

STAFF - 2016 ELECTRIC ATTRITION STUDY
Edited from Avista Response to Staff Data Request No. 130
Calculation of General Revenue Requirement
Washington - Electric System
Twelve Months Ended December 31, 2014
(000's of Dollars)

Line No.	Description	(a) Attrition Balances	(b) Revenue Growth Factor	(c) Attrition Study Results	
1	2016 Rate Base	\$1,380,143	1.013115	\$1,362,276	
2	Settlement Rate of Return			7.29%	
3	<u>Net Operating Income Requirement</u>			\$99,310	
4	2016 Net Operating Income (at 2015 rates)	\$104,513	1.013115	\$103,161	
5	<u>2016 Rate of Return (at 2015 rates)</u>			7.57%	
6	2016 Net Operating Income Deficiency (Surplus)			(\$3,851)	[Line 3 - Line 4]
7	Gross-up Conversion Factor			0.62018	
8	<u>2016 Attrition Revenue Deficiency (Surplus)</u>			(\$6,209)	
9	2016 Total General Business Revenues (at 2015 rates)			\$499,982	[CRM-2, pg. 4, col. H, Lines 1-2]
10	<u>Attrition-based 2016 revenue requirement</u>			\$493,773	[Line 8 + Line 9]
11	Percent Revenue Requirement Change (vs. 2015)			-1.242%	
12	Staff Pro Forma 2016 revenue requirement			\$479,047	[CHS-2]
13	<u>Attrition Allowance</u>			\$14,726	[Line 10 - Line 12]

Multiparty Settlement - Cost of Capital

Washington - Electric System

Twelve Months Ended December 31, 2014

Proposed Cap Structure

<u>Component</u>	<u>Capital Structure</u>	<u>Cost</u>	<u>Weighted Cost</u>
Total Debt	51.50%	5.20%	2.68%
Common	48.50%	9.50%	4.61%
Total	<u>100.00%</u>		<u>7.29%</u>

**Revenue Conversion Factor
Washington - Electric System
Twelve Months Ended December 31, 2014**

Line No.	Description	Factor
1	Revenues	<i>1.000000</i>
	Expense:	
2	Uncollectibles	0.005353
3	Commission Fees	0.002000
4	Washington Excise Tax	0.038527
5	Total Expense	<u>0.045880</u>
6	Net Operating Income Before FIT	<i>0.954120</i>
7	Federal Income Tax @ 35%	<u>0.333942</u>
8	REVENUE CONVERSION FACTOR	<u><u>0.620180</u></u>

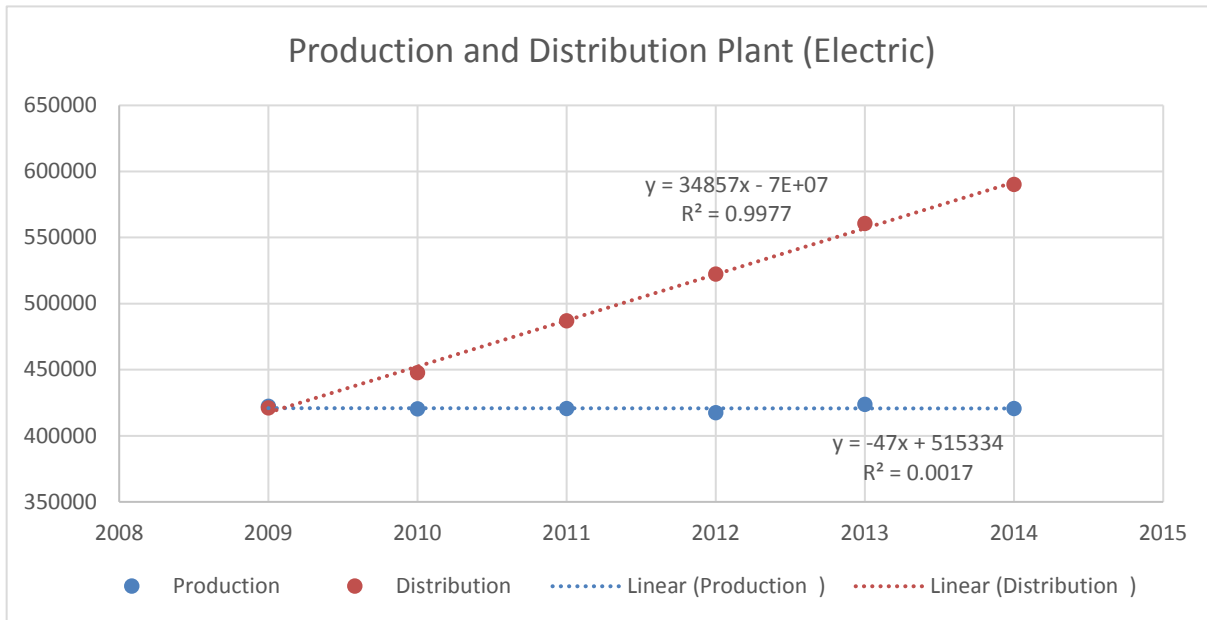
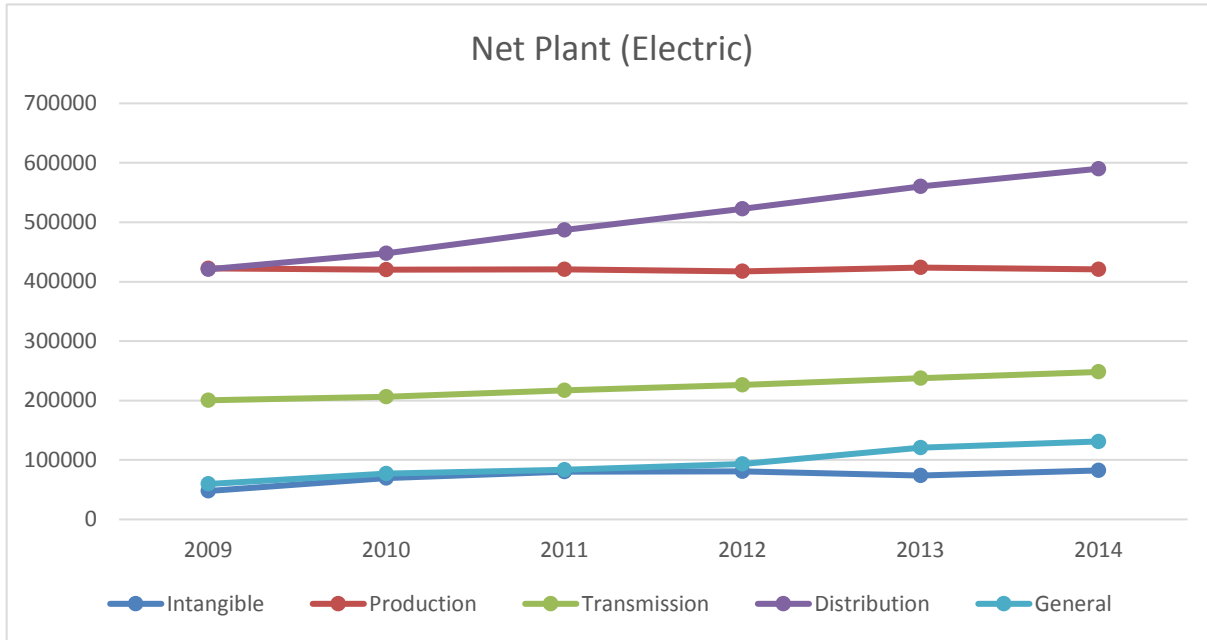
2016 ELECTRIC ATTRITION REVENUE REQUIREMENT

CBR Line Number	DESCRIPTION	Determine Base Cost and Revenue to Escalate					Escalate Non-Energy Cost			Other Cost & Revenue Adjs.				
		12.2014 Commission Basis Report Restated Totals	(less) 12.2014 Normalized Net Power Supply	Deferred Debit/Credit & Reg. Amorts Adj	Pro Forma Revenue Normalization Adjustment	December 2014 Escalation Base	Escalation Factor	Non- Energy Cost Escalation Amount	Trended 2016 Non- Energy Cost [E]+[G]=[H]	(plus) 12.2014 Pro- Formed Net Energy Cost	(plus) Revenue Growth	After Attrition Adj - CS2/Colstrip Incremental O&M Exp	After Attrition Adj - Project Compass	2016 Revenue and Cost [H]+[I]+[J]+[AA+] [PCOMP]=[K]
Twelve Months Ended December 31, 2013		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]
REVENUES														
1	Total General Business	\$ 488,372		\$ -	\$ 10,688	\$ 499,060	1.31%		\$ 499,060		\$ 6,545			\$ 505,605
2	Interdepartmental Sales	\$ 922		\$ -	\$ -	\$ 922	1.31%		\$ 922		\$ 12			\$ 934
3	Sales for Resale	\$ 60,998	\$ (60,998)	\$ -	\$ -	\$ -				\$ 53,757	\$ (2,595)			\$ 51,162
4	Subtotal: Sales of Electricity	\$ 550,292	\$ (60,998)	\$ -	\$ 10,688	\$ 499,982			\$ 499,982	\$ 53,757	\$ 3,962			\$ 557,701
5	Other Revenue	\$ 17,163	\$ (13,684)	\$ -	\$ -	\$ 3,479	0.00%		\$ 3,479	\$ 10,529	\$ -			\$ 14,008
6	Total Electric Revenue	\$ 567,455	\$ (74,682)	\$ -	\$ 10,688	\$ 503,461			\$ 503,461	\$ 64,286	\$ 3,962			\$ 571,709
EXPENSES														
Production and Transmission														
7	Operating Expenses	\$ 120,307	\$ (69,476)	\$ -	\$ -	\$ 50,831	4.82%	\$ 2,450	\$ 53,281	\$ 89,306	\$ -	\$ 180		\$ 142,767
8	Purchased Power	\$ 116,643	\$ (116,641)	\$ -	\$ -	\$ 2		\$ -	\$ 2	\$ 75,611	\$ 1,907			\$ 77,520
9	Depreciation/Amortization	\$ 23,715	\$ -	\$ -	\$ -	\$ 23,715	9.55%	\$ 2,264	\$ 25,979	\$ -	\$ -			\$ 25,979
10	Regulatory Amortization	\$ 8,101	\$ -	\$ (1,382)	\$ -	\$ 6,719	0.00%	\$ -	\$ 6,719	\$ -	\$ -			\$ 6,719
11	Taxes	\$ 12,828	\$ -	\$ -	\$ -	\$ 12,828	11.96%	\$ 1,534	\$ 14,362	\$ -	\$ -			\$ 14,362
12	Subtotal: Production and	\$ 281,594	\$ (186,117)	\$ (1,382)	\$ -	\$ 94,095		\$ 6,248	\$ 100,343	\$ 164,917	\$ 1,907	\$ 180		\$ 267,347
Distribution														
13	Operating Expenses	\$ 21,299	\$ -	\$ -	\$ -	\$ 21,299	4.82%	\$ 1,026	\$ 22,325	\$ -	\$ -			\$ 22,325
14	Depreciation/Amortization	\$ 23,794	\$ -	\$ -	\$ -	\$ 23,794	9.55%	\$ 2,272	\$ 26,066	\$ -	\$ -			\$ 26,066
15	Regulatory Amortizations	\$ -	\$ -	\$ -	\$ -	\$ -		\$ -	\$ -	\$ -	\$ -			\$ -
15	Taxes	\$ 25,575	\$ -	\$ -	\$ 412	\$ 25,987	11.96%	\$ 3,108	\$ 29,095	\$ -	\$ 252			\$ 29,347
16	Subtotal: Distribution	\$ 70,668	\$ -	\$ -	\$ 412	\$ 71,080		\$ 6,407	\$ 77,487	\$ -	\$ 252	\$ -		\$ 77,739
17	Customer Accounting	\$ 11,166	\$ -	\$ -	\$ 57	\$ 11,223	4.82%	\$ 541	\$ 11,764	\$ -	\$ 35			\$ 11,799
18	Customer Service & Information	\$ 1,383	\$ -	\$ -	\$ -	\$ 1,383	4.82%	\$ 67	\$ 1,450	\$ -	\$ -			\$ 1,450
19	Sales Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	4.82%	\$ -	\$ -	\$ -	\$ -			\$ -
Administrative & General														
20	Operating Expenses	\$ 46,210	\$ -	\$ -	\$ 21	\$ 46,231	4.82%	\$ 2,228	\$ 48,459	\$ -	\$ 13			\$ 48,472
21	Depreciation/Amortization	\$ 16,947	\$ -	\$ -	\$ -	\$ 16,947	9.55%	\$ 1,618	\$ 18,565	\$ -	\$ -	\$ 3,087		\$ 21,652
22	Taxes	\$ -	\$ -	\$ -	\$ -	\$ -	11.96%	\$ -	\$ -	\$ -	\$ -			\$ -
23	Subtotal: A&G	\$ 63,157	\$ -	\$ -	\$ 21	\$ 63,178		\$ 3,846	\$ 67,024	\$ -	\$ 13	\$ -		\$ 70,124
24	Total Electric Expenses	\$ 427,968	\$ (186,117)	\$ (1,382)	\$ 490	\$ 240,959		\$ 17,108	\$ 258,067	\$ 164,917	\$ 2,207	\$ 180	\$ 3,087	\$ 428,459
25	OPERATING INCOME BEFORE FIT	\$ 139,487	\$ 111,435	\$ 1,382	\$ 10,198	\$ 262,502		\$ (17,108)	\$ 245,394	\$ (100,631)	\$ 1,755	\$ (180)	\$ (3,087)	\$ 143,251

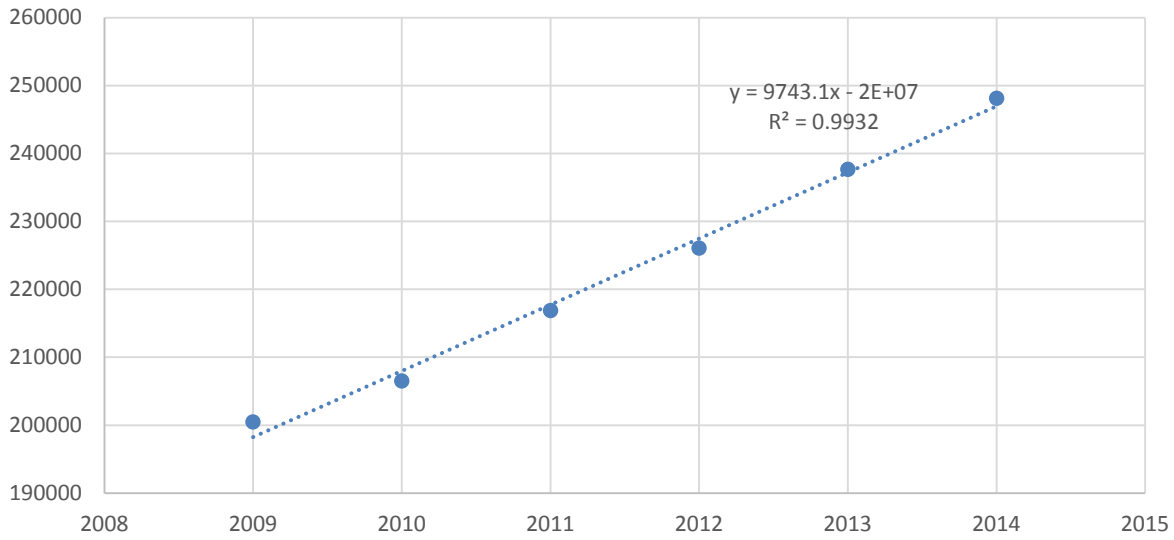
2016 ELECTRIC ATTRITION REVENUE REQUIREMENT

CBR Line Number	\$000s														
	Determine Base Cost and Revenue to Escalate					Escalate Non-Energy Cost				Other Cost & Revenue Ad		After Attrition			
	12.2014 Commission Basis Report Restated Totals [A]	(less) 12.2014 Normalized Net Power Supply [B]	Deferred Debit/Cred it & Reg. Amorts Adjis [C]	Pro Forma Revenue Normalization Adjustment [D]	December 2014 Escalation Base [E]	Escalation Factor [F]	Non- Energy Cost Escalation Amount [G]	Trended 2016 Non- Energy Cost [E]+[G]=[H]	(plus) 12.2014 Pro- Formed Net Energy Cost [I]	(plus) Revenue Growth [J]	After Attrition Adj - CS2/Colstrip Incremental O&M Exp [K]	After Attrition Adj - Project Compass	2016 Revenue and Cost [H]+[I]+[J]=[K] [M]		
	Federal Income Tax														
26	Current Accrual	\$ (7,683)	\$ 39,002	\$ 484	\$ 3,569	\$ 35,372		\$ (5,988)	\$ 29,384	\$ (35,221)	\$ 614	\$ (63)	\$ (1,080)	\$ (6,366)	
27	Debt Interest	\$ (136)	\$ -	\$ (132)	\$ -	\$ (268)		\$ (586)	\$ (854)					\$ (854)	
28	Deferred Income Taxes	\$ 46,085	\$ -	\$ -	\$ -	\$ 46,085		\$ -	\$ 46,085					\$ 46,085	
29	Amortized ITC - Noxon	\$ (128)	\$ -	\$ -	\$ -	\$ (128)		\$ -	\$ (128)					\$ (128)	
30															
31	NET OPERATING INCOME	\$ 101,349	\$ 72,433	\$ 1,030	\$ 6,629	\$ 181,441		\$ (10,535)	\$ 170,906	\$ (65,410)	\$ 1,141	\$ (117)	\$ (2,007)	\$ 104,513	
														(A) Correction	
	RATE BASE														
	Plant in Service														
32	Intangible	\$ 102,620	\$ -	\$ -	\$ -	\$ 102,620	7.83%	\$ 8,034	\$ 110,654			\$ 39,518	\$ 110,654		
33	Production	\$ 746,101	\$ -	\$ -	\$ -	\$ 746,101	7.83%	\$ 58,410	\$ 804,511				\$ 804,511		
34	Transmission	\$ 371,971	\$ -	\$ -	\$ -	\$ 371,971	7.83%	\$ 29,120	\$ 401,091				\$ 401,091		
35	Distribution	\$ 842,795	\$ -	\$ -	\$ -	\$ 842,795	7.83%	\$ 65,980	\$ 908,775				\$ 908,775		
36	General	\$ 196,867	\$ -	\$ -	\$ -	\$ 196,867	7.83%	\$ 15,412	\$ 212,279				\$ 212,279		
37	Subtotal: Plant in Service	\$ 2,260,354	\$ -	\$ -	\$ -	\$ 2,260,354		\$ 176,956	\$ 2,437,310				\$ 2,437,310		
	Accumulated Depreciation and Amortization														
38	Intangible	\$ (20,242)	\$ -	\$ -	\$ -	\$ (20,242)	7.83%	\$ (1,585)	\$ (21,827)			\$ (1,543)	\$ (21,827)		
39	Production	\$ (325,531)	\$ -	\$ -	\$ -	\$ (325,531)	7.83%	\$ (25,485)	\$ (351,016)				\$ (351,016)		
40	Transmission	\$ (123,869)	\$ -	\$ -	\$ -	\$ (123,869)	7.83%	\$ (9,697)	\$ (133,566)				\$ (133,566)		
41	Distribution	\$ (252,722)	\$ -	\$ -	\$ -	\$ (252,722)	7.83%	\$ (19,785)	\$ (272,507)				\$ (272,507)		
42	General	\$ (65,720)	\$ -	\$ -	\$ -	\$ (65,720)	7.83%	\$ (5,145)	\$ (70,865)				\$ (70,865)		
	Subtotal: Accumulated														
43	Depreciation and Amortization	\$ (788,084)	\$ -	\$ -	\$ -	\$ (788,084)		\$ (61,697)	\$ (849,781)				\$ (849,781)		
44	Net Plant	\$ 1,472,270	\$ -	\$ -	\$ -	\$ 1,472,270	\$ -	\$ 115,259	\$ 1,587,529		\$ -		\$ 1,587,529		
45	Deferred Taxes	(257,766)	\$ -	\$ -	\$ -	\$ (257,766)	7.83%	\$ (20,180)	\$ (277,946)			\$ (1,844)	\$ (279,790)		
46	Net Plant After Deferred taxes	\$ 1,214,504	\$ -	\$ -	\$ -	\$ 1,214,504	\$ 0	\$ 95,080	\$ 1,309,584				\$ 1,307,740		
47	Deferred Debits and Credits	10,846	\$ -	\$ 13,750	\$ -	\$ 24,596	0.00%	\$ -	\$ 24,596				\$ 24,596		
48	Working Capital	47,807	\$ -	\$ -	\$ -	\$ 47,807	0.00%	\$ -	\$ 47,807				\$ 47,807		
49	TOTAL RATE BASE	\$ 1,273,157	\$ -	\$ 13,750	\$ -	\$ 1,286,907		\$ 95,080	\$ 1,381,987				\$ 1,380,143		
50	RATE OF RETURN	7.96%												7.57%	
	ATTRITION ADJUSTED REVENUE REQUIREMENT														
50	Proposed Rate of Return	7.29%												7.29%	
51	Return on Plant in Service at Proposed	\$ 92,813													\$ 100,612
52	Operating Income Deficiency	\$ (8,536)													\$ (3,901)
53	Revenue Conversion Factor	0.62018												0.62018	
54	Revenue Requirement	\$ (13,764)													\$ (6,290)
55	Revenue Growth Factor													1.01315	
56	Attrition Adjusted Revenue Requirement													\$ (6,209)	

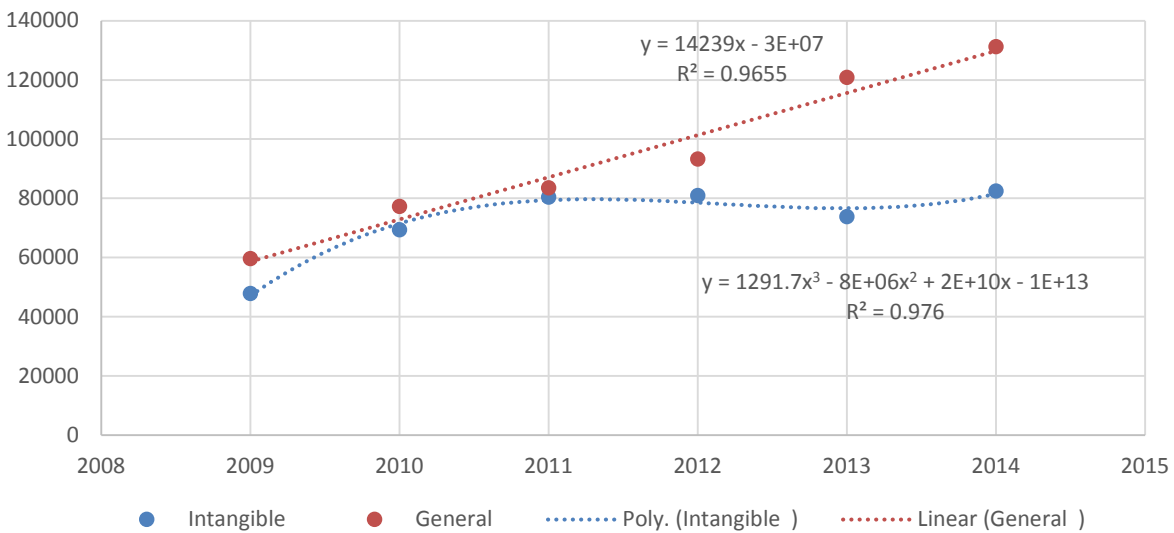
NET PLANT	2009	2010	2011	2012	2013	2014
Intangible	47814	69349	80337	80878	73799	82378
Production	422256	420349	420594	417278	423716	420570
Transmission	200441	206464	216868	226066	237633	248102
Distribution	420874	447550	486981	522324	560439	590073
General	59574	77177	83524	93233	120777	131147



Transmission Plant (Electric)



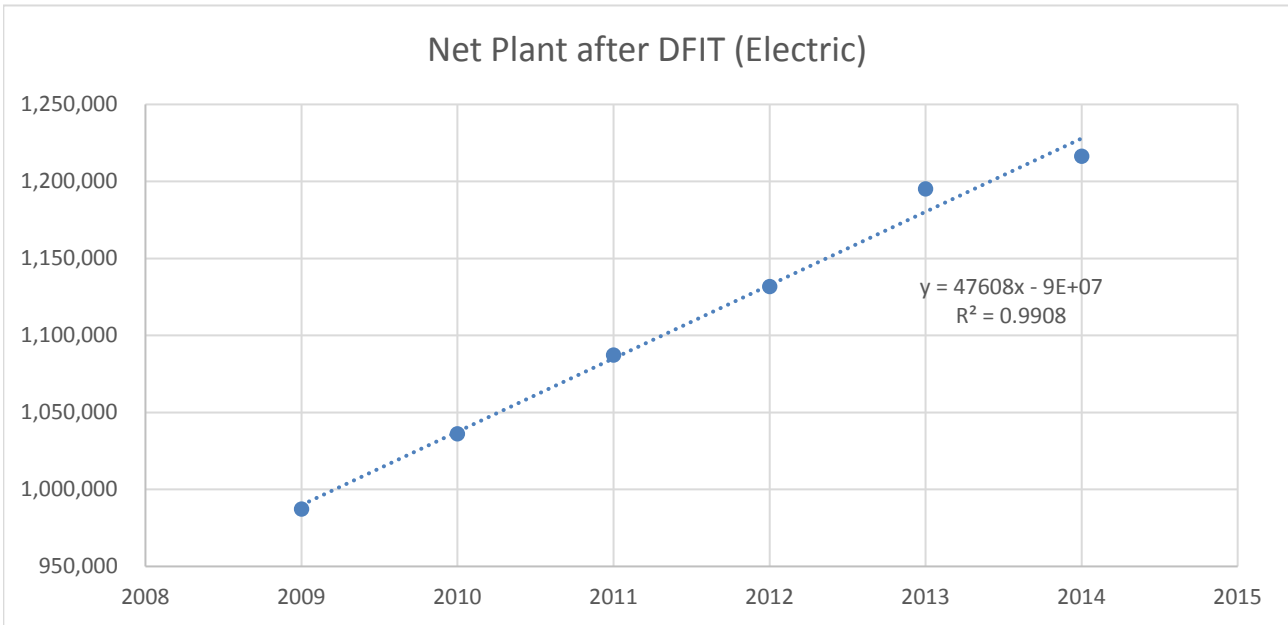
General and Intangible Plant (Electric)



● Intangible ● General Poly. (Intangible) Linear (General)

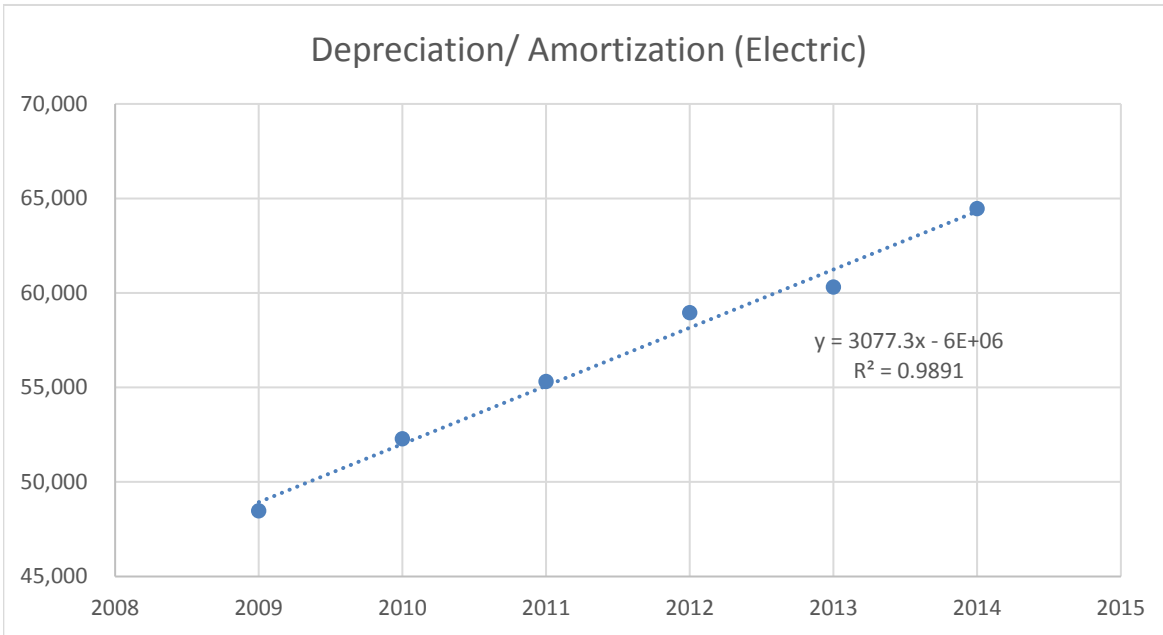
	2009	2010	2011	2012	2013	2014
Net Plant after DFIT	987,243	1,036,064	1,087,141	1,131,570	1,195,010	1,216,245

Annual Increase (slope below) 47,608
 Rate (Annual) 3.91%
 Rate (2-year, to 2016) **7.83%** (Escalation Factor)



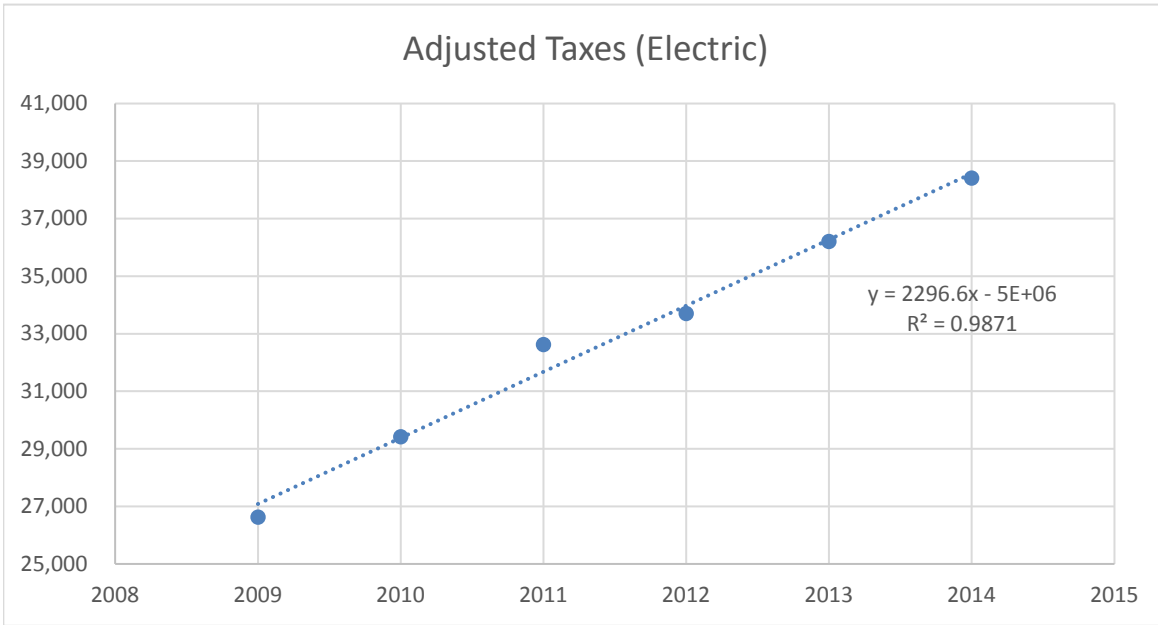
	2009	2010	2011	2012	2013	2014
Depreciation/ Amortization	48,466	52,270	55,304	58,946	60,308	64,456

Annual Increase (slope below) 3,077
 Rate (Annual) 4.77%
 Rate (2-year, to 2016) **9.55%** (Escalation Factor)



	2009	2010	2011	2012	2013	2014
Adjusted Taxes	26,617	29,412	32,614	33,701	36,201	38,403

Annual Increase (slope below) 2,297
 Rate (Annual) 5.98%
 Rate (2-year, to 2016) **11.96%** (Escalation Factor)



	2009	2010	2011	2012	2013	2014
Adj. Op Exp (2007-2014, excl. 2011-2012)	108,289	113,650			128,510	130,891
Adj. Op Exp (2011-2012)			123,419	134,594		
Adj. Op Exp (2013-2014)					128,510	130,891

	Slope	Rate (1yr)	Escalation
Rate (2013-2014, linear, slope below)	2,381.0	1.82%	3.64%
Company-proposed (2007-2014, linear)	3,926.7	3.00%	6.00%
Average		2.41%	4.82%

