Normalized Net Power Supply Cost	Deferred Dr/Cr; Reg. Amorts & Misc Adjs	Pro Forma Revenue Normalization Adjustment	2016 AMA Escalation Base	Esc. Rate Yrs: 2.33	Escalation Amounts: Non-Energy Cost Escalation Amount	Trended 2017 Non-Energy Cost	Add Back Power Costs: Current Authorized Net Energy Cost	Power Cost Incremental Load	Results: 2018 Results
		[A]	[B]	[C]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[O]
	REVENUES											
1	Total General Business	$ 492,413			$ (1,225)	$ 491,188	1.03%	$ 5,040	$ 496,228			496,228
2	Interdepartmental Sales	946			-	946	1.03%	10	956			956
3	Sales for Resale	57,325	(78,098)		-	(20,773)				57,325	-	57,325
4	Subtotal: Sales of Electricity	550,684	(78,098)		(1,225)	471,361		5,050	497,184	57,325	-	554,509
5	Other Revenue	17,116	(67,173)		$ (3,887)	(53,944)	0.00%	-	(53,944)	10,225	-	(43,719)
6	Total Electric Revenue	567,800	(145,271)	-	(5,112)	417,417		5,050	443,240	67,550	-	510,790
7	EXPENSES											
8	Production and Transmission											
9	Operating Expenses	134,600	(125,275)	(248)	-	9,077	0.00%	-	9,077	79,036	-	88,113
10	Purchased Power	77,131	(96,773)		-	(19,642)		-	(19,642)	77,131	-	57,489
11	Depreciation/Amortization	26,677			-	26,677	0.00%	-	26,677	-		26,677
12	Regulatory Amortization	4,705		(1,393)	-	3,312	0.00%	-	3,312	-		3,312
13	Taxes	14,990			-	14,990	12.28%	1,841	16,831			16,831
14	Subtotal: Production and Transmission	258,103	(222,048)	(1,641)	-	34,414		1,841	36,255	156,167	-	192,422
15	Distribution											
16	Operating Expenses	21,418			-	21,418	0.00%	-	21,418			21,418
17	Depreciation/Amortization	27,819			-	27,819	0.00%	-	27,819			27,819
18	Regulatory Amortizations	-				-		-	-			-
19	Taxes	26,951			(47)	26,904	10.49%	2,821	29,725		-	29,725
20	Subtotal: Distribution	76,188	-	-	(47)	76,141		2,821	78,962	-	-	78,962
21	Customer Accounting	13,021			(8)	13,013	9.88%	1,286	14,299		-	14,299
22	Customer Service & Information	1,406			-	1,406	0.00%	-	1,406			1,406
23	Sales Expenses	-			-	-		-	-			-
24	Administrative & General											
25	Operating Expenses	48,989			(2)	48,987	0.00%	-	48,987		-	48,987
26	Depreciation/Amortization	23,877			-	23,877	0.00%	-	23,877			23,877
27	Taxes	-			-	-		-	-			-
28	Subtotal: A&G	72,866	-	-	(2)	72,864		-	72,864	-	-	72,864
29	Total Electric Expenses	421,584	(222,048)	(1,641)	(57)	197,838		5,947	203,785	156,167	-	359,952
30	OPERATING INCOME BEFORE FIT	146,216	76,777	1,641	(5,055)	219,579		(898)	239,454	(88,617)	-	150,837

2018 ELECTRIC ATTRITION ALLOWANCE REVENUE REQUIREMENT CALCULATION (Revised 1/19/2018, Highlighted in Yellow)

Line No.	$000s / Description	Establish Attrition Base: 2016 Restated Results (BGM-3) [A]	(less) Normalized Net Power Supply Cost [B]	Deferred Dr/Cr; Reg. Amorts & Misc Adjs [C]	Pro Forma Revenue Normalization Adjustment [F]	2016 AMA Escalation Base [G]	Esc. Rate [H]	Escalation Amounts: Non-Energy Cost Escalation Amount [G]*[H]=[I] [I]	Trended 2017 Non-Energy Cost [G]+[I]=[J] [J]	Add Back Power Costs: Current Authorized Net Energy Cost [K]	Power Cost Incremental Load [L]	Results: 2018 Results: [J]+[K]+[L] = [O] [O]
31	Federal Income Tax											
32	Current Accrual	$ (27,873)	$ 40,184	$ 574	$ (1,769)	$ 11,116		$ (314)	$ 10,802	$ (31,016)	$ -	$ (20,214)
33	Debt Interest	21	-	50	-	71		(140)	(69)			(69)
34	Deferred Income Taxes	67,191		-	-	67,191		-	67,191			67,191
35	Amortized ITC - Noxon	(326)		-	-	(326)		-	(326)			(326)
36	NET OPERATING INCOME	107,203	36,593	1,017	(3,286)	141,527		(443)	161,856	(57,601)	-	104,255
37	RATE BASE											
38	Plant in Service											
39	Intangible	$156,057		-	-	156,057	9.62%	15,017	171,074			171,074
40	Production	832,833		-	-	832,833	1.65%	13,778	846,611			846,611
41	Transmission	430,613		-	-	430,613	9.65%	41,538	472,151			472,151
42	Distribution	970,455		-	-	970,455	11.77%	114,189	1,084,644			1,084,644
43	General	233,266		-	-	233,266	19.32%	45,057	278,323			278,323
44	Subtotal: Plant in Service	2,623,224	-	-	-	2,623,224		229,578	2,852,802			2,852,802
45	Accumulated Depreciation and Amortization											-
46	Intangible	(30,914)		-	-	(30,914)	9.62%	(2,975)	(33,889)			(33,889)
47	Production	(351,625)		-	-	(351,625)	1.65%	(5,817)	(357,442)			(357,442)
48	Transmission	(135,624)		-	-	(135,624)	9.65%	(13,083)	(148,707)			(148,707)
49	Distribution	(295,383)		-	-	(295,383)	11.77%	(34,756)	(330,139)			(330,139)
50	General	(80,093)		-	-	(80,093)	19.32%	(15,471)	(95,564)			(95,564)
51	Subtotal: Accumulated Depreciation and Amortization	(893,639)	-	-	-	(893,639)		(72,101)	(965,740)			(965,740)
52	Net Plant	1,729,585	-	-	-	1,729,585		157,477	1,887,062			1,887,062
53	Deferred Taxes	(353,901)		-	-	(353,901)	30.13%	(106,619)	(460,520)			(460,520)
54	Net Plant After Deferred taxes	1,375,684	-	-	-	1,375,684		50,858	1,426,542			1,426,542
55	Deferred Debits and Credits	4,568		(5,346)		(778)		-	(778)			(778)
56	Working Capital	62,474		-		62,474		-	62,474			62,474
57	Less: Plant Not Used and Useful											(90,917)
58	TOTAL RATE BASE	1,442,726	-	(5,346)	-	1,437,380		50,858	1,488,238			1,397,320
59	RATE OF RETURN	7.43%										**7.46%**
60	**ATTRITION ALLOWANCE REVENUE REQUIREMENT**											
61	Proposed Rate of Return											**7.08%**
62	Return on Plant in Service at Proposed Rate											$ 98,930
63	Operating Income Deficiency											$ (5,325)
64	Revenue Conversion Factor											0.61941
65	Revenue Requirement											$ (8,597)
66	Revenue Growth Factor											1.010260
67	Attrition Allowance Revenue Requirement											**$ (8,510)**

2019 ELECTRIC ATTRITION ALLOWANCE REVENUE REQUIREMENT CALCULATION (Revised 1/19/2018, Highlighted in Yellow)

Line No.	$000s / Description	Establish Attrition Base: 2016 Restated Results (BGM-3)	(less) Normalized Net Power Supply Cost	Deferred Dr/Cr; Reg. Amorts & Misc Adjs	Pro Forma Revenue Normalization Adjustment	2016 AMA Escalation Base	Esc. Rate Yrs: 3.33	Escalation Amounts: Non-Energy Cost Escalation Amount	Trended 2017 Non-Energy Cost	Add Back Power Costs: Current Authorized Net Energy Cost	Power Cost Incremental Load	Results: 2019 Results
		[A]	[B]	[C]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[O]
	REVENUES											
1	Total General Business	$ 492,413			$ (1,225)	$ 491,188	1.47%	$ 7,203	$ 498,391			498,391
2	Interdepartmental Sales	946			-	946	1.47%	14	960			960
3	Sales for Resale	57,325	(78,098)		-	(20,773)				57,325	-	57,325
4	Subtotal: Sales of Electricity	550,684	(78,098)		(1,225)	471,361		7,217	499,351	57,325	-	556,676
5	Other Revenue	17,116	(67,173)		$ (3,887)	(53,944)	0.00%	-	(53,944)	10,225	-	(43,719)
6	Total Electric Revenue	567,800	(145,271)	-	(5,112)	417,417		7,217	445,407	67,550	-	512,957
7	EXPENSES											
8	Production and Transmission											
9	Operating Expenses	134,600	(125,275)	(248)	-	9,077	0.00%	-	9,077	79,036	-	88,113
10	Purchased Power	77,131	(96,773)		-	(19,642)		-	(19,642)	77,131	-	57,489
11	Depreciation/Amortization	26,677			-	26,677	0.00%	-	26,677	-		26,677
12	Regulatory Amortization	4,705		(1,393)	-	3,312	0.00%	-	3,312	-		3,312
13	Taxes	14,990			-	14,990	17.55%	2,631	17,621			17,621
14	Subtotal: Production and Transmission	258,103	(222,048)	(1,641)	-	34,414		2,631	37,045	156,167	-	193,212
15	Distribution											
16	Operating Expenses	21,418			-	21,418	0.00%	-	21,418			21,418
17	Depreciation/Amortization	27,819			-	27,819	0.00%	-	27,819			27,819
18	Regulatory Amortizations	-				-		-	-			-
19	Taxes	26,951			(47)	26,904	14.99%	4,032	30,936		-	30,936
20	Subtotal: Distribution	76,188	-	-	(47)	76,141		4,032	80,173	-	-	80,173
21	Customer Accounting	13,021			(8)	13,013	14.12%	1,837	14,850		-	14,850
22	Customer Service & Information	1,406			-	1,406	0.00%	-	1,406			1,406
23	Sales Expenses	-			-	-		-	-			-
24	Administrative & General											
25	Operating Expenses	48,989			(2)	48,987	0.00%	-	48,987		-	48,987
26	Depreciation/Amortization	23,877			-	23,877	0.00%	-	23,877			23,877
27	Taxes	-			-	-		-	-			-
28	Subtotal: A&G	72,866	-	-	(2)	72,864		-	72,864	-	-	72,864
29	Total Electric Expenses	421,584	(222,048)	(1,641)	(57)	197,838		8,500	206,338	156,167	-	362,505
30	OPERATING INCOME BEFORE FIT	146,216	76,777	1,641	(5,055)	219,579		(1,283)	239,069	(88,617)	-	150,452

2019 ELECTRIC ATTRITION ALLOWANCE REVENUE REQUIREMENT CALCULATION (Revised 1/19/2018, Highlighted in Yellow)

Line No.	$000s / Description	Establish Attrition Base: 2016 Restated Results (BGM-3) [A]	(less) Normalized Net Power Supply Cost [B]	Deferred Dr/Cr; Reg. Amorts & Misc Adjs [C]	Pro Forma Revenue Normalization Adjustment [F]	2016 AMA Escalation Base [G]	Esc. Rate [H]	Escalation Amounts: Non-Energy Cost Escalation Amount [G]*[H]=[I] [I]	Trended 2017 Non-Energy Cost [G]+[I]=[J] [J]	Add Back Power Costs: Current Authorized Net Energy Cost [K]	Power Cost Incremental Load [L]	Results: 2019 Results: [J]+[K]+[L] = [O] [O]
31	Federal Income Tax											
32	Current Accrual	$ (27,873)	$ 40,184	$ 574	$ (1,769)	$ 11,116		$ (449)	$ 10,667	$ (31,016)	$ -	$ (20,349)
33	Debt Interest	21	-	50	-	71		(345)	(274)			(274)
34	Deferred Income Taxes	67,191		-	-	67,191		-	67,191			67,191
35	Amortized ITC - Noxon	(326)		-	-	(326)		-	(326)			(326)
36	NET OPERATING INCOME	107,203	36,593	1,017	(3,286)	141,527		(489)	161,811	(57,601)	-	104,210
37	RATE BASE											
38	Plant in Service											
39	Intangible	$156,057		-	-	156,057	13.75%	21,462	177,519			177,519
40	Production	832,833		-	-	832,833	2.36%	19,691	852,524			852,524
41	Transmission	430,613		-	-	430,613	13.79%	59,365	489,978			489,978
42	Distribution	970,455		-	-	970,455	16.82%	163,197	1,133,652			1,133,652
43	General	233,266		-	-	233,266	27.61%	64,395	297,661			297,661
44	Subtotal: Plant in Service	2,623,224	-	-	-	2,623,224		328,109	2,951,333			2,951,333
45	Accumulated Depreciation and Amortization											-
46	Intangible	(30,914)		-	-	(30,914)	13.75%	(4,252)	(35,166)			(35,166)
47	Production	(351,625)		-	-	(351,625)	2.36%	(8,313)	(359,938)			(359,938)
48	Transmission	(135,624)		-	-	(135,624)	13.79%	(18,697)	(154,321)			(154,321)
49	Distribution	(295,383)		-	-	(295,383)	16.82%	(49,673)	(345,056)			(345,056)
50	General	(80,093)		-	-	(80,093)	27.61%	(22,110)	(102,203)			(102,203)
51	Subtotal: Accumulated Depreciation and Amortization	(893,639)	-	-	-	(893,639)		(103,046)	(996,685)			(996,685)
52	Net Plant	1,729,585	-	-	-	1,729,585		225,064	1,954,649			1,954,649
53	Deferred Taxes	(353,901)		-	-	(353,901)	43.06%	(152,379)	(506,280)			(506,280)
54	Net Plant After Deferred taxes	1,375,684	-	-	-	1,375,684		72,685	1,448,369			1,448,369
55	Deferred Debits and Credits	4,568		(5,346)		(778)		-	(778)			(778)
56	Working Capital	62,474		-		62,474		-	62,474			62,474
57	Less: Plant Not Used and Useful											(112,744)
58	TOTAL RATE BASE	1,442,726	-	(5,346)	-	1,437,380		72,685	1,510,065			1,397,320
59	RATE OF RETURN	7.43%										**7.46%**
60	**ATTRITION ALLOWANCE REVENUE REQUIREMENT**											
61	Proposed Rate of Return											**7.08%**
62	Return on Plant in Service at Proposed Rate											$ 98,930
63	Operating Income Deficiency											$ (5,279)
64	Revenue Conversion Factor											0.61941
65	Revenue Requirement											$ (8,523)
66	Revenue Growth Factor											1.014664
67	Attrition Allowance Revenue Requirement											**$ (8,400)**

2020 ELECTRIC ATTRITION ALLOWANCE REVENUE REQUIREMENT CALCULATION (Revised 1/19/2018, Highlighted in Yellow)

Line No.	$000s / Description	Establish Attrition Base: 2016 Restated Results (BGM-3)	(less) Normalized Net Power Supply Cost	Deferred Dr/Cr; Reg. Amorts & Misc Adjs	Pro Forma Revenue Normalization Adjustment	2016 AMA Escalation Base	Esc. Rate Yrs: 4.33	Escalation Amounts: Non-Energy Cost Escalation Amount	Trended 2017 Non-Energy Cost	Add Back Power Costs: Current Authorized Net Energy Cost	Power Cost Incremental Load	Results: 2020 Results
		[A]	[B]	[C]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[O]
	REVENUES											
1	Total General Business	$ 492,413			$ (1,225)	$ 491,188	1.91%	$ 9,366	$ 500,554			500,554
2	Interdepartmental Sales	946			-	946	1.91%	18	964			964
3	Sales for Resale	57,325	(78,098)		-	(20,773)				57,325	-	57,325
4	Subtotal: Sales of Electricity	550,684	(78,098)		(1,225)	471,361		9,384	501,518	57,325	-	558,843
5	Other Revenue	17,116	(67,173)		$ (3,887)	(53,944)	0.00%	-	(53,944)	10,225	-	(43,719)
6	Total Electric Revenue	567,800	(145,271)	-	(5,112)	417,417		9,384	447,574	67,550	-	515,124
7	EXPENSES											
8	Production and Transmission											
9	Operating Expenses	134,600	(125,275)	(248)	-	9,077	0.00%	-	9,077	79,036	-	88,113
10	Purchased Power	77,131	(96,773)		-	(19,642)		-	(19,642)	77,131	-	57,489
11	Depreciation/Amortization	26,677			-	26,677	0.00%	-	26,677	-		26,677
12	Regulatory Amortization	4,705		(1,393)	-	3,312	0.00%	-	3,312	-		3,312
13	Taxes	14,990			-	14,990	22.82%	3,421	18,411			18,411
14	Subtotal: Production and Transmission	258,103	(222,048)	(1,641)	-	34,414		3,421	37,835	156,167	-	194,002
15	Distribution											
16	Operating Expenses	21,418			-	21,418	0.00%	-	21,418			21,418
17	Depreciation/Amortization	27,819			-	27,819	0.00%	-	27,819			27,819
18	Regulatory Amortizations	-				-		-	-			-
19	Taxes	26,951			(47)	26,904	19.49%	5,242	32,146		-	32,146
20	Subtotal: Distribution	76,188	-	-	(47)	76,141		5,242	81,383	-	-	81,383
21	Customer Accounting	13,021			(8)	13,013	18.36%	2,389	15,402		-	15,402
22	Customer Service & Information	1,406			-	1,406	0.00%	-	1,406			1,406
23	Sales Expenses	-			-	-		-	-			-
24	Administrative & General											
25	Operating Expenses	48,989			(2)	48,987	0.00%	-	48,987		-	48,987
26	Depreciation/Amortization	23,877			-	23,877	0.00%	-	23,877			23,877
27	Taxes	-			-	-		-	-			-
28	Subtotal: A&G	72,866	-	-	(2)	72,864		-	72,864	-	-	72,864
29	Total Electric Expenses	421,584	(222,048)	(1,641)	(57)	197,838		11,052	208,890	156,167	-	365,057
30	OPERATING INCOME BEFORE FIT	146,216	76,777	1,641	(5,055)	219,579		(1,668)	238,684	(88,617)	-	150,067

2018 ELECTRIC ATTRITION ALLOWANCE REVENUE REQUIREMENT CALCULATION (Revised 1/19/2018, Highlighted in Yellow)

Line No.	$000s / Description	Establish Attrition Base: 2016 Restated Results (BGM-3) [A]	(less) Normalized Net Power Supply Cost [B]	Deferred Dr/Cr; Reg. Amorts & Misc Adjs [C]	Pro Forma Revenue Normalization Adjustment [F]	2016 AMA Escalation Base [G]	Esc. Rate [H]	Escalation Amounts: Non-Energy Cost Escalation Amount [G]*[H]=[I] [I]	Trended 2017 Non-Energy Cost [G]+[I]=[J] [J]	Add Back Power Costs: Current Authorized Net Energy Cost [K]	Power Cost Incremental Load [L]	Results: 2020 Results: [J]+[K]+[L] = [O] [O]
31	Federal Income Tax											
32	Current Accrual	$ (27,873)	$ 40,184	$ 574	$ (1,769)	$ 11,116		$ (584)	$ 10,533	$ (31,016)	$ -	$ (20,483)
33	Debt Interest	21	-	50	-	71		(549)	(479)			(479)
34	Deferred Income Taxes	67,191		-	-	67,191		-	67,191			67,191
35	Amortized ITC - Noxon	(326)		-	-	(326)		-	(326)			(326)
36	NET OPERATING INCOME	107,203	36,593	1,017	(3,286)	141,527		(535)	161,765	(57,601)	-	104,164
37	RATE BASE											
38	Plant in Service											
39	Intangible	$156,057		-	-	156,057	17.88%	27,908	183,965			183,965
40	Production	832,833		-	-	832,833	3.07%	25,604	858,437			858,437
41	Transmission	430,613		-	-	430,613	17.93%	77,193	507,806			507,806
42	Distribution	970,455		-	-	970,455	21.87%	212,205	1,182,660			1,182,660
43	General	233,266		-	-	233,266	35.90%	83,732	316,998			316,998
44	Subtotal: Plant in Service	2,623,224	-	-	-	2,623,224		426,641	3,049,865			3,049,865
45	Accumulated Depreciation and Amortization											-
46	Intangible	(30,914)		-	-	(30,914)	17.88%	(5,528)	(36,442)			(36,442)
47	Production	(351,625)		-	-	(351,625)	3.07%	(10,810)	(362,435)			(362,435)
48	Transmission	(135,624)		-	-	(135,624)	17.93%	(24,312)	(159,936)			(159,936)
49	Distribution	(295,383)		-	-	(295,383)	21.87%	(64,590)	(359,973)			(359,973)
50	General	(80,093)		-	-	(80,093)	35.90%	(28,750)	(108,843)			(108,843)
51	Subtotal: Accumulated Depreciation and Amortization	(893,639)	-	-	-	(893,639)		(133,990)	(1,027,629)			(1,027,629)
52	Net Plant	1,729,585	-	-	-	1,729,585		292,650	2,022,235			2,022,235
53	Deferred Taxes	(353,901)		-	-	(353,901)	55.99%	(198,138)	(552,039)			(552,039)
54	Net Plant After Deferred taxes	1,375,684	-	-	-	1,375,684		94,512	1,470,196			1,470,196
55	Deferred Debits and Credits	4,568		(5,346)		(778)		-	(778)			(778)
56	Working Capital	62,474		-		62,474		-	62,474			62,474
57	Less: Plant Not Used and Useful											(134,572)
58	TOTAL RATE BASE	1,442,726	-	(5,346)	-	1,437,380		94,512	1,531,892			1,397,320
59	RATE OF RETURN	7.43%										**7.45%**
60	**ATTRITION ALLOWANCE REVENUE REQUIREMENT**											
61	Proposed Rate of Return											**7.08%**
62	Return on Plant in Service at Proposed Rate											$ 98,930
63	Operating Income Deficiency											$ (5,234)
64	Revenue Conversion Factor											0.61941
65	Revenue Requirement											$ (8,450)
66	Revenue Growth Factor											1.019068
67	Attrition Allowance Revenue Requirement											**$ (8,291)**

2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Production & Transmission O&M Expense**

Selected trend period highlighted green and displayed as green dots in figure

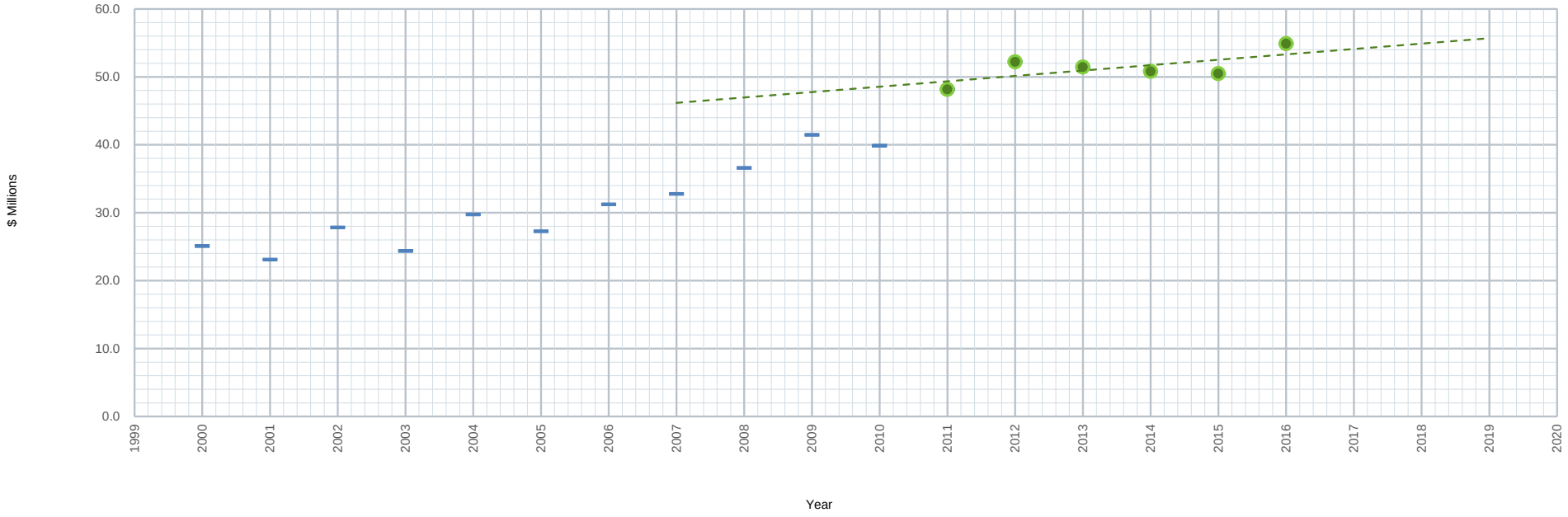
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
P/T Operations Expense	78,721	47,157	101,475	132,098	101,545	105,374	104,260	102,890	117,123	87,599	147,107	145,634	131,795	143,904	120,307	140,485	136,385
Less: Power Supply	(53,596)	(24,026)	(73,610)	(107,691)	(71,757)	(78,074)	(72,978)	(70,079)	(80,476)	(46,101)	(107,172)	(97,441)	(79,551)	(92,437)	(69,474)	(89,988)	(81,468)
Total Production & Transmission O&M Expense	**25,125**	**23,131**	**27,865**	**24,407**	**29,788**	**27,300**	**31,282**	**32,811**	**36,647**	**41,498**	**39,935**	**48,193**	**52,244**	**51,467**	**50,833**	**50,497**	**54,917**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	793
R -Squared of Best-Fit	0.44889
Annual Growth Rate (% of 2015)	1.44%
1-year Growth Rate	**1.44%**

Narrative

Over the most recent five years (2011 through 2016), production and transmission O&M has remained relatively flat. The recent trend appears to be similar to the trend that was experienced over the period 2000 through 2005, in which little to no growth in production and transmission O&M was experienced. Between 2010 and 2011, there was an unexplained increase in production and transmission O&M expense. The Company has not explained the cause of this increase, and therefore, it is not known whether a similar increase should be expected in future periods. Because the cause of the increase in production and transmission O&M between 2010 and 2011 is not known and appears to be related to a one-time event, I viewed it to be less appropriate to include that increase in the historical trend calculation. In addition, the recent flat trend in this category of expense is an indication that the Company has been able to control this expense and should be able to control it in future periods. Finally, low inflationary pressure is another reason why it is probably a better assumption to assume that this category of cost will remain relative stable into the future. Thus, my model calculates the trend using the most recent five-year period, in which production and transmission O&M expenses have increased slightly.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Production & Transmission Depreciation Expense**

Selected trend period highlighted green and displayed as green dots in figure

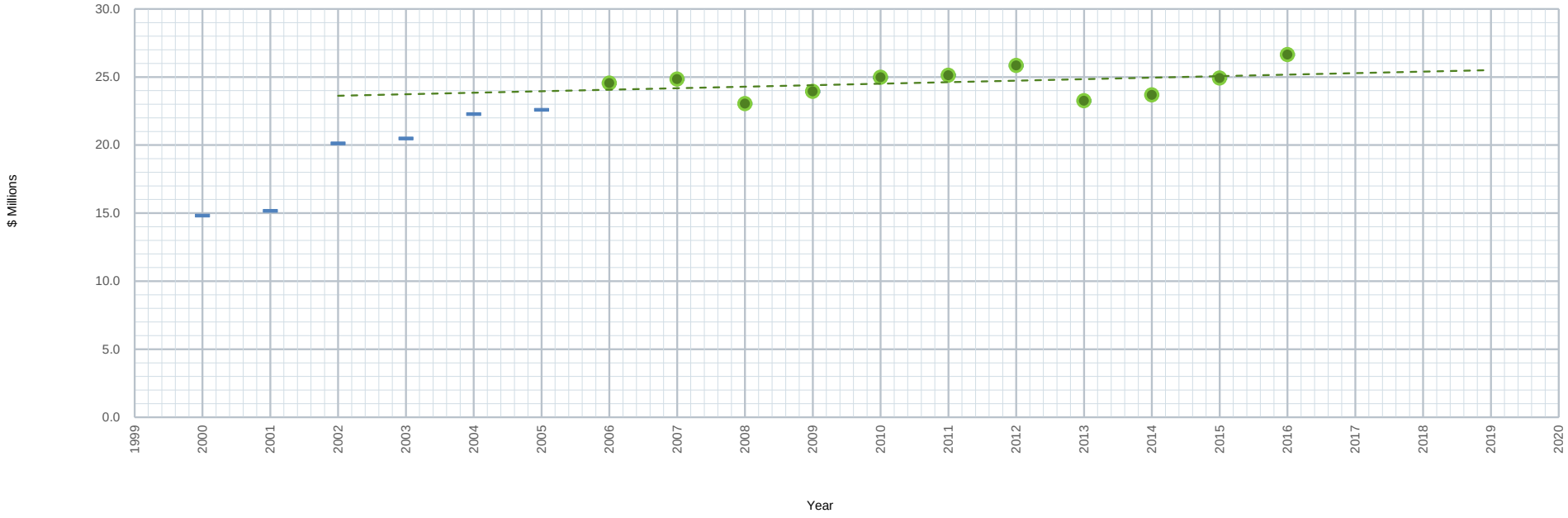
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
P/T Depreciation (per CBR)	(3,114)	9,152	13,808	14,915	22,879	13,812	25,745	21,795	22,000	22,266	22,129	25,158	25,872	23,284	23,715	24,947	26,677
Less: Reg. Amort. in Hist. P/T Depr.	17,964	6,050	6,349	5,608	(567)	8,817	(1,168)	3,082	1,076	1,703	2,879						
Total Production & Transmission Depreciation Expense	**14,850**	**15,202**	**20,157**	**20,523**	**22,312**	**22,629**	**24,577**	**24,877**	**23,076**	**23,969**	**25,008**	**25,158**	**25,872**	**23,284**	**23,715**	**24,947**	**26,677**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	111
R -Squared of Best-Fit	0.11436
Annual Growth Rate (% of 2015)	0.42%
1-year Growth Rate	**0.42%**

Narrative

Production and transmission depreciation expense have been markedly flat over the period 2006 to the present. Accordingly, my model uses the escalation period of 2006 through 2016.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Production & Transmission Taxes Other Than Income Taxes**

Selected trend period highlighted green and displayed as green dots in figure

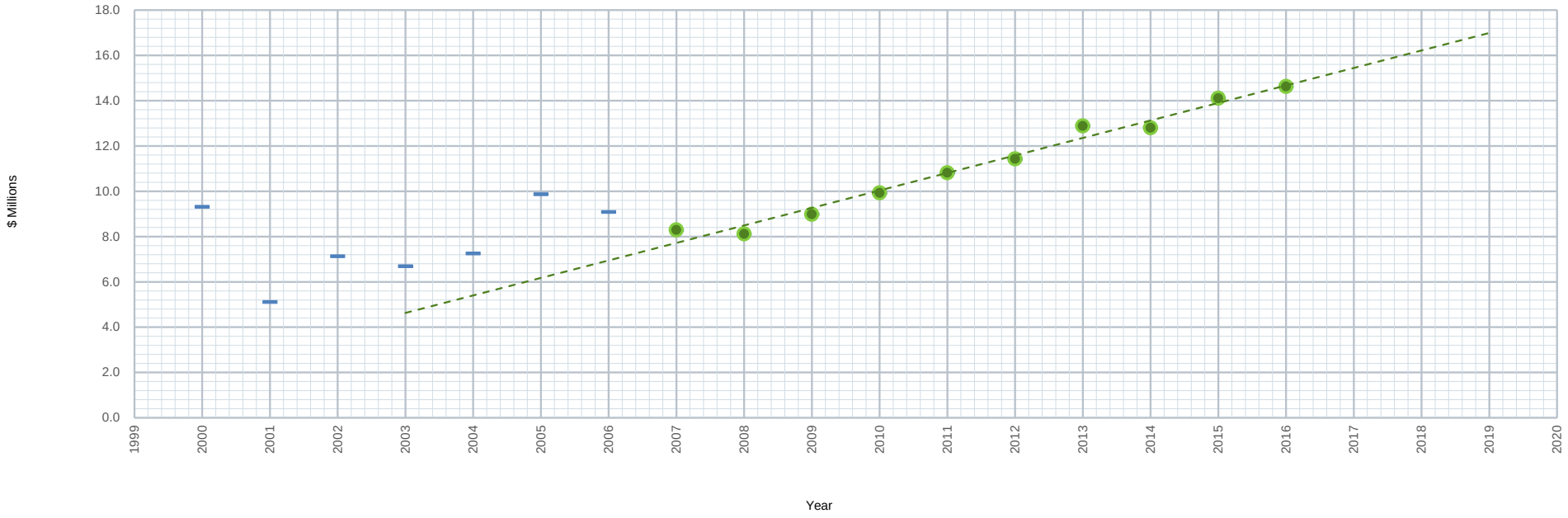
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
P/T Taxes	9,346	5,139	7,164	6,722	7,283	9,900	9,115	8,319	8,146	9,014	9,955	10,846	11,456	12,913	12,828	14,133	14,654
Total Production & Transmission Taxes Other Than Income Taxes	**9,346**	**5,139**	**7,164**	**6,722**	**7,283**	**9,900**	**9,115**	**8,319**	**8,146**	**9,014**	**9,955**	**10,846**	**11,456**	**12,913**	**12,828**	**14,133**	**14,654**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	773
R -Squared of Best-Fit	0.97985
Annual Growth Rate (% of 2015)	5.27%
1-year Growth Rate	**5.27%**

Narrative

Production and transmission tax expense other than income taxes have increased fairly consistently in the recent period 2007 through 2016. Because the amount of net production plant has remained relatively flat for nearly ten years, however, it is not necessarily clear why the taxes other than income taxes on production plant have been increasing at such a high rate. The trend is most likely caused by increasing property tax rates over the period, as well as increasing balances associated with transmission plant. There may be other taxes, such as generation taxes at Colstrip power station, that are influencing this trend, as well. Notwithstanding, my model uses the Company's escalation period of 2007 through 2016 for this category of cost.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Distribution O&M Expense**

Selected trend period highlighted green and displayed as green dots in figure

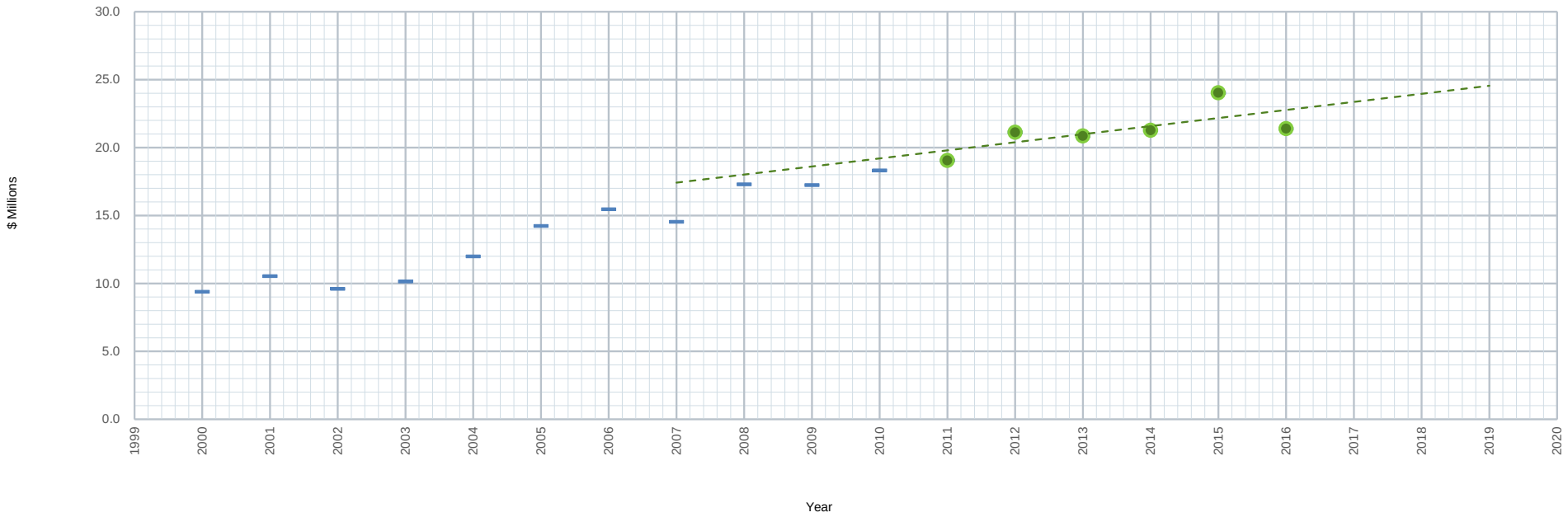
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Distribution Operations Expense	9,418	10,560	9,631	10,171	12,016	14,263	15,485	14,563	17,329	17,267	18,354	19,081	21,152	20,878	21,299	24,056	21,415
Total Distribution O&M Expense	**9,418**	**10,560**	**9,631**	**10,171**	**12,016**	**14,263**	**15,485**	**14,563**	**17,329**	**17,267**	**18,354**	**19,081**	**21,152**	**20,878**	**21,299**	**24,056**	**21,415**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	594
R -Squared of Best-Fit	0.48559
Annual Growth Rate (% of 2015)	2.78%
1-year Growth Rate	**2.78%**

Narrative

The distribution O&M category of cost has experienced fairly steady growth over the past fifteen years. In the most recent five years (2012 through 2016), this trend appears to have leveled off, as this category of cost has experienced a rate of growth that is less than that experienced in the prior period. The slowing rate of growth in this category of cost may be related to the relatively low inflationary pressures on commodity prices experienced recently. Thus, the long term historical trend may not be the best predictor of this category of cost into the future. Notwithstanding, while the case could be made to use an escalation period of 2012 through 2015, my model uses the Company's escalation period of 2007 through 2016 for this category of cost. In addition, this category of cost experienced an increase in 2015, followed by a corresponding reduction in 2016. Accordingly, I have excluded 2015 from my trend calculation.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Distribution Depreciation Expense**

Revised 1/19/2018
(Revisions Highlighted in Yellow)

Selected trend period highlighted green and displayed as green dots in figure

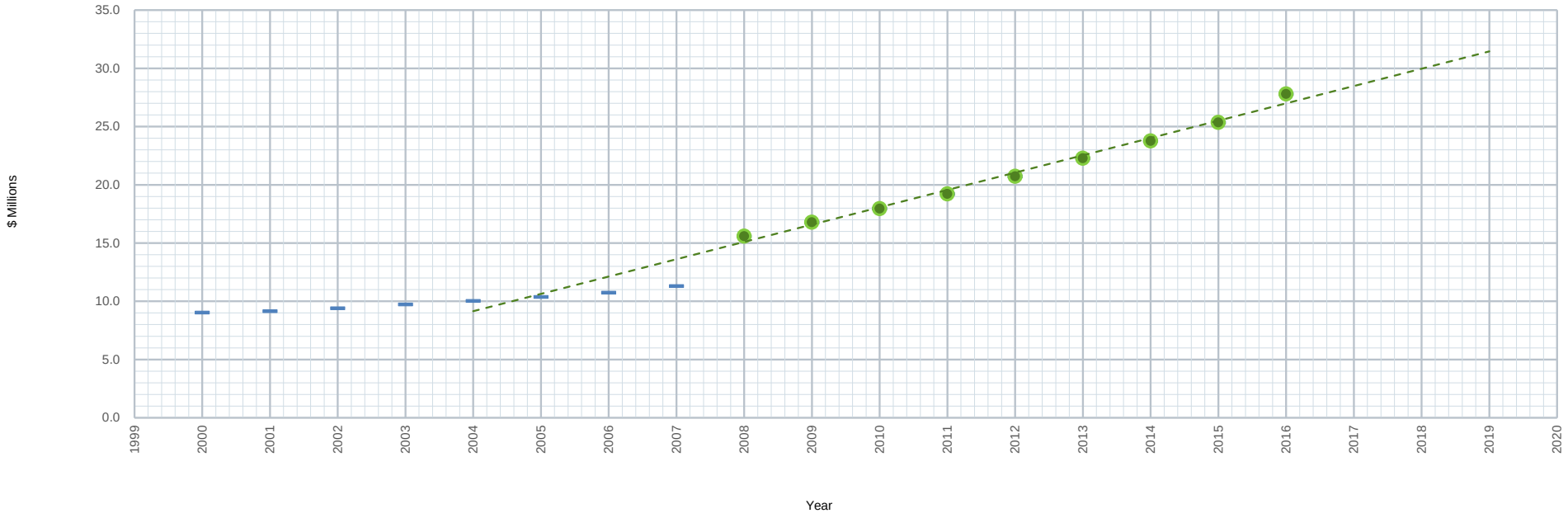
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Distribution Depreciation Expense	9,056	9,178	9,427	9,752	10,067	10,399	10,776	11,333	15,611	16,809	17,985	19,240	20,749	22,303	23,794	25,379	27,819
Total Distribution Depreciation Expense	**9,056**	**9,178**	**9,427**	**9,752**	**10,067**	**10,399**	**10,776**	**11,333**	**15,611**	**16,809**	**17,985**	**19,240**	**20,749**	**22,303**	**23,794**	**25,379**	**27,819**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	1,487
R -Squared of Best-Fit	0.99027
Annual Growth Rate (% of 2015)	5.35%
1-year Growth Rate	**5.35%**

Narrative

Over the period 2000 through 2007, the distribution depreciation expense category of cost was markedly flat, experiencing only minor increases. Beginning in 2008, however, the flat trend changed, and the category of cost began increasing at an increased rate. Accordingly, my analysis uses an escalation period of 2008 through 2016 for this category of cost. Inclusion of the 2007 data point, per the Company's escalation period, would have resulted in a lower r-squared value, thus making it less preferable to use that data point in the escalation factor calculation.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Distribution Taxes Other Than Income Taxes**

Revised 1/19/2018
(Revisions Highlighted in Yellow)

Selected trend period highlighted green and displayed as green dots in figure

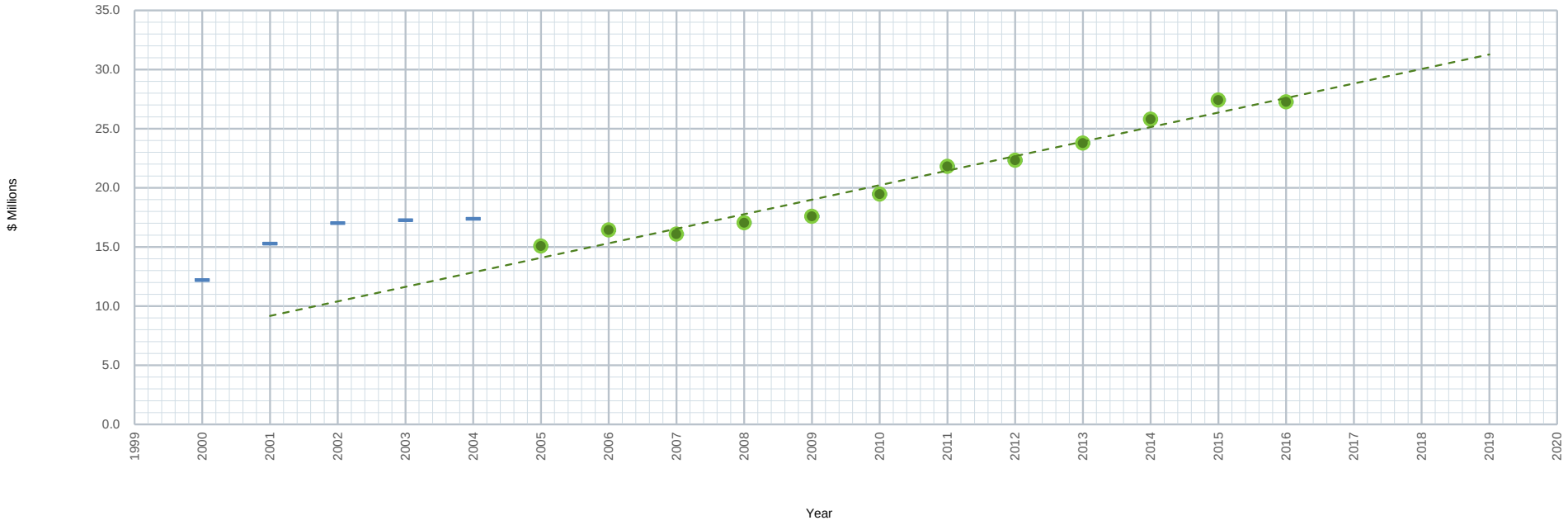
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Distribution Taxes	11,693	15,462	16,996	17,286	17,401	14,988	16,307	16,156	17,416	18,216	20,029	22,459	22,699	23,809	25,821	27,448	27,287
Less: ResEx Excise Taxes	672	57	303	256	289	379	415	225	144	162	252	186	336	-	-	-	-
Less: DSM Excise Taxes	(139)	(205)	(245)	(248)	(272)	(267)	(266)	(269)	(488)	(762)	(787)	(812)	(683)	-	-	-	-
Total Distribution Taxes Other Than Income Taxes	**12,226**	**15,314**	**17,054**	**17,294**	**17,418**	**15,100**	**16,457**	**16,112**	**17,072**	**17,615**	**19,494**	**21,834**	**22,353**	**23,809**	**25,821**	**27,448**	**27,287**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	1,228
R -Squared of Best-Fit	0.96665
Annual Growth Rate (% of 2015)	4.50%
1-year Growth Rate	**4.50%**

Narrative

Distribution taxes other than income taxes showed a somewhat more complicated historical pattern than some other categories of cost. Over the period 2000 through 2005, the category of cost increased and then decreased. Beginning in 2005, however, the category of cost began to increase again. While this category of cost experienced a slight reduction in 2007, the current trend appears to have largely originated in 2005, and accordingly, my model uses the period 2005 through 2017 to calculate the escalation rate for this category of cost.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Customer Accounting and Sales**

Revised 1/19/2018
(Revisions Highlighted in Yellow)

Selected trend period highlighted green and displayed as green dots in figure

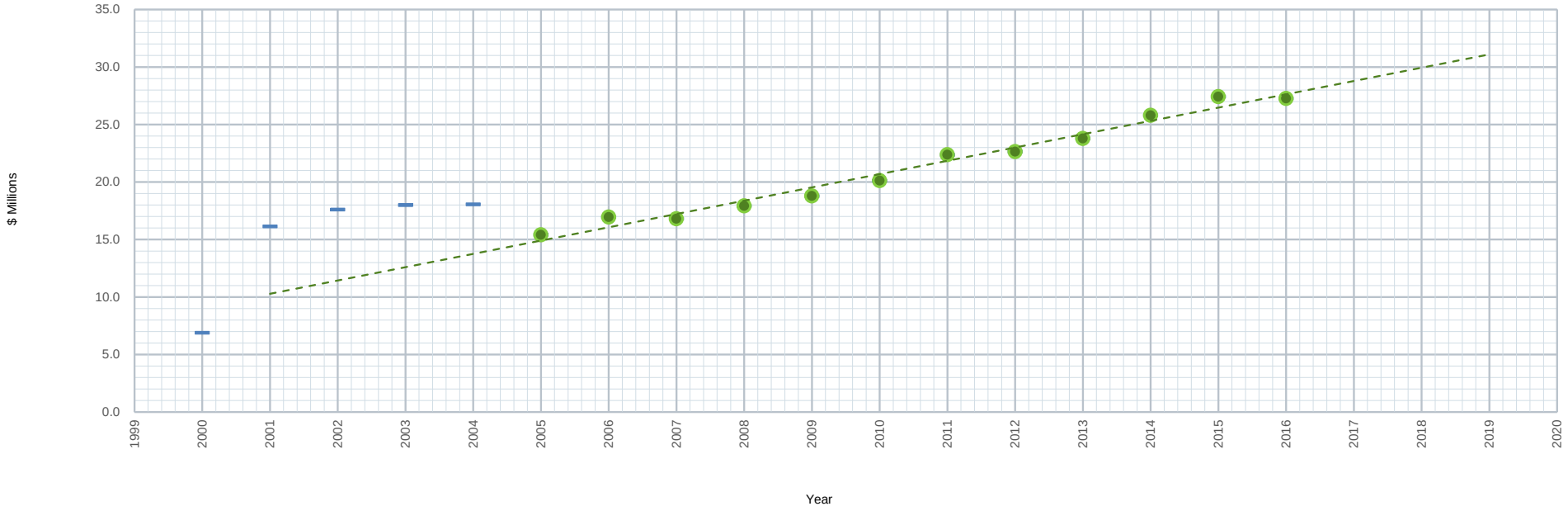
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Customer Accounting	5,768	15,462	16,996	17,286	17,401	14,988	16,307	16,156	17,416	18,216	20,029	22,459	22,699	23,809	25,821	27,448	27,287
Sales Expense	1,071	734	628	734	686	430	657	682	571	660	176	4	5	5	-	-	-
Less: ResEx	115	10	52	44	49	43	47	25	16	18	28	21	38	-	-	-	-
Less: DSM Excise	(24)	(35)	(42)	(42)	(47)	(30)	(30)	(30)	(55)	(86)	(88)	(91)	(77)	-	-	-	-
Total Customer Accounting and Sales	**6,930**	**16,171**	**17,634**	**18,021**	**18,090**	**15,431**	**16,981**	**16,833**	**17,948**	**18,808**	**20,145**	**22,393**	**22,665**	**23,814**	**25,821**	**27,448**	**27,287**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	1,156
R -Squared of Best-Fit	0.97892
Annual Growth Rate (% of 2015)	4.24%
1-year Growth Rate	**4.24%**

Narrative

Over the period 2001 through 2004, the customer accounting and sales category of cost experienced little to no growth. Beginning in 2005, the category of cost began to increase, developing what appears to be the current trend in this category of cost. Accordingly, my model uses the period 2005 through 2016 as the trend period for this category of cost.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Customer Service and Information**

Selected trend period highlighted green and displayed as green dots in figure

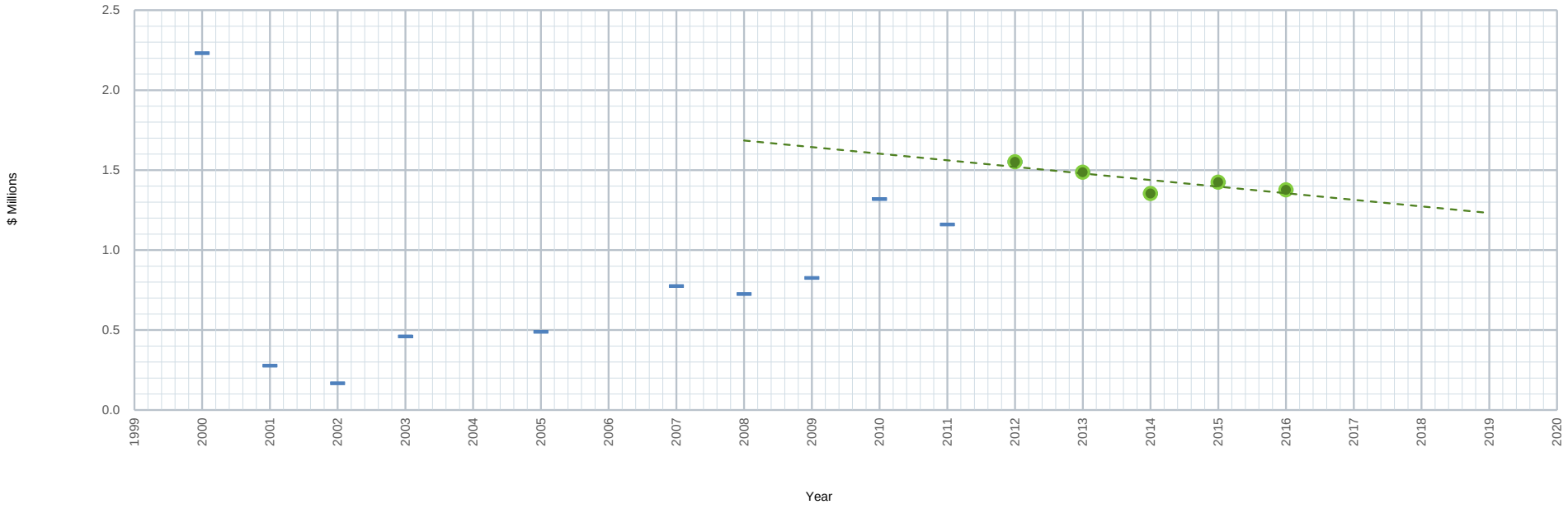
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Customer Service and Information	5,704	5,381	6,261	6,620	266	7,127	1,159	7,472	12,847	19,736	20,832	21,292	18,487	1,516	1,383	1,454	1,406
Less: DSM Cost	(3,443)	(5,074)	(6,064)	(6,130)	(6,747)	(6,608)	(6,580)	(6,667)	(12,092)	(18,880)	(19,483)	(20,102)	(16,906)	-	-	-	-
Total Customer Service and Information	**2,261**	**307**	**197**	**490**	**(6,481)**	**519**	**(5,421)**	**805**	**755**	**856**	**1,349**	**1,190**	**1,581**	**1,516**	**1,383**	**1,454**	**1,406**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	(41)
R -Squared of Best-Fit	0.64448
Annual Growth Rate (% of 2015)	-2.93%
1-year Growth Rate	**0.00%**

Narrative

The trend related to the customer service and information expense category of cost is less clear compared to other categories of cost. For example, this category of cost increased dramatically between 2009 and 2010. Yet, in 2011, it declined, only to increase again in 2012. From 2012 to the present, however, this category of cost has been relatively flat, declining slightly. It is probably most appropriate to assume that this category of cost will decline slightly in the test period, based on the use of a 2012 to 2016 trend period. Notwithstanding, my model assumes zero growth in this category of cost, due to the erratic historical pattern.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Administrative & General Operations Expense**

Selected trend period highlighted green and displayed as green dots in figure

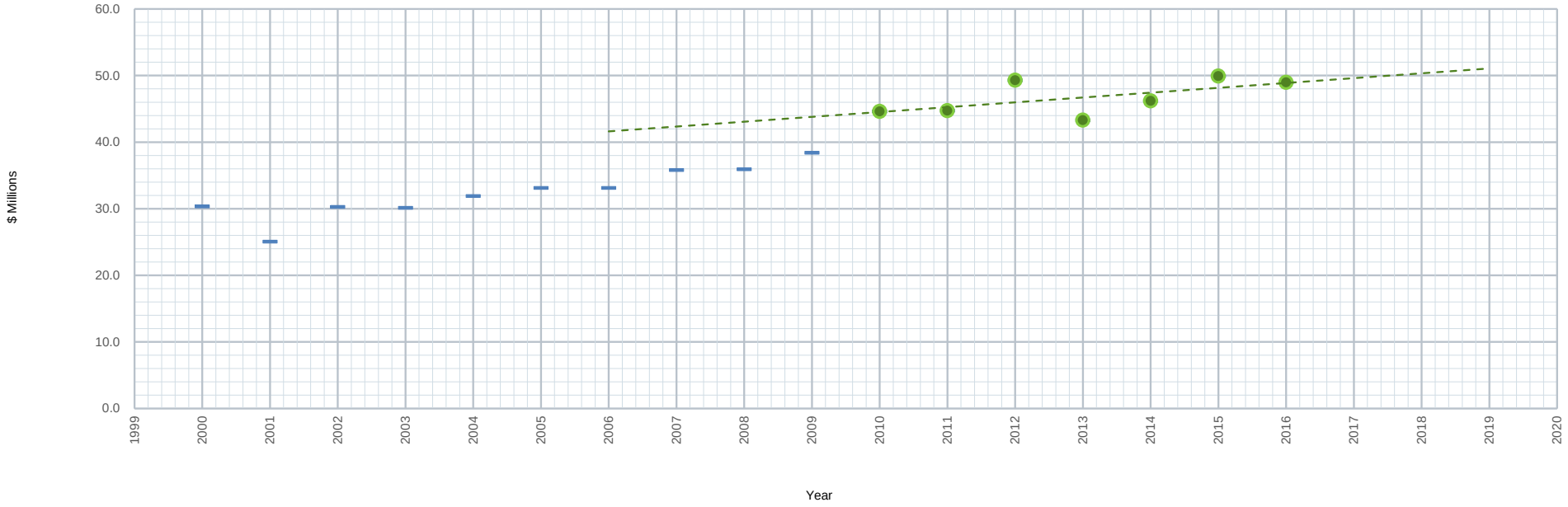
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Adminisrtative and General	30,350	25,102	30,304	30,153	31,927	33,143	33,148	35,844	35,982	38,461	44,662	44,779	49,333	43,310	46,210	49,942	48,989
Less: DSM Cost	(7)	(11)	(13)	(13)	(14)	(14)	(14)	(14)	(25)	(40)	(41)	(42)	(35)	-	-	-	-
Less: ResEx Cost	35	3	16	13	15	20	22	12	7	8	13	10	17	-	-	-	-
Total Administrative & General Operations Expense	**30,378**	**25,094**	**30,307**	**30,153**	**31,928**	**33,149**	**33,156**	**35,842**	**35,964**	**38,430**	**44,634**	**44,747**	**49,315**	**43,310**	**46,210**	**49,942**	**48,989**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	727
R -Squared of Best-Fit	0.34882
Annual Growth Rate (% of 2015)	1.48%
1-year Growth Rate	**1.48%**

Narrative

Administrative and general operations expense increased at a fairly steady rate over the period 2000 through 2010. From 2010 through 2016, the rate of growth appears to have leveled-off slightly, showing a slower growth trend over that period. This may be an indication that the Company has the ability to control this category of expense and that the longer term trend is not an indication of the uncontrollable costs increases in the future period. In addition, this category of cost appears to have experienced a one-time increase in between 2009 and 2010, which does not appear to be most appropriately included in the trend calculations. Accordingly, my model relies on the period 2010 to 2016 as the trend period for this category of cost.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Administrative & General Depreciation Expense**

Selected trend period highlighted green and displayed as green dots in figure

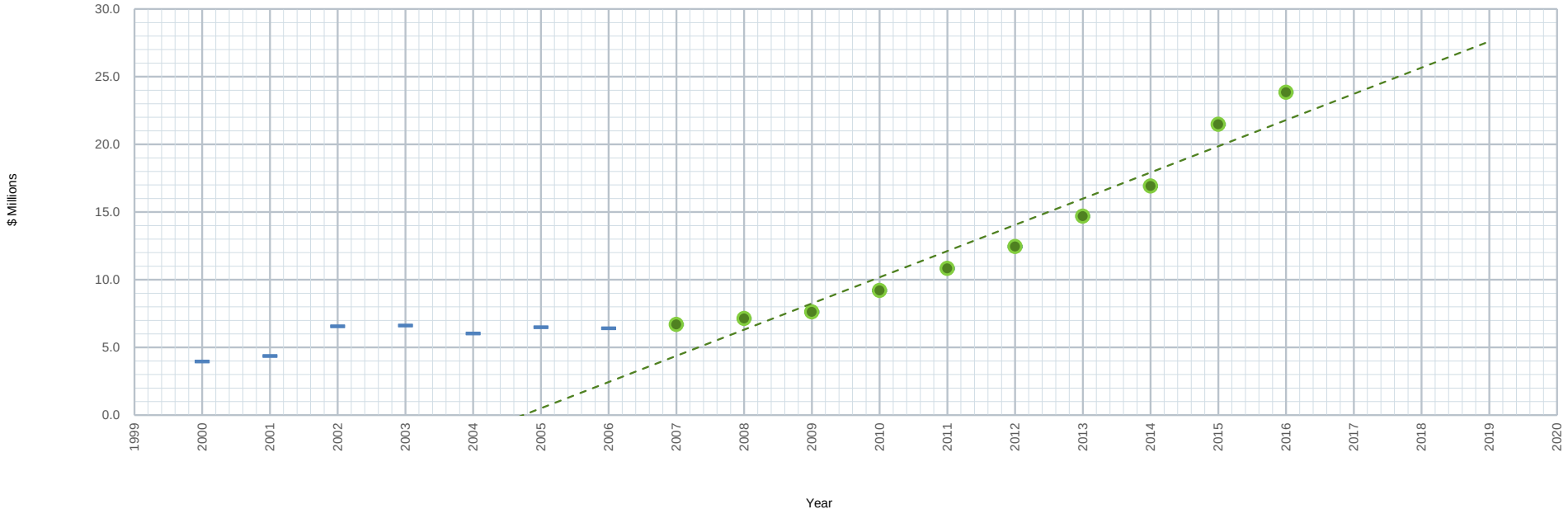
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Adminisrtative and General	3,998	4,414	6,606	6,659	6,072	6,537	6,459	6,739	7,187	7,688	9,277	10,906	12,517	14,721	16,947	21,503	23,877
Less: DSM Cost	(7)	(11)	(13)	(13)	(14)	(14)	(14)	(14)	(25)	(40)	(41)	(42)	(35)	-	-	-	-
Less: Project Compass (ICNU DR 175)																	
Total Administrative & General Depreciation Expense	**3,991**	**4,403**	**6,593**	**6,646**	**6,058**	**6,523**	**6,445**	**6,725**	**7,162**	**7,648**	**9,236**	**10,864**	**12,482**	**14,721**	**16,947**	**21,503**	**23,877**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	1,935
R -Squared of Best-Fit	0.93601
Annual Growth Rate (% of 2015)	8.11%
1-year Growth Rate	**8.11%**

Narrative

As with general plant, the category of cost related to administrative and general depreciation expense has escalated dramatically in recent years. As discussed in testimony in the Company's 2016 GRC, however, this is not a category of cost that one typically considers in relation to the Company's claims of attrition, as it is often more discretionary than other categories of cost. Thus, I remain concerned with the degree of escalation in administrative and general depreciation expenses. Notwithstanding these concerns, my model uses the Company's escalation period of 2007 to 2016 for this category of cost. In my view, however, the Commission would be justified in eliminating the escalation assumption for this category of cost, similar to its treatment of distribution plant in the 2015 GRC.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Intangible Net Plant**

Selected trend period highlighted green and displayed as green dots in figure

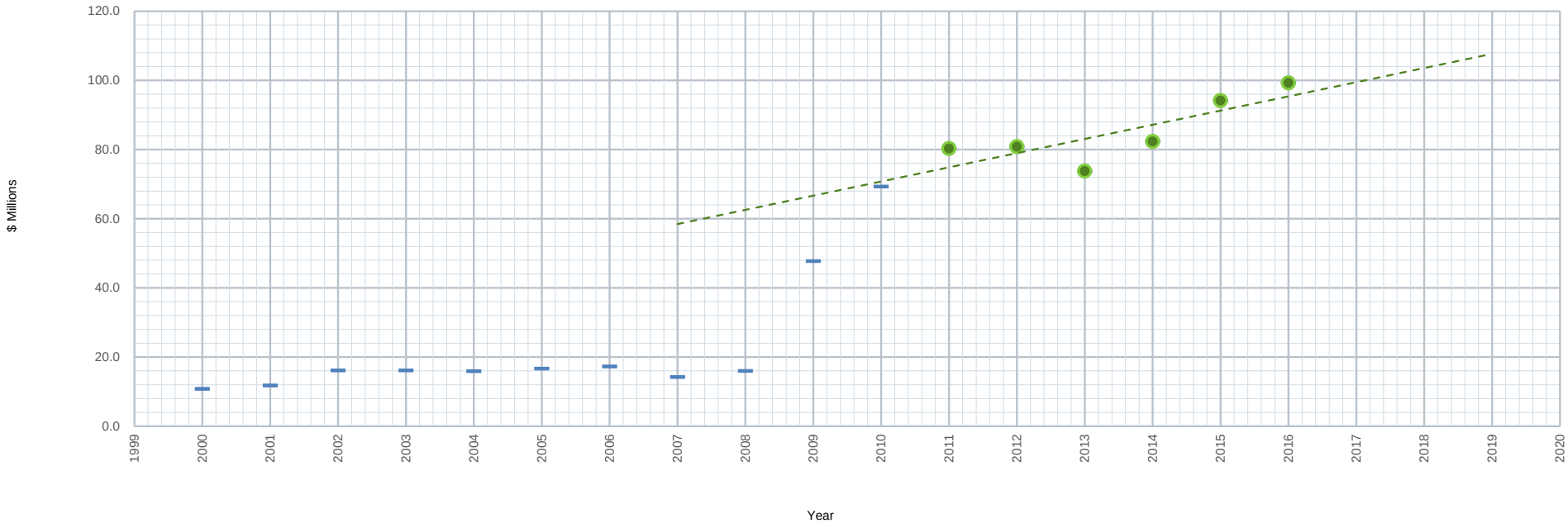
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Gross Plant	15,127	16,340	20,910	21,299	21,374	22,459	23,458	20,632	23,321	57,116	81,955	84,081	85,247	91,466	102,620	144,970	156,057
Depreciation Reserve	(4,279)	(4,501)	(4,721)	(5,095)	(5,397)	(5,729)	(6,111)	(6,349)	(7,252)	(9,302)	(12,606)	(3,744)	(4,369)	(17,667)	(20,242)	(24,943)	(30,914)
Less: Project Compass (ICNU DR 175)																(25,812)	(25,812)
Total Intangible Net Plant	**10,848**	**11,839**	**16,189**	**16,204**	**15,977**	**16,730**	**17,347**	**14,283**	**16,069**	**47,814**	**69,349**	**80,337**	**80,878**	**73,799**	**82,378**	**94,215**	**99,331**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	4,102
R -Squared of Best-Fit	0.63835
Annual Growth Rate (% of 2015)	4.13%
1-year Growth Rate	**4.13%**

Narrative

Over the period 2000 through 2008, the net intangible plant balances remained markedly flat. Between 2008 and 2011, however, the net intangible plant values increased dramatically. Subsequently, between 2011 and 2016, the plant values returned to their historical flat trend. It is not clear what drove the increases in net intangible plant that occurred between 2008 and 2011. It is also not clear whether similarly large increases will occur in the future, as the Company has just completed Project Compass. Accordingly, my model uses the most recent flat trend that has occured over the period 2011 through 2016.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Production Net Plant**

Selected trend period highlighted green and displayed as green dots in figure

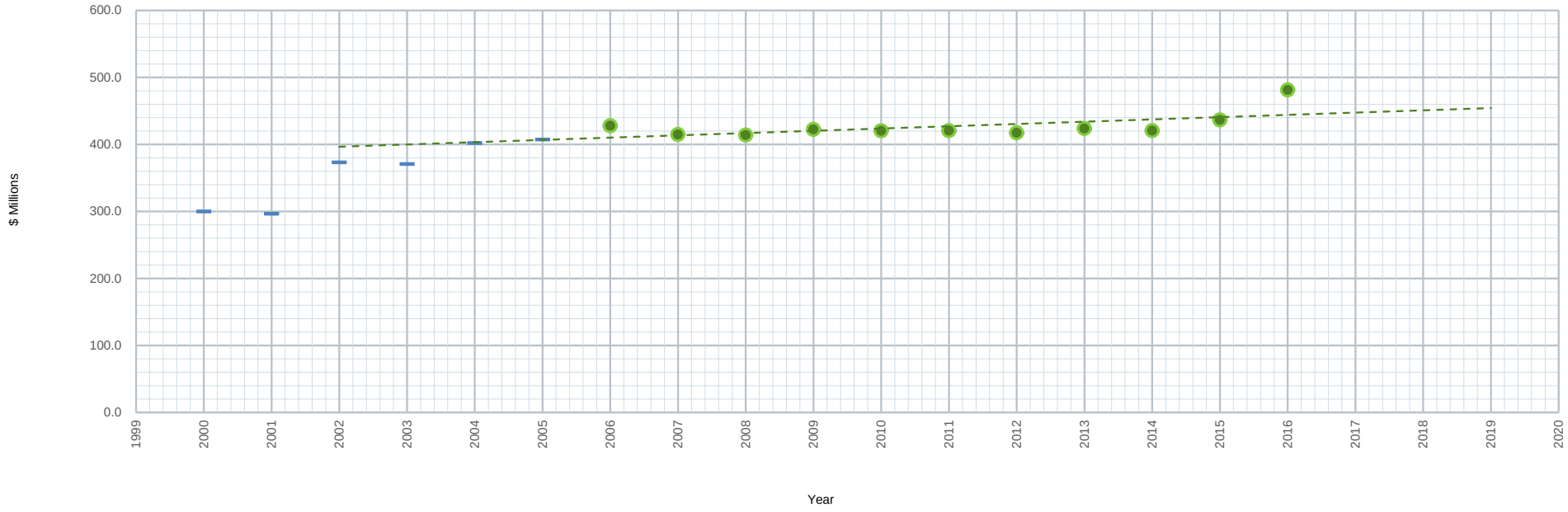
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Gross Plant	455,498	460,292	545,002	556,067	598,268	615,624	649,965	645,576	657,099	677,646	692,689	706,894	717,448	738,315	746,101	779,441	832,833
Depreciation Reserve	(155,496)	(163,566)	(171,572)	(185,180)	(196,126)	(208,203)	(222,098)	(230,738)	(243,189)	(255,390)	(272,340)	(286,300)	(300,170)	(314,599)	(325,531)	(342,899)	(351,625)
Total Production Net Plant	**300,002**	**296,726**	**373,430**	**370,887**	**402,142**	**407,421**	**427,867**	**414,838**	**413,910**	**422,256**	**420,349**	**420,594**	**417,278**	**423,716**	**420,570**	**436,542**	**481,208**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	3,394
R -Squared of Best-Fit	0.35164
Annual Growth Rate (% of 2015)	0.71%
1-year Growth Rate	**0.71%**

Narrative

Net production plant has remained relatively flat over the past ten years. Accordingly, my model uses the Company's escalation period of 2007 to 2016 for this category of cost.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Transmission Net Plant**

Selected trend period highlighted green and displayed as green dots in figure

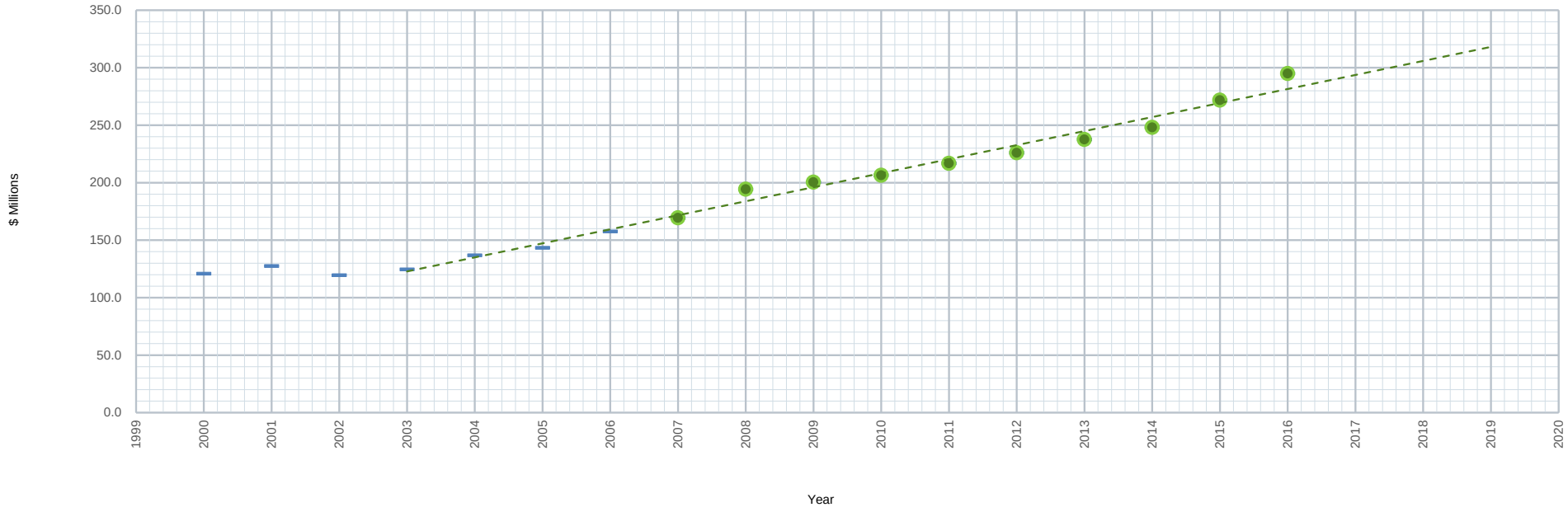
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Gross Plant	181,627	191,517	186,550	196,937	213,539	224,696	244,435	259,532	289,302	301,090	312,505	328,012	342,382	359,941	371,971	401,700	430,613
Depreciation Reserve	(60,746)	(63,899)	(67,026)	(72,342)	(76,619)	(81,337)	(86,765)	(90,140)	(95,026)	(100,649)	(106,041)	(111,144)	(116,316)	(122,308)	(123,869)	(129,936)	(135,624)
Total Transmission Net Plant	**120,881**	**127,618**	**119,524**	**124,595**	**136,920**	**143,359**	**157,670**	**169,392**	**194,276**	**200,441**	**206,464**	**216,868**	**226,066**	**237,633**	**248,102**	**271,764**	**294,989**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	12,205
R -Squared of Best-Fit	0.95984
Annual Growth Rate (% of 2015)	4.14%
1-year Growth Rate	**4.14%**

Narrative

Net transmission plant has grown relatively steadily over the past ten years. Accordingly, my model uses the escalation period of 2007 to 2016 for this category of cost.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Distribution Net Plant**

Selected trend period highlighted green and displayed as green dots in figure

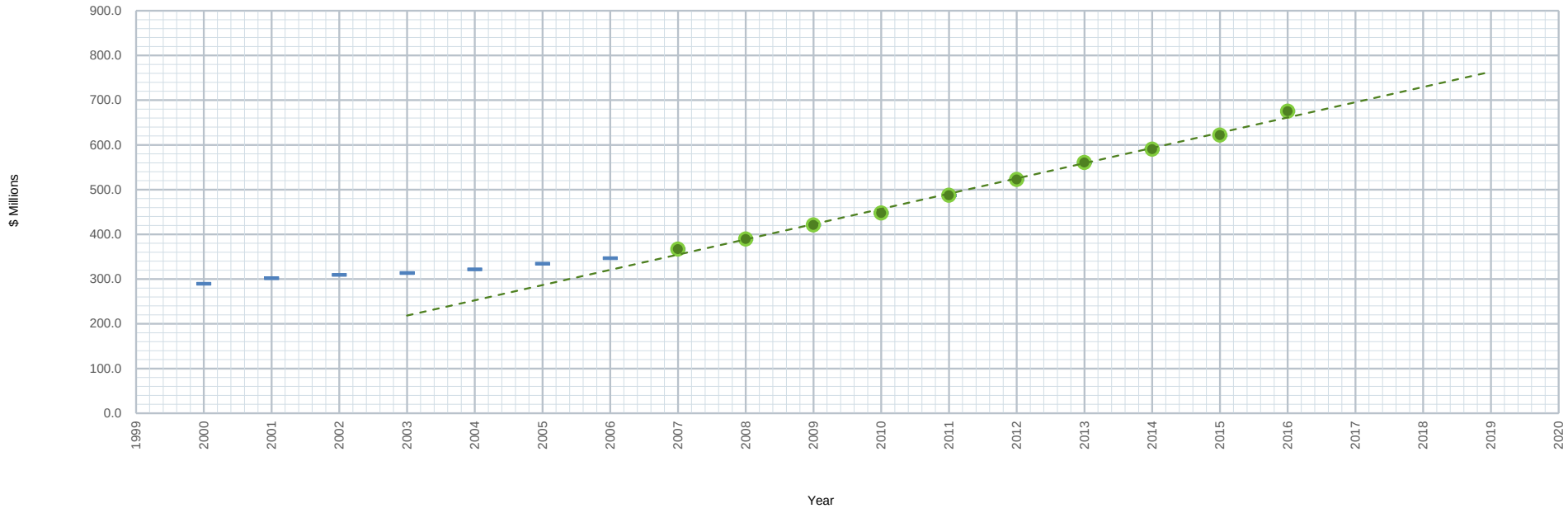
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Gross Plant	398,952	416,914	429,987	443,649	459,739	480,886	502,838	529,067	561,248	602,201	642,143	696,082	743,732	796,640	842,795	895,055	970,455
Depreciation Reserve	(109,404)	(115,082)	(120,715)	(130,289)	(137,991)	(146,488)	(156,264)	(162,343)	(172,026)	(181,327)	(194,593)	(209,101)	(221,408)	(236,201)	(252,722)	(273,578)	(295,383)
Total Distribution Net Plant	**289,548**	**301,832**	**309,272**	**313,360**	**321,748**	**334,398**	**346,574**	**366,724**	**389,222**	**420,874**	**447,550**	**486,981**	**522,324**	**560,439**	**590,073**	**621,477**	**675,072**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	34,066
R -Squared of Best-Fit	0.99487
Annual Growth Rate (% of 2015)	5.05%
1-year Growth Rate	**5.05%**

Narrative

The history of net distribution plant shows two distinct trends. The first trend occurred between 2000 and 2006 and showed relatively modest growth in net plant values. The second trend begins in 2007 and extends until 2015. During the second trend period, distribution plant has increased at a greater rate. In the 2015 GRC, the Commission questioned whether the growth in distribution plant was beyond the control of the Company. While Ms. Rosentrater provided testimony on distribution plant investments (See Exh. No. HLR-1T at 31:11-43:19), I still do not have a clear understanding of why distribution plant is increasing at such a great rate. In addition, her descriptions certainly did not give me the impression that the Company is working hard to prioritize and control its investment in this category of cost. Given the low inflationary environment, I would expect the growth in this category of plant to show some signs of slowing. In addition, it would be helpful to understand how the Company's investment in distribution plant compares to other similar utilities. To my knowledge, similarly sized utilities such as PacifiCorp have not been making attrition claims on the basis of distribution investment, yet distribution plant appears to be a key driver of the Company's claims. Notwithstanding these concerns, my model uses the Company's escalation period of 2007 to 2016 for this category of cost. In my view, however, the Commission would be justified in eliminating escalation for this category of cost, similar to its treatment in the 2015 GRC.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **General Net Plant**

Selected trend period highlighted green and displayed as green dots in figure

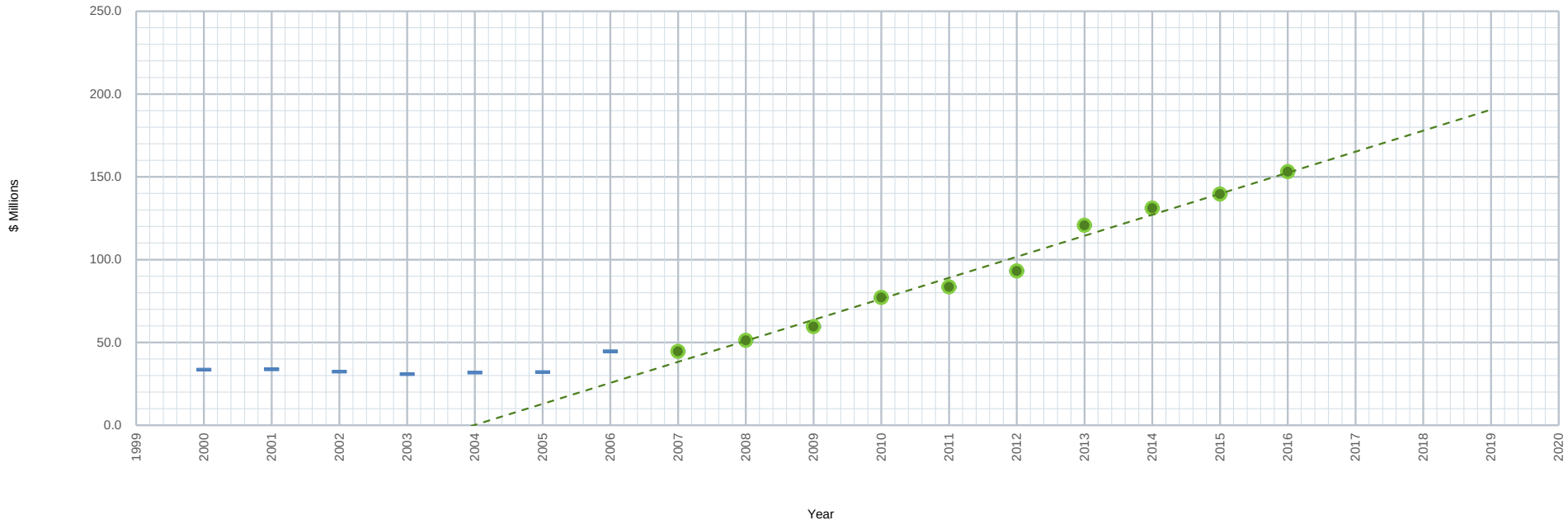
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Gross Plant	58,402	59,846	59,771	60,444	63,155	65,299	80,110	81,368	91,205	98,727	120,996	140,218	155,104	179,134	196,867	212,726	233,266
Depreciation Reserve	(24,757)	(26,042)	(27,317)	(29,483)	(31,226)	(33,149)	(35,361)	(36,737)	(39,933)	(39,153)	(43,819)	(56,694)	(61,871)	(58,357)	(65,720)	(73,050)	(80,093)
Total General Net Plant	**33,645**	**33,804**	**32,454**	**30,961**	**31,929**	**32,150**	**44,749**	**44,631**	**51,272**	**59,574**	**77,177**	**83,524**	**93,233**	**120,777**	**131,147**	**139,676**	**153,173**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	12,691
R -Squared of Best-Fit	0.98389
Annual Growth Rate (% of 2015)	8.29%
1-year Growth Rate	**8.29%**

Narrative

As noted in Response Testimony, the trend related to general net plant is somewhat concerning. This is a category of cost which I typically consider to be more under the control of the Company than other categories of costs, as the Company often has the ability to defer these sorts of investments to the extent that it is experiencing attrition. In this case, however, it is not necessarily clear why general net plant is growing at such a high rate. Notwithstanding these concerns, my model uses the Company's escalation period of 2007 to 2016 for this category of cost. In my view, however, the Commission would be justified in eliminating escalation for this category of cost, similar to its treatment of distribution plant in the 2015 GRC.



2018 Electric Attrition Allowance Revenue Requirement Model
Escalation Rate Evaluation

Cost / Rate Base Category: **Accumulated Deferred Income Taxes**

Selected trend period highlighted green and displayed as green dots in figure

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Accumulated Deferred Income Taxes	105,775	109,541	111,367	135,404	150,960	134,967	138,495	139,033	147,502	163,716	184,825	201,163	208,209	221,354	257,766	317,860	353,900
Total Accumulated Deferred Income Taxes	**105,775**	**109,541**	**111,367**	**135,404**	**150,960**	**134,967**	**138,495**	**139,033**	**147,502**	**163,716**	**184,825**	**201,163**	**208,209**	**221,354**	**257,766**	**317,860**	**353,900**

Statistics (Over Highlighted Period)

Slope of Best-Fit Line	45,773
R -Squared of Best-Fit	0.98924
Annual Growth Rate (% of 2015)	12.93%
1-year Growth Rate	**12.93%**

Narrative

Because of the availability of bonus depreciation and accelerated depreciation for tax purposes, my expectation was that deferred income tax balances would grow at a rate in excess of the rate of growth applicable to net plant. Upon review of the data, it appears that the rate of growth in this category of cost over the long-term has largely aligned with other categories of plant. In the short-term, however, the growth in this category of cost appears to have accelerated, potentially in relation to the Company's increased levels of investments over the period. Accordingly, my model uses the past three years, 2013 through 2016, to establish the escalation rate for this category of cost. Use of this period produces a higher r-squared value than any other period that I evaluated in the historic data.