

Delta Natural Gas Company, Inc.
CASE NO. 2018-00086

FIRST PSC DATA REQUEST
DATED APRIL 25, 2018

1. Refer to the Application, Schedule I. State if Delta is aware that the proposed rates will not produce sufficient revenues to meet the \$2,017,503 Pipeline Replacement Program (“PRP”) adjustment.

Response:

Delta is aware the proposed rates will not produce sufficient revenues to meet the PRP adjustment. When rounded to two decimal places, the monthly PRP rate yields \$2,016,103 which is \$1,400 different from the total PRP adjustment of \$2,017,503. Since a fixed charge must be rounded to two decimal places, there will always be a slight difference between the revenue generated by the rates and the amount requested. Adjustments could be made to the rate classes with fewer customers to adjust for the rounding; however, such adjustment would result in improper allocation of revenue across the customer classes. Delta believes the balancing adjustment within the filing appropriately handles issues caused by rounding of the rates as it ensures there is no over or under billing of PRP rates.

Sponsoring Witness:

Matthew D. Wesolosky

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2. Refer to the Application, Schedule V, the responses to Items 1.a., c., and d., and to Schedule VII.
 - a. The response to Schedule V, 1.a. indicates that Delta is proposing to include Aldyl-A plastic pipe as pipeline eligible for replacement through its PRP. Provide detailed information setting out how much of the \$3.05 to \$6.89 million annual estimated range shown in Schedule VII is related to steel pipeline currently eligible for replacement, and how much represents the cost of 168 miles of Aldyl-A plastic pipe which Delta now proposes to include in the PRP.
 - b. Refer to the response to Item 1.c. Provide support for the additional 15 years proposed to complete the PRP. Explain how this length of time was chosen, and state whether Delta considered other time periods such as 20 or 25 years in order to lessen the cost impact to its customers.
 - c. Provide support for the reasonableness of the \$7.8 million cap proposed in the response to Item 1.c. State whether Delta considered lower cap amounts to lessen the cost impact to its customers.
 - d. Provide estimates of the annual surcharge amounts for each customer class through 2033 based on the high and low ends of the annual cost projections provided in Schedule VII.
 - e. The response to Item 1.b. states that once a service has been inactive for five years, Delta schedules removal of the service line from the premise.
 - (1) Explain why Delta removes the service lines rather than abandoning them in place.
 - (2) Explain if Delta does any analysis to determine which service lines should be removed, or if there is a possibility the service may be renewed.

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Response:

- a. The PRP, as proposed, would provide for the replacement of 201 miles of pipe which includes approximately 168 miles of Aldyl-A pipe and approximately 33 miles of bare and unprotected steel pipe. In any given year, the amount of each type of pipe will vary as replacements will occur based on priority rather than proportionately. As noted in Item 3 of this data request, Delta will prioritize the replacement of PRP pipe based on prior leak history, irrespective of pipe type. Delta will then target older vintages of pipe, which are currently bare steel.

The costs estimates of \$3.05 and \$6.89 million for main replacements and retirements, as provided in Item 2c of this data question, use the historical cost of PRP pipe replacements and extrapolate the high and low cost per foot projections based on the estimated feet of pipe to be replaced. As the mix of bare steel versus Aldyl-A pipe could change from year to year, the projection does not differentiate between the two.

- b. Based on 2017 PRP replacements, Delta can replace an average of 11 miles of pipe a year. Accelerating the program through the use of additional resources, Delta believes it could replace up to 14 miles per year.

Delta chose a fifteen year program so that by replacing 14 miles of pipe per year, the newest vintage of pipe eligible for replacement was approximately 50 years old or less by the end of the program. In developing the program, Delta considered a fifteen year term with a five-year renewal option at the Commission's discretion. Delta recognizes that the decision regarding the pace of replacing at-risk pipe is a balance between the cost to the customer and the integrity and safety of the pipeline system.

- c. Attached are Delta's cash flow projections created to develop the high and low cost estimates.

The caps were created using a high and low estimated cost per foot derived from actual experience under the PRP program. The cost per foot was then escalated 2% per year for inflation. The cost per foot can vary widely from year to year based on the circumstances of the pipe being replaced. For example, factors that escalate the cost of replacement include geographic density, rock formations, crossings (highway, railroad and waterway), state right of ways and customers tapped into the main.

Lower cap amounts could be attained by replacing fewer feet of pipe on an annual basis. However, the longer at-risk pipe remains in service the greater the probability of failure. Delta's proposal to accelerate the replacement of the at-risk pipe is designed with the goal of replacing pipe before it fails and becomes a risk to public safety.

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- d. See attached estimates of the annual surcharge amounts for each customer class through 2033 based on the high and low ends of the annual cost projections provided in Schedule VII.

- e.
 - 1) Delta uses the term service line removals whenever a service is disconnected from the main and the above ground appurtenances are removed. Most often, the service line is purged, capped and left in place for potential future use.

 - 2) Before a service line is removed for any reason, Delta's customer service personnel contact the owner of the premise to determine if they anticipate coming back on service. If the customer does not intend to come back on service, the service line removal will be scheduled.

Sponsoring Witness:

Matthew D. Wesolosky

Delta Natural Gas
PRP Cash Flow Projections
Case No. 2018-00086
Item 2c

Inflation 2.00%

Pace: Fifteen year

		Low				High				
	Age of Newest Pipe		Min Replaced	PRP Spending	Remaining Pipe	Avg	Max Replaced	PRP Spending	Remaining Pipe	
	Min	\$ 36.87			1,061,981	\$ 71.57			1,061,981	
1	2018	36	\$ 37.61	(73,000)	2,745,340	988,981	\$ 73.00	(73,000)	5,329,102.20	988,981
2	2019	37	\$ 38.36	(73,000)	2,800,247	915,981	\$ 74.46	(73,000)	5,435,684.24	915,981
3	2020	38	\$ 39.13	(73,000)	2,856,252	842,981	\$ 75.95	(73,000)	5,544,397.93	842,981
4	2021	39	\$ 39.91	(73,000)	2,913,377	769,981	\$ 77.47	(73,000)	5,655,285.89	769,981
5	2022	40	\$ 40.71	(73,000)	2,971,645	696,981	\$ 79.02	(73,000)	5,768,391.61	696,981
6	2023	41	\$ 41.52	(73,000)	3,031,077	623,981	\$ 80.60	(73,000)	5,883,759.44	623,981
7	2024	42	\$ 42.35	(73,000)	3,091,699	550,981	\$ 82.21	(73,000)	6,001,434.63	550,981
8	2025	43	\$ 43.20	(73,000)	3,153,533	477,981	\$ 83.86	(73,000)	6,121,463.32	477,981
9	2026	44	\$ 44.06	(73,000)	3,216,604	404,981	\$ 85.53	(73,000)	6,243,892.58	404,981
10	2027	45	\$ 44.94	(73,000)	3,280,936	331,981	\$ 87.24	(73,000)	6,368,770.44	331,981
11	2028	46	\$ 45.84	(73,000)	3,346,554	258,981	\$ 88.99	(73,000)	6,496,145.85	258,981
12	2029	47	\$ 46.76	(73,000)	3,413,485	185,981	\$ 90.77	(73,000)	6,626,068.76	185,981
13	2030	48	\$ 47.70	(73,000)	3,481,755	112,981	\$ 92.58	(73,000)	6,758,590.14	112,981
14	2031	49	\$ 48.65	(73,000)	3,551,390	39,981	\$ 94.44	(73,000)	6,893,761.94	{2} 39,981
15	2032	50	\$ 49.62	(39,981)	1,983,944	-	\$ 96.32	(39,981)	3,851,121.73	-

Pace: Fifteen year with extension

		Low				High				
	Age of Newest Pipe		Min Replaced	PRP Spending	Remaining Pipe	Avg	Max Replaced	PRP Spending	Remaining Pipe	
	Min	\$ 36.87			1,061,981	\$ 71.57			1,061,981	
1	2018	36	\$ 37.61	(58,000)	2,181,229	1,003,981	\$ 73.00	(58,000)	4,234,081.20	1,003,981
2	2019	37	\$ 38.36	(58,000)	2,224,854	945,981	\$ 74.46	(58,000)	4,318,762.82	945,981
3	2020	38	\$ 39.13	(58,000)	2,269,351	887,981	\$ 75.95	(58,000)	4,405,138.08	887,981
4	2021	39	\$ 39.91	(58,000)	2,314,738	829,981	\$ 77.47	(58,000)	4,493,240.84	829,981
5	2022	40	\$ 40.71	(58,000)	2,361,033	771,981	\$ 79.02	(58,000)	4,583,105.66	771,981
6	2023	41	\$ 41.52	(58,000)	2,408,253	713,981	\$ 80.60	(58,000)	4,674,767.77	713,981
7	2024	42	\$ 42.35	(58,000)	2,456,418	655,981	\$ 82.21	(58,000)	4,768,263.13	655,981
8	2025	43	\$ 43.20	(58,000)	2,505,547	597,981	\$ 83.86	(58,000)	4,863,628.39	597,981
9	2026	44	\$ 44.06	(58,000)	2,555,658	539,981	\$ 85.53	(58,000)	4,960,900.96	539,981
10	2027	45	\$ 44.94	(58,000)	2,606,771	481,981	\$ 87.24	(58,000)	5,060,118.98	481,981
11	2028	46	\$ 45.84	(58,000)	2,658,906	423,981	\$ 88.99	(58,000)	5,161,321.36	423,981
12	2029	47	\$ 46.76	(58,000)	2,712,084	365,981	\$ 90.77	(58,000)	5,264,547.78	365,981
13	2030	48	\$ 47.70	(58,000)	2,766,326	307,981	\$ 92.58	(58,000)	5,369,838.74	307,981
14	2031	49	\$ 48.65	(58,000)	2,821,653	249,981	\$ 94.44	(58,000)	5,477,235.51	249,981
15	2032	50	\$ 49.62	(58,000)	2,878,086	191,981	\$ 96.32	(58,000)	5,586,780.22	191,981
16	2033	51	\$ 50.61	(58,000)	2,935,647	133,981	\$ 98.25	(58,000)	5,698,515.83	133,981
17	2034	52	\$ 51.63	(58,000)	2,994,360	75,981	\$ 100.22	(58,000)	5,812,486.15	75,981
18	2035	53	\$ 52.66	(58,000)	3,054,247	{1} 17,981	\$ 102.22	(58,000)	5,928,735.87	17,981
19	2036	54	\$ 53.71	(17,981)	965,807	-	\$ 104.26	(17,981)	1,874,770.55	-

{1} Low estimate
{2} High estimate

Delta Natural Gas
Impact on Customer Rates
Case No. 2018-00086
Item 2d

Schedule II - PRP Adjustment
Estimate Range - Low

	Actual	Projected															
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Investment																	
Annual		3,705,000	3,705,000	3,705,000	3,705,000	3,705,000	3,705,000	3,705,000	3,705,000	3,705,000	3,705,000	3,705,000	3,705,000	3,705,000	3,705,000	3,705,000	3,705,000
Cumulative	19,335,196	23,040,196	26,745,196	30,450,196	34,155,196	37,860,196	41,565,196	45,270,196	48,975,196	52,680,196	56,385,196	60,090,196	63,795,196	67,500,196	71,205,196	74,910,196	78,615,196
Accumulated Depreciation	(1,740,530)	(2,454,776)	(3,283,877)	(4,227,833)	(5,286,644)	(6,460,310)	(7,748,831)	(9,152,208)	(10,670,439)	(12,303,525)	(14,051,466)	(15,914,262)	(17,891,913)	(19,984,419)	(22,191,780)	(24,513,996)	(26,951,067)
Deferred Income Taxes	(6,554,440)	(7,265,182)	(7,951,067)	(8,611,716)	(9,246,848)	(9,856,308)	(10,439,944)	(10,997,653)	(11,528,834)	(12,033,487)	(12,511,540)	(12,962,993)	(13,388,517)	(13,787,514)	(14,158,970)	(14,503,048)	(14,819,396)
Net PRP Rate Base	11,040,226	13,320,238	15,510,252	17,610,646	19,621,704	21,543,578	23,376,421	25,120,335	26,775,923	28,343,184	29,822,190	31,212,941	32,514,766	33,728,263	34,854,446	35,893,152	36,844,733
WACOC, per Case No. 2010-00116		7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%
Allowed Return		1,061,656	1,236,206	1,403,613	1,563,899	1,717,077	1,863,159	2,002,154	2,134,108	2,259,023	2,376,903	2,487,749	2,591,508	2,688,227	2,777,986	2,860,774	2,936,617
Tax Gross-up Factor	{1}	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756
Return, Grossed-up for Income Taxes		1,420,029	1,653,499	1,877,416	2,091,809	2,296,694	2,492,087	2,678,000	2,854,498	3,021,578	3,179,251	3,327,514	3,466,298	3,595,665	3,715,724	3,826,457	3,927,902
Cost of Service Items																	
Depreciation Expense		714,246	829,101	943,956	1,058,811	1,173,666	1,288,521	1,403,376	1,518,231	1,633,086	1,747,941	1,862,796	1,977,651	2,092,506	2,207,361	2,322,216	2,437,071
Property Taxes		390,300	444,827	497,176	547,348	595,342	641,158	684,797	726,258	765,542	802,648	837,576	870,326	900,899	929,294	955,512	979,552
PRP Adjustment		2,524,575	2,927,427	3,318,548	3,697,967	4,065,701	4,421,767	4,766,174	5,098,987	5,420,206	5,729,839	6,027,886	6,314,275	6,589,070	6,852,379	7,104,185	7,344,525

{1} As calculated in the amended response to Item 5 of the Commission Staff's First Request for information in Case No. 2018-00040

Delta Natural Gas
Impact on Customer Rates
Case No. 2018-00086
Item 2d

Schedule III - Deferred Tax Calculation
Estimate Range - Low

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033			
Book Depreciation	714,246	829,101	943,956	1,058,811	1,173,666	1,288,521	1,403,376	1,518,231	1,633,086	1,747,941	1,862,796	1,977,651	2,092,506	2,207,361	2,322,216	2,437,071			
Tax Depreciation																			
MACRS 15 year property rates	Year Rate	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
		5.000%	9.500%	8.550%	7.695%	6.925%	6.233%	5.905%	5.905%	5.905%	5.905%	5.905%	5.905%	5.905%	5.905%	5.905%	2.952%		
	Prior Tax Expensing and Bonus Depreciation	Remaining Basis																	
	PRP Investment																		
2010	1,574,788	(1,493,193)	81,595	4,818	4,818	4,818	4,818	4,818	4,818	2,409	-	-	-	-	-	-	-		
2011	1,730,104	(1,730,104)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2012	3,796,271	(3,704,919)	91,352	5,394	5,394	5,394	5,394	5,394	5,394	5,394	5,394	2,697	-	-	-	-	-		
2013	2,961,542	(2,961,542)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2014	1,843,366	(1,843,116)	250	17	16	15	15	15	15	15	15	15	7	-	-	-	-		
2015	1,758,827	(1,677,567)	81,260	6,253	5,627	5,065	4,798	4,798	4,798	4,798	4,798	4,798	4,798	4,798	2,399	-	-		
2016	3,190,348	(3,052,621)	137,727	11,776	10,598	9,538	8,585	8,133	8,133	8,133	8,133	8,133	8,133	8,133	8,133	4,066	-		
2017	2,479,950	(2,420,581)	59,369	5,640	5,076	4,568	4,111	3,700	3,506	3,506	3,506	3,506	3,506	3,506	3,506	1,753	-		
	Qualifying Tax Expense	Remaining Basis																	
2018	3,705,000	(3,519,750)	185,250	3,529,013	17,599	15,839	14,255	12,829	11,547	10,939	10,939	10,939	10,939	10,939	10,939	10,939	5,469		
2019	3,705,000	(3,519,750)	185,250		3,529,013	17,599	15,839	14,255	12,829	11,547	10,939	10,939	10,939	10,939	10,939	10,939	10,939		
2020	3,705,000	(3,519,750)	185,250			3,529,013	17,599	15,839	14,255	12,829	11,547	10,939	10,939	10,939	10,939	10,939	10,939		
2021	3,705,000	(3,519,750)	185,250				3,529,013	17,599	15,839	14,255	12,829	11,547	10,939	10,939	10,939	10,939	10,939		
2022	3,705,000	(3,519,750)	185,250					3,529,013	17,599	15,839	14,255	12,829	11,547	10,939	10,939	10,939	10,939		
2023	3,705,000	(3,519,750)	185,250						3,529,013	17,599	15,839	14,255	12,829	11,547	10,939	10,939	10,939		
2024	3,705,000	(3,519,750)	185,250							3,529,013	17,599	15,839	14,255	12,829	11,547	10,939	10,939		
2025	3,705,000	(3,519,750)	185,250								3,529,013	17,599	15,839	14,255	12,829	11,547	10,939		
2026	3,705,000	(3,519,750)	185,250									3,529,013	17,599	15,839	14,255	12,829	10,939		
2027	3,705,000	(3,519,750)	185,250										3,529,013	17,599	15,839	14,255	10,939		
2028	3,705,000	(3,519,750)	185,250											3,529,013	17,599	15,839	11,547		
2029	3,705,000	(3,519,750)	185,250												3,529,013	17,599	12,829		
2030	3,705,000	(3,519,750)	185,250													3,529,013	14,255		
2031	3,705,000	(3,519,750)	185,250														17,599		
2032	3,705,000	(3,519,750)	185,250														17,599		
2033	3,705,000	(3,519,750)	185,250														3,529,013		
				3,562,911	3,578,141	3,591,848	3,604,427	3,616,393	3,627,745	3,638,684	3,647,213	3,655,743	3,663,985	3,672,227	3,683,159	3,691,691	3,696,164	3,701,284	3,705,000
Difference	(2,848,665)	(2,749,040)	(2,647,892)	(2,545,616)	(2,442,727)	(2,339,223)	(2,235,307)	(2,128,982)	(2,022,657)	(1,916,044)	(1,809,431)	(1,705,508)	(1,599,185)	(1,488,803)	(1,379,068)	(1,267,929)			
Statutory rate	{2}	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	
Increase in deferred tax liability	(710,742)	(685,885)	(660,649)	(635,131)	(609,460)	(583,636)	(557,709)	(531,181)	(504,653)	(478,053)	(451,453)	(425,524)	(398,997)	(371,456)	(344,077)	(316,348)			
Deferred tax liability, balance	(6,554,440)	(7,265,182)	(7,951,067)	(8,611,716)	(9,246,848)	(9,856,308)	(10,439,944)	(10,997,653)	(11,528,834)	(12,033,487)	(12,511,540)	(12,962,993)	(13,388,517)	(13,787,514)	(14,158,970)	(14,503,048)	(14,819,396)		
	{1}																		

{1} Represents the sum of the accumulated deferred income taxes 2010-2017 on the Summary page of Delta's PRP filing

{2} Statutory income tax rate calculated as follows:

Federal	21.00%
Kentucky	5.00%
Federal benefit of state deduction	-1.05%
	<u>24.95%</u>

Delta Natural Gas
Impact on Customer Rates
Case No. 2018-00086
Item 2d

Schedule II - PRP Adjustment
Estimate Range - High

	Actual	Projected															
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Investment																	
Annual		7,800,000	7,800,000	7,800,000	7,800,000	7,800,000	7,800,000	7,800,000	7,800,000	7,800,000	7,800,000	7,800,000	7,800,000	7,800,000	7,800,000	7,800,000	7,800,000
Cumulative	19,335,196	27,135,196	34,935,196	42,735,196	50,535,196	58,335,196	66,135,196	73,935,196	81,735,196	89,535,196	97,335,196	105,135,196	112,935,196	120,735,196	128,535,196	136,335,196	144,135,196
Accumulated Depreciation	(1,740,530)	(2,581,721)	(3,664,712)	(4,989,503)	(6,556,094)	(8,364,485)	(10,414,676)	(12,706,668)	(15,240,459)	(18,016,050)	(21,033,441)	(24,292,632)	(27,793,623)	(31,536,414)	(35,521,005)	(39,747,396)	(44,215,587)
Deferred Income Taxes	(6,554,440)	(8,206,681)	(9,807,245)	(11,355,269)	(12,850,032)	(14,290,990)	(15,677,634)	(17,009,696)	(18,286,573)	(19,508,266)	(20,674,703)	(21,785,884)	(22,842,479)	(23,843,891)	(24,789,106)	(25,678,287)	(26,509,573)
Net PRP Rate Base	11,040,226	16,346,794	21,463,239	26,390,424	31,129,070	35,679,721	40,042,885	44,218,832	48,208,164	52,010,880	55,627,052	59,056,681	62,299,094	65,354,891	68,225,085	70,909,513	73,410,036
WACOC, per Case No. 2010-00116		7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%	7.97025%
Allowed Return		1,302,880	1,710,674	2,103,383	2,481,065	2,843,763	3,191,518	3,524,351	3,842,311	4,145,397	4,433,615	4,706,965	4,965,394	5,208,948	5,437,710	5,651,665	5,850,963
Tax Gross-up Factor	{1}	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756	1.33756
Return, Grossed-up for Income Taxes		1,742,681	2,288,129	2,813,401	3,318,573	3,803,704	4,268,847	4,714,032	5,139,322	5,544,717	5,930,226	6,295,848	6,641,512	6,967,281	7,273,263	7,559,442	7,826,015
Cost of Service Items																	
Depreciation Expense		841,191	1,082,991	1,324,791	1,566,591	1,808,391	2,050,191	2,291,991	2,533,791	2,775,591	3,017,391	3,259,191	3,500,991	3,742,791	3,984,591	4,226,391	4,468,191
Property Taxes		465,534	592,888	715,658	833,844	947,445	1,056,461	1,160,893	1,260,740	1,356,003	1,446,681	1,532,775	1,614,284	1,691,209	1,763,549	1,831,305	1,894,476
PRP Adjustment		3,049,406	3,964,008	4,853,850	5,719,008	6,559,539	7,375,499	8,166,916	8,933,853	9,676,312	10,394,299	11,087,814	11,756,787	12,401,281	13,021,403	13,617,137	14,188,681

{1} As calculated in the amended response to Item 5 of the Commission Staff's First Request for information in Case No. 2018-00040

Delta Natural Gas
Impact on Customer Rates
Case No. 2018-00086
Item 2d

Schedule III - Deferred Tax Calculation
Estimate Range - High

		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
Book Depreciation		841,191	1,082,991	1,324,791	1,566,591	1,808,391	2,050,191	2,291,991	2,533,791	2,775,591	3,017,391	3,259,191	3,500,991	3,742,791	3,984,591	4,226,391	4,468,191	
Tax Depreciation																		
MACRS 15 year property rates	Year Rate	1 5.000%	2 9.500%	3 8.550%	4 7.695%	5 6.925%	6 6.233%	7 5.905%	8 5.905%	9 5.905%	10 5.905%	11 5.905%	12 5.905%	13 5.905%	14 5.905%	15 5.905%	16 2.952%	
	Prior Tax Expensing and Bonus Depreciation																	
	PRP Investment																	
	Remaining Basis																	
2010	1,574,788	(1,493,193)	81,595	4,818	4,818	4,818	4,818	4,818	4,818	2,409	-	-	-	-	-	-	-	
2011	1,730,104	(1,730,104)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2012	3,796,271	(3,704,919)	91,352	5,394	5,394	5,394	5,394	5,394	5,394	5,394	5,394	2,697	-	-	-	-	-	
2013	2,961,542	(2,961,542)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2014	1,843,366	(1,843,116)	250	17	16	15	15	15	15	15	15	15	15	7	-	-	-	
2015	1,758,827	(1,677,567)	81,260	6,253	5,627	5,065	4,798	4,798	4,798	4,798	4,798	4,798	4,798	4,798	2,399	-	-	
2016	3,190,348	(3,052,621)	137,727	11,776	10,598	9,538	8,585	8,133	8,133	8,133	8,133	8,133	8,133	8,133	8,133	8,133	4,066	
2017	2,479,950	(2,420,581)	59,369	5,640	5,076	4,568	4,111	3,700	3,506	3,506	3,506	3,506	3,506	3,506	3,506	3,506	1,753	
	Qualifying Tax Expense																	
	Remaining Basis																	
2018	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	11,513
2019	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
2020	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
2021	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
2022	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
2023	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
2024	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
2025	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
2026	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
2027	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
2028	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
2029	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
2030	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
2031	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
2032	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
2033	7,800,000	(7,410,000)	390,000	7,429,500	37,050	33,345	30,011	27,008	24,309	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030	23,030
		7,463,399	7,498,080	7,529,293	7,557,627	7,583,772	7,607,886	7,630,915	7,651,535	7,672,156	7,692,488	7,712,821	7,735,843	7,756,466	7,773,029	7,790,240	7,800,000	
Difference		(6,622,207)	(6,415,088)	(6,204,502)	(5,991,036)	(5,775,381)	(5,557,695)	(5,338,924)	(5,117,744)	(4,896,565)	(4,675,097)	(4,453,630)	(4,234,852)	(4,013,674)	(3,788,438)	(3,563,849)	(3,331,809)	
Statutory rate	{2}	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	24.95%	
Increase in deferred tax liability		(1,652,241)	(1,600,565)	(1,548,023)	(1,494,763)	(1,440,958)	(1,386,645)	(1,332,062)	(1,276,877)	(1,221,693)	(1,166,437)	(1,111,181)	(1,056,596)	(1,001,412)	(945,215)	(889,180)	(831,286)	
Deferred tax liability, balance	{1}	(6,554,440)	(8,206,681)	(9,807,245)	(11,355,269)	(12,850,032)	(14,290,990)	(15,677,634)	(17,009,696)	(18,286,573)	(19,508,266)	(20,674,703)	(21,785,884)	(22,842,479)	(23,843,891)	(24,789,106)	(25,678,287)	(26,509,573)

{1} Represents the sum of the accumulated deferred income taxes 2010-2017 on the Summary page of Delta's PRP filing

{2} Statutory income tax rate calculated as follows:

Federal	21.00%
Kentucky	5.00%
Federal benefit of state deduction	-1.05%
	<u>24.95%</u>

Delta Natural Gas Company, Inc.
CASE NO. 2018-00086

FIRST PSC DATA REQUEST
DATED APRIL 25, 2018

3. State how Delta proposes to integrate the replacement of Aldyl-A plastic pipe into its steel pipeline replacement efforts. The explanation should include how the risk ranking of the vintage plastic pipe compares to the steel pipe which is eligible for replacement through the program.

Response:

Delta utilizes its leak history to prioritize the replacement of bare steel pipe for the PRP program. In planning its construction activity for a year, Delta reviews the prior year leak classifications and number of leak occurrences in a section of pipe to determine which pipes require priority for replacement. This approach gives high risk pipe replacement priority. To the extent the construction crews can take on additional projects, the oldest vintage pipe is given secondary priority. The longer at-risk pipe remains in service, the greater the probability of failure.

To integrate the Aldyl-A pipe into the PRP program, the leak analysis will be broadened to include bare steel and vintage plastic pipe. Priority between the two types of pipe will be dictated by leak history. Then, consistent with Delta's current approach, additional replacements will target the older vintages of PRP pipe first.

The combined integration of vintage plastic pipe into the PRP and acceleration of replacement efforts is designed with the intention to increase public safety by replacing at-risk pipe before it fails.

Sponsoring Witness:

John B. Brown

Delta Natural Gas Company, Inc.
CASE NO. 2018-00086

FIRST PSC DATA REQUEST
DATED APRIL 25, 2018

4. Provide the number of leaks per year on Delta's system beginning in 2009 through the most recently available leak survey.

Response:

See attached.

Sponsoring Witness:

Matthew D. Wesolosky

Delta Natural Gas
Number of Leaks Reported by Year
Case No. 2018-00086
Item 4

Year	Leaks Reported
2009	572
2010	530
2011	515
2012	409
2013	349
2014	406
2015	409
2016	377
2017	383

Delta Natural Gas Company, Inc.
CASE NO. 2018-00086

FIRST PSC DATA REQUEST
DATED APRIL 25, 2018

5. Provide the annual lost and unaccounted for gas percentage on Delta's system beginning in 2009 through the most available information.

Response:

See attached.

Sponsoring Witness:

Matthew D. Wesolosky

Delta Natural Gas
Lost and Unaccounted For Gas
Case No. 2018-00086
Item 5

Year	Lost and Unaccounted for Gas
2009	3.67%
2010	1.88%
2011	2.26%
2012	2.48%
2013	4.03%
2014	2.71%
2015	2.62%
2016	0.20%
2017	0.05%

Delta Natural Gas Company, Inc.
CASE NO. 2018-00086

FIRST PSC DATA REQUEST
DATED APRIL 25, 2018

6. Provide a discussion of Delta's PRP cost containment efforts. The discussion should include the bid or Request for Proposal process used to ensure that the cost is as low as possible for Delta's customers.

Response:

Delta's PRP efforts are a combination of in-house and outside construction crews. There are currently two primary construction companies in Delta's service territory which can assist with replacement projects. Delta sends these companies an invitation to bid which includes construction specifications and standards, list of equipment needed, the crew size and crew skill set. The most recent invitation to bid was performed in 2017. The company who won the 2017 bid agreed to honor its 2017 price for calendar 2018. Delta will conduct its next invitation to bid in 2019.

In response to the invitation to bid, the companies provide Delta an itemized calculation which arrives at a fixed hourly rate per five person and three person crew for the entire year. Delta is currently utilizing the lowest cost provider; however the decision is not limited to price alone. Delta considers the company's operator qualification program, safety policy, safety record, drug and alcohol policy, and overall capabilities.

Delta also takes steps during the planning and construction process to reduce costs. When feasible, Delta either plans several jobs in close geographical proximity or for larger projects schedules multiple crews on a single project. This approach creates cost savings as synergies with multiple crews reduces construction down time, allows for sharing of employees and equipment and allows for the project to be managed by a single inspector.

Additionally, inclusion of vintage plastic pipe into the PRP program would create efficiencies for construction crews where sections of Delta's pipeline system containing both vintage plastic and bare steel could be replaced in a single project, rather than revisiting the vintage plastic pipe at a future date.

Sponsoring Witness:

Matthew D. Wesolosky

Delta Natural Gas Company, Inc.
CASE NO. 2018-00086

FIRST PSC DATA REQUEST
DATED APRIL 25, 2018

7. State whether the cost estimates provided in Schedule VII include changes to the federal corporate tax rate. If not, provide any revisions necessary to reflect those changes.

Response:

The cost estimates provided in Schedule VII are the anticipated construction costs incurred on an annual basis and therefore do not include a provision for income taxes. The impact of changes to both the federal and state corporate income tax rates tax law change have been reflected in the gross-up factor and deferred tax calculations to determine the annual PRP adjustment as provided in Item 2d of this data request.

Sponsoring Witness:

Matthew D. Wesolosky

Delta Natural Gas Company, Inc.
CASE NO. 2018-00086

FIRST PSC DATA REQUEST
DATED APRIL 25, 2018

8. Refer to the Application, Exhibit 1, Schedule 1. This page shows a different PRP adjustment from what is shown on Application Schedule 1. Explain each difference between the two pages, and explain which rates Delta is requesting the Public Service Commission to approve.

Response:

Exhibit I includes a revised Schedule I and Schedule III. The difference between Exhibit I and the Application schedules is the amount of property tax expense calculated on Schedule III which ultimately flows through to line 10 of Schedule I.

Delta is requesting approval to update the property tax expense calculation on Schedule III to utilize the average property tax rate for the current year as opposed to an outdated rate. As a result, Delta is requesting approval for the PRP adjustment of \$2,181,023 as shown on Exhibit I, Schedule I.

Sponsoring Witness:

Matthew D. Wesolosky

Delta Natural Gas Company, Inc.
CASE NO. 2018-00086

FIRST PSC DATA REQUEST
DATED APRIL 25, 2018

9. Provide all Application exhibits, Schedules, and responses and all responses to this request for information, as applicable, in Excel spreadsheet format with all cells unprotected and all formulae intact.

Response:

All requested schedules have been provided in response to this data request in Excel spreadsheet format.

Sponsoring Witness:

Matthew D. Wesolosky

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF CLARK)

The undersigned, John B. Brown, being duly sworn, deposes and says that he is President, Treasurer, and Secretary of Delta Natural Gas Company, Inc. and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness and the answers contained therein are true and correct to the best of his information, knowledge and belief.

John B. Brown

John B. Brown

Subscribed and sworn to before me, a Notary Public, in said County and State this 4th day of May 2018.

Emily P. Bennett (SEAL)

Notary Public

My Commission Expires:
6/20/20



VERIFICATION

COMMONWEALTH OF KENTUCKY)
COUNTY OF CLARK) SS:

The undersigned, Matthew D. Wesolosky, being duly sworn, deposes and says that he is Vice President - Controller of Delta Natural Gas Company, Inc. and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Handwritten signature of Matthew D. Wesolosky in blue ink over a horizontal line. The printed name 'Matthew D. Wesolosky' is written below the line.

Subscribed and sworn to before me, a Notary Public, in said County and State this 7th day of May 2018.

Handwritten signature of Emily P. Bennett in blue ink over a horizontal line. The printed name 'Emily P. Bennett (SEAL)' is written below the line, with 'Notary Public' printed underneath.



My Commission Expires: 6/20/20