Danville Utility Commission Meeting Agenda
4:00 p.m., November 30, 2020

City Council Chambers, Danville City Hall

I. Call to Order
- A. Roll Call

II. Discussion/Business Items
- A. Minutes of the October 26, 2020 Commission Meeting
- B. Review of Utilities' Financial Statements
- C. 2021 Biennial Rate Study
- D. Battery Energy Storage System Proposal

III. Communications
- A. City Manager
- B. Utilities Staff
- C. Commission Members
- D. Public Comments
- E. Director's Report

IV. Adjournment

<u>Next Utility Commission Meeting</u>

4:00 p.m. Monday, January 25, 2021

City Council Chambers
4th Floor, City Hall

Danville Utility Commission
4:00 p.m. October 26, 2020 Meeting
4th Floor Conference Room, City Hall
Minutes

Commission Members Present: Sheila Williamson-Branch, Vanessa Cain, Helm Dobbins, Bert Eades, Ken Larking, Paul Liepe

Commission Members Absent:

Staff Present: Ryan Dodson, Jason Grey, Janet Davis, Jennifer Holley

Others Present:

Call to Order

Chairman Cain opened the meeting and asked that the attendance be recorded. As a quorum was present, the meeting was called to order.

Discussion/Business Items

Minutes of September 28, 2020 Commission Meeting

Ms. Cain asked for any corrections, deletions, or adjustments to the minutes from September 28, 2020.

Mr. Eades made a motion to approve the minutes. Mr. Dobbins seconded, all members voted in favor, and the motion carried unanimously.

Review of Utilities' Financial Statements

Ms. Holley presented the utility financial statements for each utility fund and addressed questions from the commissioners.

Mr. Eades asked what the jobbing cost line item is on the electric statement. Ms. Holley responded this is for items that may be able to be billed third party.

Dr. Miller asked why industrial income was lower than budget. Mr. Grey responded that the budget last year was based on the current usage at that time and with IKEA closing and Unilin having some changes in their use this affected the overall consumption by industrial customers.

Ms. Cain asked if there was still funds available through the CARES Act for customers needing financial assistance with their utility bills. Ms. Holley responded that there is still funds available through Social Services.

BP Gas Supply Update

Joey Caskey, Josh McCall, and Christine Wright from BP discussed the current gas market. Natural gas purchases are affected by new infrastructure, weather, and the economy among other factors. The commodity prices are passed through to our customers and can be hedged out for up to 10 years. The City has commitments until March 2021 and is starting to look at favorable options in future years.

Mr. Eades asked how geopolitical factors affect pricing. Mr. McCall said that there are currently mixed signals as far as where OPEC will be in the future and Russia is uncertain as well.

Mr. Eades asked if risk was built in with fracking depending on any legislation that may occur after the presidential election. Mr. McCall responded that it is not built into the range and would be additional risk.

Discussion on Fiscal Year 2021 and 2022 Capital Projects

Jason Grey presented the progress made on current fiscal year 2021 capital projects and what proposed projects will likely be included in the upcoming fiscal year 2022 budget presentation in January.

Department Discussions
There was no further communication from staff, commission members, or the public.

Adjournment

Ms. Cain stated the next meeting is scheduled for November 30, 2020 and will be a combined November and December meeting. Mr. Larking made a motion to adjourn. Mr. Dobbins seconded, all members voted in favor, and the motion carried unanimously. There being no further business, Ms. Cain adjourned the meeting at 5:20pm.

November 30, 2020
Date Approved

Submitted by Janet C. Davis
Secretary to the DUC

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Chairman
Danville Utility Commission

Commission Item Number: DUC2011130 - 1
Utility Commission Meeting: November 30, 2020
Item: II. B. Review of Utilities' Financial Statements

Financial Report

September financials will be reviewed.

UTILITY FUNDS
COMBINING STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN FUND NET ASSETS
FOR THE PERIOD ENDED SEPTEMBER 30, 2020 (YTD)
UNAUDITED

	WASTEWATER	WATER	GAS	ELECTRIC	TELECOM	TOTAL	CURRENT 20-21 BUDGET	LAST YEAR TO DATE
OPERATING REVENUE	2,211,586.50	2,251,432.62	2,388,490.84	31,456,426.95	174,166.59	38,482,103.50	169,322,180.00	40,066,034.83
COST OF SALES								
PURCHASED SERVICES	-	-	1,994,221.60	23,578,365.87	15,629.93	25,588,217.40	109,277,060.00	26,065,638.22
PRODUCTION	-	-	-	130,420.01	-	130,420.01	1,161,914.34	174,201.09
TOTAL COST OF SALES	-	-	1,994,221.60	23,708,785.88	15,629.93	25,718,637.41	110,438,974.34	26,239,839.31
GROSS PROFIT	2,211,586.50	2,251,432.62	394,269.24	7,747,641.07	158,536.66	12,763,466.09	58,883,205.66	13,826,195.52
GROSS PROFIT %	100.00%	100.00%	16.51%	24.63%	91.03%	33.17%	34.78%	34.51%
OPERATING EXPENSES								
TRANSMISSION & TREATMENT	906,153.14	463,631.22	-	343,695.48	-	1,713,479.84	6,881,796.06	1,329,940.28
ENGINEERING	-	57,542.25	54,369.15	231,443.41	-	343,354.81	1,826,807.95	264,562.72
DISTRIBUTION	559,154.11	290,888.61	129,992.19	3,187,944.10	-	4,167,979.01	17,391,054.40	4,236,469.35
SERVICE	23,917.47	15,342.49	8,218.75	-	-	47,478.71	382,580.00	33,899.74
METERS & REGULATORS	-	19,747.80	21,859.04	90,751.33	(8.80)	132,349.37	699,846.14	137,384.91
GENERAL & ADMINISTRATIVE	418,527.10	828,998.61	704,311.66	1,317,589.98	196,023.03	3,465,450.38	15,792,518.82	3,963,550.36
TOTAL OPERATING EXPENSES	1,907,751.82	1,676,150.98	918,750.79	5,171,424.30	196,014.23	9,870,092.12	42,974,603.37	9,965,807.36
OPERATING INCOME (LOSS)	303,834.68	575,281.64	(524,481.55)	2,576,216.77	(37,477.57)	2,893,373.97	15,908,602.29	3,860,388.16
NON-OPERATING REVENUE (EXPENSE)								
INTEREST INCOME ON INVESTMENTS	35,548.34	34,077.65	40,504.77	94,986.15	2,689.36	207,806.27	951,800.00	380,750.53
ENERGY EFFICIENCY RECOVERY	-	-	-	-	-	-	(110,160.09)	(59,830.74)
RECOVERIES AND REBATES	1,046.22	2,441.17	83.03	(24,131.50)	-	(20,561.08)	(122,050.00)	12,065.60
GAIN/LOSS ON DISPOSAL	-	-	-	2,089.46	-	2,089.46	48,970.00	185.00
JOBBING INCOME (LOSS)	5,969.36	22,376.45	4,319.53	306,927.30	(862.29)	338,730.35	495,850.00	174,349.29
INTEREST ON LONG TERM INDEBTEDNESS	(44,557.66)	(44,101.17)	(21,750.06)	(881,631.05)	-	(992,039.94)	(1,774,700.00)	(955,315.62)
NET INCOME (LOSS)	301,840.94	590,075.74	(501,324.28)	2,074,457.13	(35,650.50)	2,429,399.03	15,398,312.20	3,412,592.22
OPERATING TRANSFERS IN(OUT)	(176,439.99)	(237,575.01)	(796,582.50)	(2,607,402.51)	(20,250.00)	(3,838,250.01)	(15,353,000.00)	(3,838,250.01)
NET INCOME AFTER TRANSFERS	125,400.95	352,500.73	(1,297,906.78)	(532,945.38)	(55,900.50)	(1,408,850.98)	45,312.20	(425,657.79)
NET ASSETS JULY 1, AS RESTATED	62,156,573.90	47,244,511.09	56,214,191.52	170,688,476.88	8,647,107.61	344,950,861.00		
NET INCOME AFTER TRANSFERS	125,400.95	352,500.73	(1,297,906.78)	(532,945.38)	(55,900.50)	(1,408,850.98)		
FEDERAL GRANT	-	-	-	-	-	-		
CONTRIBUTION IN AID	12,910.00	-	-	-	-	12,910.00		
NET ASSETS SEPTEMBER 2020	62,294,884.85	47,597,011.82	54,916,284.74	170,155,531.50	8,591,207.11	343,554,920.02		
NET ASSETS								
CONTRIBUTED CAPITAL - FIXED ASSETS	3,935,841.44	4,676,282.92	1,340,510.58	13,721,622.53	337,248.59	24,011,506.06		
RESTRICTED FOR INVESTMENT IN FIXED ASSETS	45,350,715.82	30,114,647.33	38,722,436.60	117,638,418.20	7,062,516.76	238,888,734.71		
RESTRICTED FOR PROJECTS IN PROGRESS	9,666,488.32	10,606,910.28	6,719,994.31	8,086,430.54	639,533.19	35,719,356.64		
RESTRICTED FOR ENCUMBRANCES	1,898,913.88	105,029.89	37,968.28	972,201.53	5,770.34	3,019,883.92		
RESTRICTED FOR ENERGY EFFICIENCY	-	-	-	-	-	-		
NET PENSION ASSETS	165,573.00	333,715.00	287,208.00	1,158,908.00	35,936.00	1,981,340.00		
DEFERRED OUTFLOWS - PENSION	205,037.00	413,258.00	355,665.00	1,435,139.00	44,502.00	2,453,601.00		
UNRESTRICTED	1,277,352.39	1,760,426.40	7,808,166.97	28,577,950.70	510,202.23	39,934,098.69		
TOTAL NET ASSETS	62,294,884.85	47,597,011.82	54,916,284.74	170,155,531.50	8,591,207.11	343,554,920.02		

CITY OF DANVILLE
UTILITY FUNDS
COMBINING STATEMENT OF NET ASSETS - UNAUDITED
SEPTEMBER 30, 2020

		WASTEWATER	WATER	GAS	ELECTRIC	TELECOM	SEPTEMBER 30, 2020
ASSETS							
Equity in pooled Cash and Investments	$	12,173,522.60	11,495,709.63	13,118,508.81	30,028,548.33	859,981.46	67,676,270.83
Receivables (Net of allowances for Uncollectible):							
Accounts		1,002,548.46	434,784.38	1,172,049.64	16,311,005.26	97,339.41	19,017,727.15
Power/Gas Cost Recovery		-	-	24,606.80	2,188,691.27	-	2,213,298.07
Pension Assets		165,573.00	333,715.00	287,208.00	1,158,908.00	35,936.00	1,981,340.00
Inventory of Gas, Materials and Supplies, at Cost		-	540,088.82	744,266.76	1,657,657.50	185,582.30	3,127,595.38
Fixed Assets		99,095,521.41	77,237,460.27	71,430,738.94	320,681,518.32	10,949,191.39	579,394,430.33
Accumulated Depreciation		(47,854,805.22)	(40,508,902.56)	(30,420,818.60)	(143,703,703.64)	(3,549,426.04)	(266,037,656.06)
Deferred Outflows - Pension		205,037.00	413,258.00	355,665.00	1,435,139.00	44,502.00	2,453,601.00
TOTAL ASSETS	$	64,787,397.25	49,946,113.54	56,712,225.35	229,757,764.04	8,623,106.52	409,826,606.70
LIABILITIES AND NET ASSETS							
Liabilities							
Accounts Payable	$	503,821.07	259,413.73	766,431.38	8,329,468.67	21,292.98	9,880,427.83
Accrued Interest Payable		34,532.40	33,632.09	17,610.92	620,360.67	-	706,136.08
Customer Deposits		-		-	3,877,235.93	-	3,877,235.93
Accrued Vacation, Sick Leave & Workers Comp.		-	118,428.44	64,925.15	552,506.27	10,606.43	746,466.29
Deferred Gain / Loss - Refunding Bonds		(129,803.08)	(123,763.30)	(69,312.09)	(1,267,774.71)	-	(1,590,653.18)
Original Issue Premium/Discount (Refunding Bonds)		160,704.43	156,720.87	80,941.41	4,297,943.41	-	4,696,310.12
General Obligation Bonds Payable		1,923,257.75	1,904,669.89	935,343.84	42,587,605.25	-	47,350,876.73
Revenue Bonds Payable		(0.17)	-	-	-	-	(0.17)
Long-Term Leases, Notes, and Contracts Payable		-	-	-	604,887.05	-	604,887.05
TOTAL LIABILITIES	$	2,492,512.40	2,349,101.72	1,795,940.61	59,602,232.54	31,899.41	66,271,686.68
Net Assets							
Contributed Capital	$	3,935,841.44	4,676,282.92	1,340,510.58	13,721,622.53	337,248.59	24,011,506.06
Retained Earnings:							
Restricted for Investment in Fixed Assets	$	45,350,715.82	30,114,647.33	38,722,436.60	117,638,418.20	7,062,516.76	238,888,734.71
Restricted for Incomplete Projects		9,666,488.32	10,606,910.28	6,719,994.31	8,086,430.54	639,533.19	35,719,356.64
Restricted for Subsequent Expenses		1,898,913.88	105,029.89	37,968.28	972,201.53	5,770.34	3,019,883.92
Net Pension Assets		165,573.00	333,715.00	287,208.00	1,158,908.00	35,936.00	1,981,340.00
Deferred Outflows - Pension		205,037.00	413,258.00	355,665.00	1,435,139.00	44,502.00	2,453,601.00
Unrestricted		1,277,352.39	1,760,426.40	7,808,166.97	28,577,950.70	510,202.23	39,934,098.69
Total Retained Earnings	$	58,359,043.41	42,920,728.90	53,575,774.16	156,433,908.97	8,253,958.52	319,543,413.96
TOTAL NET ASSETS	$	62,294,884.85	47,597,011.82	54,916,284.74	170,155,531.50	8,591,207.11	343,554,920.02
TOTAL LIABILITIES AND NET ASSETS	$	64,787,397.25	49,946,113.54	56,712,225.35	229,757,764.04	8,623,106.52	409,826,606.70

CITY OF DANVILLE
UTILITY FUNDS
COMBINING STATEMENT OF REVENUES, EXPENSES,
AND CHANGES IN FUND NET ASSETS
FOR THE PERIOD ENDED SEPTEMBER 30, 2020

	WASTEWATER	WATER	GAS	ELECTRIC	TELECOM	SEPTEMBER 30, 2020
Operating revenues:						
Charges for Services	$ 2,211,586.50	2,251,432.62	2,388,490.84	31,456,426.95	174,166.59	38,482,103.50
Operating Expenses:						
Purchased Services	$ -	-	1,994,221.60	23,578,365.87	15,629.93	25,588,217.40
Production	-	-	-	130,420.01	-	130,420.01
Transmission & Treatment	906,153.14	463,631.22	-	343,695.48	-	1,713,479.84
Engineering	-	57,542.25	54,369.15	231,443.41	-	343,354.81
Distribution	559,154.11	290,888.61	129,992.19	3,187,944.10	-	4,167,979.01
Service	23,917.47	15,342.49	8,218.75	-	-	47,478.71
Meters & Regulators	-	19,747.80	21,859.04	90,751.33	(8.80)	132,349.37
Administrative	418,527.10	828,998.61	704,311.66	1,317,589.98	196,023.03	3,465,450.38
Total Operating Expenses	$ 1,907,751.82	1,676,150.98	2,912,972.39	28,880,210.18	211,644.16	35,588,729.53
Operating Income (Loss)	$ 303,834.68	575,281.64	(524,481.55)	2,576,216.77	(37,477.57)	2,893,373.97
Non-Operating Revenues (Expenses):						
Jobbing Income (Loss)	5,969.36	22,376.45	4,319.53	306,927.30	(862.29)	338,730.35
Interest Income	35,548.34	34,077.65	40,504.77	94,986.15	2,689.36	207,806.27
Energy Efficiency Recovery	-	-	-	-	-	-
Gain (Loss) on Disposal of Property	-	-	-	2,089.46	-	2,089.46
Recoveries and Rebates	1,046.22	2,441.17	83.03	(24,131.50)	-	(20,561.08)
Interest Expense	(44,557.66)	(44,101.17)	(21,750.06)	(881,631.05)	-	(992,039.94)
Total Non-Operating Revenues (Expenses)	$ (1,993.74)	14,794.10	23,157.27	(501,759.64)	1,827.07	(463,974.94)
Income (Loss) Before Operating Transfers	$ 301,840.94	590,075.74	(501,324.28)	2,074,457.13	(35,650.50)	2,429,399.03
Operating Transfers:						
Transfers In (Out)	(176,439.99)	(237,575.01)	(796,582.50)	(2,607,402.51)	(20,250.00)	(3,838,250.01)
Total Operating Transfers	$ (176,439.99)	(237,575.01)	(796,582.50)	(2,607,402.51)	(20,250.00)	(3,838,250.01)
Net Income (Loss)	$ 125,400.95	352,500.73	(1,297,906.78)	(532,945.38)	(55,900.50)	(1,408,850.98)
Net Assets - July 1, 2020, as restated	62,156,573.90	47,244,511.09	56,214,191.52	170,688,476.88	8,647,107.61	344,950,861.00
Net Income (Loss)	125,400.95	352,500.73	(1,297,906.78)	(532,945.38)	(55,900.50)	(1,408,850.98)
Contribution In Aid of Construction	12,910.00	-	-	-	-	12,910.00
Net Assets - August 31, 2020	$ 62,294,884.85	47,597,011.82	54,916,284.74	170,155,531.50	8,591,207.11	343,554,920.02

UTILITY FUNDS
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN FUND NET ASSETS - UNAUDITED
FOR THE PERIOD ENDED SEPTEMBER 30, 2020

WASTEWATER - FINAL

	ORIGINAL BUDGET 2020-21	ADJUSTMENTS AND CARRYFORWARDS	CURRENT BUDGET 2020-21	SEPTEMBER 2020	PERCENT OF CURRENT BUDGET	SEPTEMBER 2019
OPERATING REVENUE	9,118,040.00		9,118,040.00	2,211,586.50	24.26%	2,504,365.95
OPERATING EXPENSES						
TRANSMISSION & TREATMENT	3,088,200.00	27,977.16	3,116,177.16	906,153.14	29.08%	496,968.33
ENGINEERING	-		-	-		-
DISTRIBUTION	2,509,070.00	127,017.58	2,636,087.58	559,154.11	21.21%	596,282.19
SERVICE	140,230.00		140,230.00	23,917.47	17.06%	1,609.97
METERS & REGULATORS	-		-	-		-
BAD DEBT	36,000.00		36,000.00	1,856.12	5.16%	8,535.63
GENERAL & ADMINISTRATIVE	1,808,530.00		1,808,530.00	416,670.98	23.04%	435,755.31
TOTAL OPERATING EXPENSES	7,582,030.00	154,994.74	7,737,024.74	1,907,751.82	24.66%	1,539,151.43
OPERATING INCOME (LOSS)	1,536,010.00	(154,994.74)	1,381,015.26	303,834.68	22.00%	965,214.52
NON-OPERATING REVENUE (EXPENSE)						
INTEREST INCOME ON INVESTMENTS	118,200.00		118,200.00	35,548.34	30.07%	54,407.29
RECOVERIES AND REBATES	-		-	1,046.22		5,803.16
GAIN/LOSS ON DISPOSAL	-		-	-		-
JOBBING INCOME (LOSS)	48,500.00		48,500.00	5,969.36	12.31%	12,005.00
INTEREST ON LONG TERM INDEBTEDNESS	(78,250.00)		(78,250.00)	(44,557.66)	56.94%	(62,402.34)
NET INCOME (LOSS)	1,624,460.00	(154,994.74)	1,469,465.26	301,840.94	20.54%	975,027.63
OPERATING TRANSFERS IN (OUT)	(705,760.00)		(705,760.00)	(176,439.99)	25.00%	(176,439.99)
NET INCOME AFTER TRANSFERS	918,700.00	(154,994.74)	763,705.26	125,400.95	16.42%	798,587.64
CONTRIBUTION IN AID	38,000.00		38,000.00	12,910.00	33.97%	
REGULAR CAPITAL MAINTENANCE	(126,300.00)	(236,178.50)	(362,478.50)	(35,515.41)	9.80%	
CAPITAL PROJECTS	(4,150,000.00)		(4,150,000.00)	(252,958.62)	6.10%	
DEBT SERVICE	(333,340.00)		(333,340.00)	(120,321.00)	36.10%	
DEPRECIATION	2,145,750.00		2,145,750.00	492,945.06	22.97%	

UTILITY FUNDS
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN FUND NET ASSETS - UNAUDITED
FOR THE PERIOD ENDED SEPTEMBER 30, 2020

WATER - FINAL

	ORIGINAL BUDGET 2020-21	ADJUSTMENTS AND CARRYFORWARDS	CURRENT BUDGET 2020-21	SEPTEMBER 2020	PERCENT OF CURRENT BUDGET	SEPTEMBER 2019
OPERATING REVENUE	8,473,100.00		8,473,100.00	2,251,432.62	26.57%	2,135,077.07
OPERATING EXPENSES						
TRANSMISSION & TREATMENT	1,897,720.00	58,994.85	1,956,714.85	463,631.22	23.69%	417,007.80
ENGINEERING	309,270.00	7,233.25	316,503.25	57,542.25	18.18%	47,356.57
DISTRIBUTION	662,080.00	154,340.63	816,420.63	290,888.61	35.63%	118,914.98
SERVICE	124,940.00		124,940.00	15,342.49	12.28%	21,540.39
METERS & REGULATORS	140,980.00		140,980.00	19,747.80	14.01%	23,728.33
BAD DEBT	31,000.00		31,000.00	1,467.34	4.73%	6,709.56
GENERAL & ADMINISTRATIVE	3,557,220.00	1,045.18	3,558,265.18	827,531.27	23.26%	697,710.29
TOTAL OPERATING EXPENSES	6,723,210.00	221,613.91	6,944,823.91	1,676,150.98	24.14%	1,332,967.92
OPERATING INCOME (LOSS)	1,749,890.00	(221,613.91)	1,528,276.09	575,281.64	37.64%	802,109.15
NON-OPERATING REVENUE (EXPENSE)						
INTEREST INCOME ON INVESTMENTS	190,000.00		190,000.00	34,077.65	17.94%	58,695.79
RECOVERIES AND REBATES	17,980.00		17,980.00	2,441.17	13.58%	5,669.19
GAIN/LOSS ON DISPOSAL	1,970.00		1,970.00	-	0.00%	-
JOBBING INCOME (LOSS)	105,180.00		105,180.00	22,376.45	21.27%	6,248.59
INTEREST ON LONG TERM INDEBTEDNESS	(77,440.00)		(77,440.00)	(44,101.17)	56.95%	(64,429.96)
NET INCOME (LOSS)	1,987,580.00	(221,613.91)	1,765,966.09	590,075.74	33.41%	808,292.76
OPERATING TRANSFERS IN (OUT)	(950,300.00)		(950,300.00)	(237,575.01)	25.00%	(237,575.01)
NET INCOME AFTER TRANSFERS	1,037,280.00	(221,613.91)	815,666.09	352,500.73	43.22%	570,717.75
CONTRIBUTION IN AID	2,500,000.00		2,500,000.00	-	0.00%	
REGULAR CAPITAL MAINTENANCE	(926,490.00)	(204,980.91)	(1,131,470.91)	(192,278.24)	16.99%	
CAPITAL PROJECTS	(4,500,000.00)	145,047.93	(4,354,952.07)	(352,901.53)	8.10%	
DEBT SERVICE	(359,710.00)		(359,710.00)	(105,009.00)	29.19%	
DEPRECIATION	1,752,540.00		1,752,540.00	401,909.37	22.93%	

UTILITY FUNDS
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN FUND NET ASSETS - UNAUDITED
FOR THE PERIOD ENDED SEPTEMBER 30, 2020

GAS - FINAL

	ORIGINAL BUDGET 2020-21	ADJUSTMENTS AND CARRYFORWARDS	CURRENT BUDGET 2020-21	SEPTEMBER 2020	PERCENT OF CURRENT BUDGET	SEPTEMBER 2019
OPERATING REVENUE	22,389,840.00		22,389,840.00	2,388,490.84	10.67%	2,668,101.59
COST OF SALES						
PURCHASED SERVICES	12,730,400.00		12,730,400.00	1,994,221.60	15.67%	2,309,199.25
PRODUCTION	-		-	-		-
TOTAL COST OF SALES	12,730,400.00	-	12,730,400.00	1,994,221.60		2,309,199.25
GROSS PROFIT	9,659,440.00	-	9,659,440.00	394,269.24		358,902.34
GROSS PROFIT %	43.14%		43.14%	16.51%		13.45%
OPERATING EXPENSES						
TRANSMISSION & TREATMENT	-			-		-
ENGINEERING	398,510.00	41,739.88	440,249.88	54,369.15	12.35%	67,461.60
DISTRIBUTION	668,480.00	1,818.86	670,298.86	129,992.19	19.39%	139,476.72
SERVICE	117,410.00		117,410.00	8,218.75	7.00%	10,749.38
METERS & REGULATORS	171,960.00	(673.86)	171,286.14	21,859.04	12.76%	35,861.32
BAD DEBT	57,000.00		57,000.00	4,241.30	7.44%	27,279.13
GENERAL & ADMINISTRATIVE	3,651,460.00	5,644.37	3,657,104.37	700,070.36	19.14%	945,566.68
TOTAL OPERATING EXPENSES	5,064,820.00	48,529.25	5,113,349.25	918,750.79	17.97%	1,226,394.83
OPERATING INCOME (LOSS)	4,594,620.00	(48,529.25)	4,546,090.75	(524,481.55)	-11.54%	(867,492.49)
NON-OPERATING REVENUE (EXPENSE)						
INTEREST INCOME ON INVESTMENTS	177,900.00		177,900.00	40,504.77	22.77%	72,358.24
RECOVERIES AND REBATES	(20,000.00)		(20,000.00)	83.03		225.52
GAIN/LOSS ON DISPOSAL	2,000.00		2,000.00	-		-
JOBBING INCOME (LOSS)	148,610.00		148,610.00	4,319.53	2.91%	10,374.30
INTEREST ON LONG TERM INDEBTEDNESS	(38,180.00)		(38,180.00)	(21,750.06)	56.97%	(26,986.18)
NET INCOME (LOSS)	4,864,950.00	(48,529.25)	4,816,420.75	(501,324.28)	-10.41%	(811,520.61)
OPERATING TRANSFERS IN (OUT)	(3,186,330.00)		(3,186,330.00)	(796,582.50)	25.00%	(796,582.50)
NET INCOME AFTER TRANSFERS	1,678,620.00	(48,529.25)	1,630,090.75	(1,297,906.78)	-79.62%	(1,608,103.11)
CONTRIBUTION IN AID	-		-	-	0.00%	
REGULAR CAPITAL MAINTENANCE	(845,400.00)	(176,319.77)	(1,021,719.77)	(92,090.98)	9.01%	
CAPITAL PROJECTS	(3,500,000.00)		(3,500,000.00)	(136,926.90)	3.91%	
DEBT SERVICE	(123,160.00)		(123,160.00)	(77,691.00)	63.08%	
DEPRECIATION	1,542,230.00		1,542,230.00	390,964.02	25.35%	

UTILITY FUNDS
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN FUND NET ASSETS - UNAUDITED
FOR THE PERIOD ENDED SEPTEMBER 30, 2020

ELECTRIC - FINAL

	ORIGINAL BUDGET 2020-21	ADJUSTMENTS AND CARRYFORWARDS	CURRENT BUDGET 2020-21	SEPTEMBER 2020	PERCENT OF CURRENT BUDGET	SEPTEMBER 2019
OPERATING REVENUE	128,714,030.00		128,714,030.00	31,456,426.95	24.44%	32,610,612.50
COST OF SALES						
PURCHASED SERVICES	96,489,660.00		96,489,660.00	23,578,365.87	24.44%	23,741,644.88
PRODUCTION	978,580.00	183,334.34	1,161,914.34	130,420.01		174,201.09
TOTAL COST OF SALES	97,468,240.00	183,334.34	97,651,574.34	23,708,785.88		23,915,845.97
GROSS PROFIT	31,245,790.00	(183,334.34)	31,062,455.66	7,747,641.07		8,694,766.53
GROSS PROFIT %	24.28%		24.13%	24.63%		26.66%
OPERATING EXPENSES						
TRANSMISSION & TREATMENT	1,511,680.00	297,224.05	1,808,904.05	343,695.48	19.00%	415,964.15
ENGINEERING	1,044,490.00	25,564.82	1,070,054.82	231,443.41	21.63%	149,744.55
DISTRIBUTION	13,492,900.00	(224,652.67)	13,268,247.33	3,187,944.10	24.03%	3,381,795.46
SERVICE	-		-	-		-
METERS & REGULATORS	383,580.00	4,000.00	387,580.00	90,751.33	23.41%	77,795.26
BAD DEBT	310,000.00		310,000.00	38,090.75	12.29%	220,690.69
GENERAL & ADMINISTRATIVE	5,315,840.00	91,066.77	5,406,906.77	1,279,499.23	23.66%	1,394,000.68
TOTAL OPERATING EXPENSES	22,058,490.00	193,202.97	22,251,692.97	5,171,424.30	23.24%	5,639,990.79
OPERATING INCOME (LOSS)	9,187,300.00	(376,537.31)	8,810,762.69	2,576,216.77	29.24%	3,054,775.74
NON-OPERATING REVENUE (EXPENSE)						
INTEREST INCOME ON INVESTMENTS	452,100.00		452,100.00	94,986.15	21.01%	189,302.03
ENERGY EFFICIENCY RECOVERY	-	(110,160.09)	(110,160.09)	-	0.00%	(59,830.74)
RECOVERIES AND REBATES	(120,030.00)		(120,030.00)	(24,131.50)	20.10%	367.73
GAIN/LOSS ON DISPOSAL	45,000.00		45,000.00	2,089.46	4.64%	185.00
JOBBING INCOME (LOSS)	185,640.00		185,640.00	306,927.30	165.33%	145,875.02
INTEREST ON LONG TERM INDEBTEDNESS	(1,580,830.00)		(1,580,830.00)	(881,631.05)	55.77%	(801,497.14)
NET INCOME (LOSS)	8,169,180.00	(486,697.40)	7,682,482.60	2,074,457.13	27.00%	2,529,177.64
OPERATING TRANSFERS IN (OUT)	(10,429,610.00)		(10,429,610.00)	(2,607,402.51)	25.00%	(2,607,402.51)
NET INCOME AFTER TRANSFERS	(2,260,430.00)	(486,697.40)	(2,747,127.40)	(532,945.38)	19.40%	(78,224.87)
CONTRIBUTION IN AID			-		0.00%	
FEDERAL AID - CAPITAL PROJECTS			-		0.00%	
REGULAR CAPITAL MAINTENANCE	(3,306,680.00)	(162,422.50)	(3,469,102.50)	(737,752.93)	21.27%	
CAPITAL PROJECTS	-	-	-	(524,036.97)	100.00%	
DEBT SERVICE	(3,152,550.00)		(3,152,550.00)	(2,042,094.39)	64.78%	
DEPRECIATION	8,871,610.00		8,871,610.00	2,127,840.87	23.98%	

UTILITY FUNDS
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN FUND NET ASSETS - UNAUDITED
FOR THE PERIOD ENDED SEPTEMBER 30, 2020

TELECOMMUNICATIONS - FINAL

	ORIGINAL BUDGET 2020-21	ADJUSTMENTS AND CARRYFORWARDS	CURRENT BUDGET 2020-21	SEPTEMBER 2020	PERCENT OF CURRENT BUDGET	SEPTEMBER 2019
OPERATING REVENUE	627,170.00		627,170.00	174,166.59	27.77%	147,877.72
COST OF SALES						
PURCHASED SERVICES	57,000.00		57,000.00	15,629.93	27.42%	14,794.09
PRODUCTION	-		-	-		-
TOTAL COST OF SALES	57,000.00	-	57,000.00	15,629.93		14,794.09
GROSS PROFIT	570,170.00	-	570,170.00	158,536.66		133,083.63
GROSS PROFIT %	90.91%		90.91%	91.03%		90.00%
OPERATING EXPENSES						
TRANSMISSION & TREATMENT			-	-		-
ENGINEERING			-	-		-
DISTRIBUTION			-	-		-
SERVICE			-	-		-
METERS & REGULATORS			-	-		-
BAD DEBT			-	(8.80)		(266.64)
GENERAL & ADMINISTRATIVE	926,650.00	1,062.50	927,712.50	196,023.03	21.13%	227,569.03
TOTAL OPERATING EXPENSES	926,650.00	1,062.50	927,712.50	196,014.23	21.13%	227,302.39
OPERATING INCOME (LOSS)	(356,480.00)	(1,062.50)	(357,542.50)	(37,477.57)	10.48%	(94,218.76)
NON-OPERATING REVENUE (EXPENSE)						
INTEREST INCOME ON INVESTMENTS	13,600.00		13,600.00	2,689.36	19.77%	5,987.18
RECOVERIES AND REBATES	-		-	-		-
GAIN/LOSS ON DISPOSAL	-		-	-		-
JOBBING INCOME (LOSS)	7,920.00		7,920.00	(862.29)	-10.89%	(153.62)
INTEREST ON LONG TERM INDEBTEDNESS	-		-	-		-
NET INCOME (LOSS)	(334,960.00)	(1,062.50)	(336,022.50)	(35,650.50)	10.61%	(88,385.20)
OPERATING TRANSFERS IN (OUT)	(81,000.00)		(81,000.00)	(20,250.00)	25.00%	(20,250.00)
NET INCOME AFTER TRANSFERS	(415,960.00)	(1,062.50)	(417,022.50)	(55,900.50)	13.40%	(108,635.20)
CONTRIBUTION IN AID	-		-		0.00%	
REGULAR CAPITAL MAINTENANCE	(25,000.00)		(25,000.00)	(4,572.70)	18.29%	
CAPITAL PROJECTS	(250,000.00)		(250,000.00)	(71,713.84)	28.69%	
DEPRECIATION	482,230.00		482,230.00	109,961.46	22.80%	
CONTINGENCY	-		-	-	0.00%	

GAS OPERATING STATISTICS
YTD September 2020 and 2019

	YTD 2020	YTD 2019	YTD Change	YTD % Change
NUMBER OF CUSTOMERS:				
Residential	13,147	13,053	94	0.7201%
Commercial	1,494	1,495	-1	-0.0669%
Small Firm Industrial	14	14	0	0.0000%
Municipal	52	54	-2	-3.7037%
Large Firm Industrial	5	5	0	0.0000%
Interruptible Industrial	6	6	0	0.0000%
Industrial Transportation	7	8	-1	-12.5000%
Interruptible Commercial	1	1	0	0.0000%
Commercial Transportation	-	8	-8	-100.0000%
TOTAL CUSTOMERS	14,726	14,644	82	0.5600%
NATURAL GAS SALES-DEKATHERMS:				
Residential	34,433	32,557	1,876	5.7622%
Commercial	42,115	47,125	-5,010	-10.6313%
Small Firm Industrial	436	847	-411	-48.5242%
Municipal	1,202	1,249	-47	-3.7630%
Large Firm Industrial	3,182	2,643	539	20.3935%
Interruptible Industrial	347,686	379,132	-31,446	-8.2942%
Industrial Transportation	43,259	46,915	-3,656	-7.7928%
Interruptible Commercial	17,517	18,251	-734	-4.0217%
Commercial Transportation	-	1,183	-1,183	-100.0000%
TOTAL DEKATHERMS	489,830	529,902	-40,072	-7.5622%

ELECTRIC OPERATING STATISTICS
YTD September 2020 and 2019

	YTD 2020	YTD 2019	YTD Change	YTD % Change
NUMBER OF CUSTOMERS:				
Residential	37,112	36,880	232	0.6291%
Commercial	4,757	4,737	20	0.4222%
Industrial	16	16	0	0.0000%
High Load Factor	8	8	0	0.0000%
Municipal	285	281	4	1.4235%
Outdoor Lighting	6,010	5,958	52	0.8728%
TOTAL CUSTOMERS	48,188	47,880	308	0.6433%
KILOWATT HOURS SALES:				
Residential	136,705,209	131,616,870	5,088,339	3.8660%
Commercial	74,403,807	80,839,660	-6,435,853	-7.9613%
Industrial	3,056,740	7,196,420	-4,139,680	-57.5242%
High Load Factor	34,446,000	37,716,000	-3,270,000	-8.6701%
Municipal	5,734,588	5,917,356	-182,768	-3.0887%
Outdoor Lighting	3,649,291	3,693,268	-43,977	-1.1907%
TOTAL KILOWATT HOURS	257,995,635	266,979,574	-8,983,939	-3.3650%

KEY IN YELLOW CELLS ONLY. TWEAK THE PCA IN COLUMN "L" TO ACHIEVE THE DESIRED RECOVERY.

BILLING MONTH	TOTAL POWER COST	HLF POWER COST	**NON-HLF POWER COST**	TOTAL kWh SALES	HLF kWh SALES	NON-HLF kWh SALES	PCA / kWh	POWER COST / kWh RECOVERED IN BASE RATE	TOTAL POWER COST / kWh RECOVERED	HLF STRANDED COSTS RECOVERED	**NON-HLF POWER COST RECOVERED**	NON-HLF POWER COST OVER / (UNDER) RECOVERY	ADJUSTMTS	**CUMULATIVE POWER COST RECOVERY NON-HLF CUSTOMERS (+ / - $4,000,000)**	
May-20	$ 6,880,478.95	$ 1,350,624.72	**$ 5,529,854.23**	57,738,724	11,334,000	46,404,724	$0.025000	$0.086200	$0.111200		**$ 5,160,205.35**	$ (369,648.88)		**$ (4,748,113.56)**	ACTUAL
Jun-20	$ 7,486,106.40	$ 1,061,018.33	**$ 6,425,088.07**	66,539,823	9,430,800	57,109,023	$0.020000	$0.086200	$0.106200		**$ 6,064,978.27**	$ (360,109.80)		**$ (5,108,223.36)**	ACTUAL
Jul-20	$ 8,068,815.04	$ 1,130,204.86	**$ 6,938,610.18**	80,145,220	11,226,000	68,919,220	$0.015000	$0.086200	$0.101200		**$ 6,974,625.09**	$ 36,014.91		**$ (5,072,208.45)**	ACTUAL
Aug-20	$ 8,030,609.43	$ 1,001,949.95	**$ 7,028,659.48**	94,794,779	11,827,200	82,967,579	$0.015000	$0.086200	$0.101200		**$ 8,396,319.01**	$ 1,367,659.53		**$ (3,704,548.92)**	ACTUAL
Sep-20	$ 7,478,941.40	$ 1,025,891.66	**$ 6,453,049.74**	83,055,635	11,392,800	71,662,835	**$0.025000**	$0.086200	$0.111200		**$ 7,968,907.29**	$ 1,515,857.55		**$ (2,188,691.38)**	ACTUAL
Oct-20	$ 8,163,829.21	$ 1,343,199.21	**$ 6,820,630.00**	77,529,680	12,756,000	64,773,680	$0.035000	$0.086200	$0.121200		**$ 7,850,570.06**	$ 1,029,940.06		**$ (1,158,751.31)**	PROJECTED
Nov-20	$ 8,323,943.81	$ 1,468,214.06	**$ 6,855,729.76**	68,836,009	12,141,600	56,694,409	$0.035000	$0.086200	$0.121200		**$ 6,871,362.40**	$ 15,632.64		**$ (1,143,118.67)**	PROJECTED
Dec-20	$ 8,458,029.62	$ 1,197,251.36	**$ 7,260,778.26**	80,561,183	11,403,600	69,157,583	$0.020000	$0.086200	$0.106200		**$ 7,344,535.34**	$ 83,757.08		**$ (1,059,361.59)**	PROJECTED
Jan-21	$ 7,818,549.35	$ 1,045,435.56	**$ 6,773,113.80**	81,093,563	10,843,200	70,250,363	$0.010000	$0.086200	$0.096200		**$ 6,758,084.93**	$ (15,028.87)		**$ (1,074,390.45)**	PROJECTED
Feb-21	$ 7,545,412.09	$ 1,015,300.95	**$ 6,530,111.14**	88,244,006	11,874,000	76,370,006	$0.010000	$0.086200	$0.096200		**$ 7,346,794.58**	$ 816,683.44		**$ (257,707.02)**	PROJECTED
Mar-21	$ 7,473,414.54	$ 1,094,593.84	**$ 6,378,820.70**	72,680,833	10,645,200	62,035,633	**$0.015000**	$0.086200	$0.101200		**$ 6,278,006.08**	$ (100,814.62)		**$ (358,521.64)**	PROJECTED
Apr-21	$ 7,649,350.31	$ 1,300,067.59	**$ 6,349,282.72**	69,017,088	11,730,000	57,287,088	$0.030000	$0.086200	$0.116200		**$ 6,656,759.60**	$ 307,476.88		**$ (51,044.75)**	PROJECTED

Future months (still in blue) show projections.

After PGA's are calculated, hard code them before reconciling the month

Mo Rate Applied	WACOG	WACOG Plus Losses	Demand Rate Firm	Demand Rate Interruptible	Adjustments	PGA (f)	PGA (i)	**DEMAND Recovery** (Independent of Commod) **Cum Over (Under) Demand Recovery Current FY**	**COMMODITY - Rolling Recovery** *(Does not include Demand Recovery)* **Monthly Commodity Cost**	**Monthly Commodity Recovered**	**Monthly Commod Over (Under) Recovery**	Adjustments	**Commodity Recovery Balance Over (Under)** **+/- $2,000,000**	
May-20	$ 2.89222	$ 2.89222	$ 1.55000	$ 0.2500	$ (0.58000)	$ 3.82247	$ 2.52247	$ 101,422.88	$ 410,659.70	$ 347,032.34	$ (63,627.36)		$ (97,512.32)	Final
Jun-20	$ 3.92701	$ 3.92701	$ -	$ 0.2500		$ 3.95494	$ 4.20494	$ (146,913.88)	$ 356,797.74	$ 433,064.51	$ 76,266.77		$ (21,245.56)	Final
Jul-20	$ 3.92642	$ 3.92642	$ -	$ -		$ 3.62684	$ 3.62684	$ (408,820.15)	$ 295,052.52	$ 320,376.73	$ 25,324.21		$ 4,078.66	Final
Aug-20	$ 3.95831	$ 3.95831	$ -	$ -	$ (0.09800)	$ 2.91569	$ 2.91569	$ (670,726.42)	$ 350,492.32	$ 335,146.76	$ (15,345.56)		$ (11,266.90)	Final
Sep-20	$ 3.84209	$ 3.84209	$ -	$ -	$ (0.09800)	$ 4.12912	$ 4.12912	$ (923,943.40)	$ 454,684.44	$ 441,344.54	$ (13,339.90)		$ (24,606.80)	Final
Oct-20	$ 3.91968	$ 3.91968	$ -	$ -		$ 3.86782	$ 3.86782	$ (1,181,326.60)	$ 541,433.16	$ 435,584.29	$ (105,848.87)		$ (130,455.67)	Est
Nov-20	$ 3.77757	$ 3.77757	$ 1.98533	$ -	$ (0.16450)	**$ 5.59840**	**$ 3.61307**	$ (1,160,093.20)	$ 1,079,324.73	$ 822,910.19	$ (256,414.53)		$ (386,870.21)	Est
Dec-20	$ 3.70165	$ 3.70165	$ 1.98533	$ -	$ (0.16450)	$ 5.52248	$ 3.53715	$ (830,683.75)	$ 1,352,663.69	$ 1,224,873.00	$ (127,790.69)		$ (514,660.90)	Est
Jan-21	$ 3.68406	$ 3.68406	$ 1.98533	$ -	$ (0.16450)	$ 5.50489	$ 3.51956	$ (377,694.91)	$ 1,509,665.11	$ 1,326,966.28	$ (182,698.84)		$ (697,359.74)	Est
Feb-21	$ 3.98612	$ 3.98612	$ 1.98533	$ -	$ (0.16450)	$ 5.80695	$ 3.82162	$ 104,851.84	$ 1,183,990.12	$ 1,530,282.24	$ 346,292.12		$ (351,067.62)	Est
Mar-21	$ 3.29535	$ 3.29535	$ 1.98533	$ -	$ (0.16450)	$ 5.11618	$ 3.13085	$ 344,319.79	$ 1,000,432.84	$ 1,026,432.24	$ 25,999.40		$ (325,068.22)	Est
Apr-21	$ 2.60959	$ 2.60959	$ 1.98533	$ -	$ (0.16450)	$ 4.43042	$ 2.44509	$ 483,021.67	$ 521,631.89	$ 717,223.45	$ 195,591.56		$ (129,476.66)	Est

2021 Biennial Rate Study

Mark Beauchamp from Utility Financial Solutions will discuss via video conference their review of the City's electric, gas, water and wastewater rate requirements for fiscal years 2022 and 2023.

City of Danville, VA

Rate Design

11/17/2020

Utility Financial Solutions, LLC
185 Sun Meadow Court
Holland, MI 49424
608 230 5849

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Submitted Respectfully by:
Mike Johnson
Manager, Utility Financial Solutions

City of Danville, VA
Rate Design
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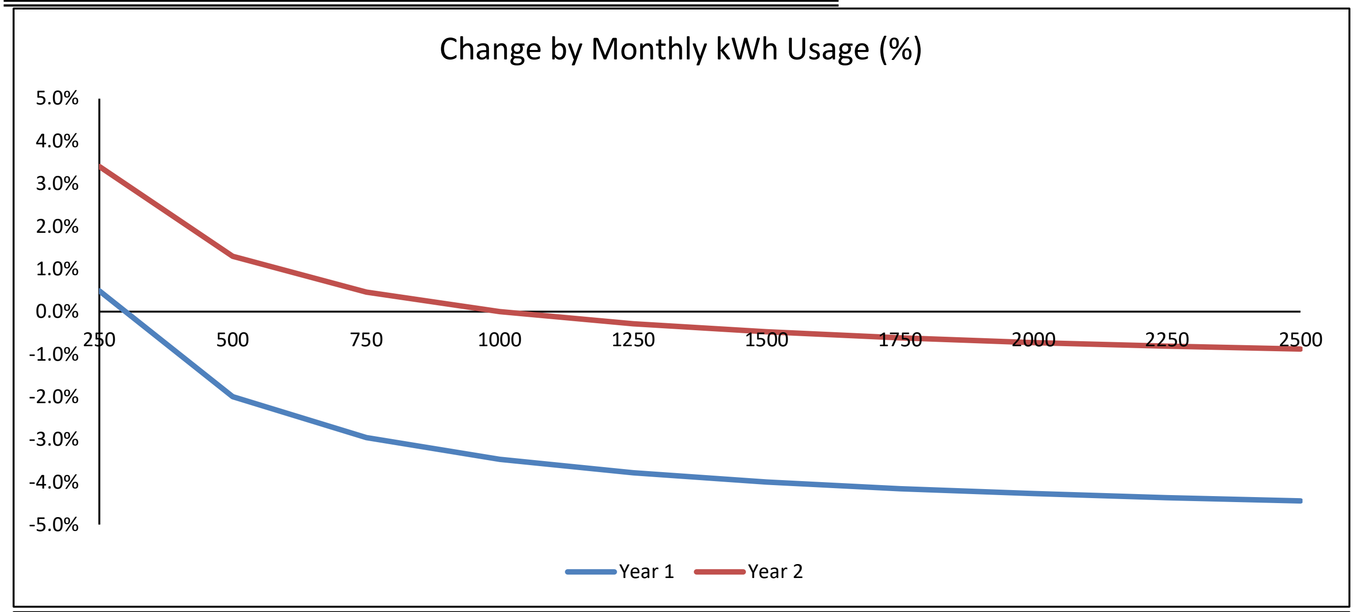
Medium General Service TOU	18
Large General Service TOU	19

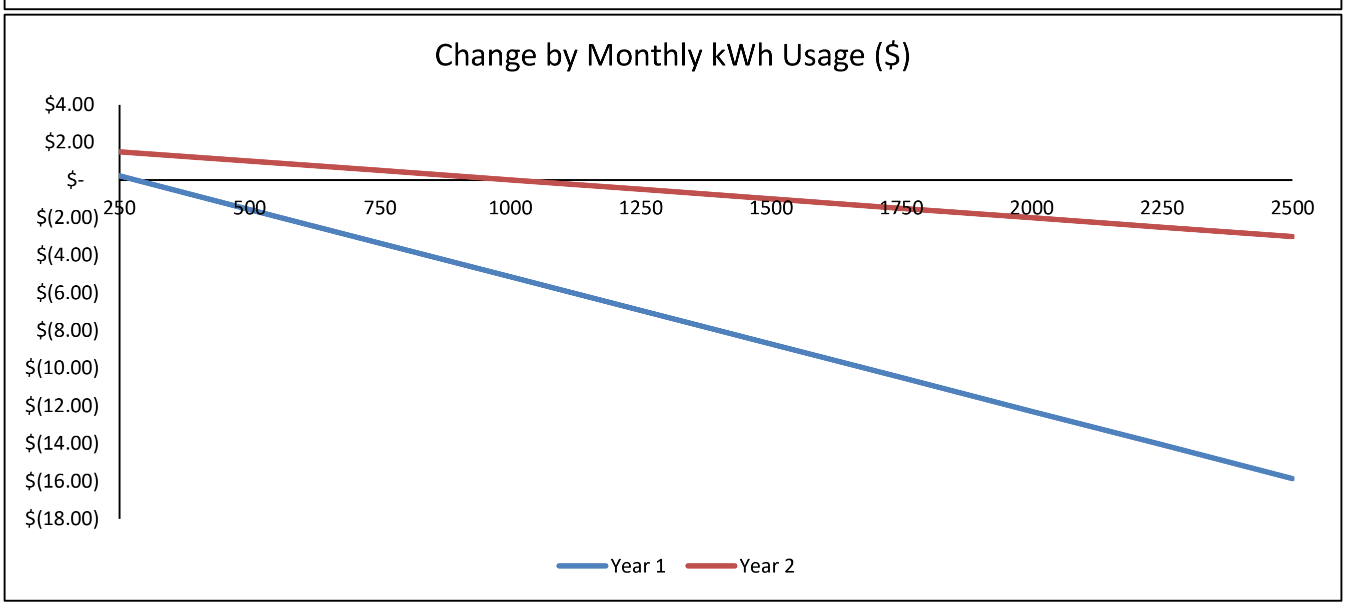
City of Danville, VA
Rate Design
Rate Design Summary

Customer Class		Projected Revenues Under Current Rates	Projected Revenues Under Proposed Rates Year 1	Projected Revenues Under Proposed Rates Year 2	Projected Percentage Change Year 1	Projected Percentage Change Year 2
Residential (RS-10)		$ 68,743,955	$ 66,308,162	$ 66,263,809	-3.54%	-0.07%
Small General (SGS-40)		7,783,411	7,571,081	7,562,423	-2.73%	-0.11%
Outdoor Rental Lighting (OL)		1,237,597	1,190,361	1,190,361	-3.82%	0.00%
Street Lighting (SL)		1,577,035	1,574,497	1,574,497	-0.16%	0.00%
Worship (WSS-15)		1,505,748	1,450,093	1,449,825	-3.70%	-0.02%
Medium General Sec (MGS1-50)		25,595,761	24,891,989	24,829,600	-2.75%	-0.25%
Medium General Pri (MGS2-55, customer-owned xfmr)		13,529	13,000	12,989	-3.91%	-0.08%
Medium General Pri (MGS3-56, utility-owned xfmr)		983,030	958,836	951,978	-2.46%	-0.72%
Large General Sec (LGS1-60)		2,274,590	2,214,988	2,203,339	-2.62%	-0.53%
Large General Pri (LGS2-65, customer-owned xfmr)		1,818,474	1,769,185	1,761,514	-2.71%	-0.43%
Large General Pri (LGS3-66, utility-owned xfmr)		6,452,509	6,264,332	6,228,640	-2.92%	-0.57%
	Totals	$ 117,985,639	$ 114,206,525	$ 114,028,975	-3.20%	-0.16%

City of Danville, VA
Rate Design
Projected Residential (RS-10) Rates

Rates	Current	Year 1	Year 2
Monthly Facilities Charge:			
All Customers	$ 9.00	$ 11.00	$ 13.00
Energy Charge:			
All Energy	$ 0.11760	$ 0.1220	$ 0.1200
Power Cost Adjustment:			
All Energy	**$ 0.02170**	$ 0.01016	**$ 0.01016**
Revenue from Rate	$ 68,743,955	$ 66,308,162	$ 66,263,809
Change from Previous		-3.5%	-0.1%





City of Danville, VA

Rate Design

Projected Residential (RS-10) Rates

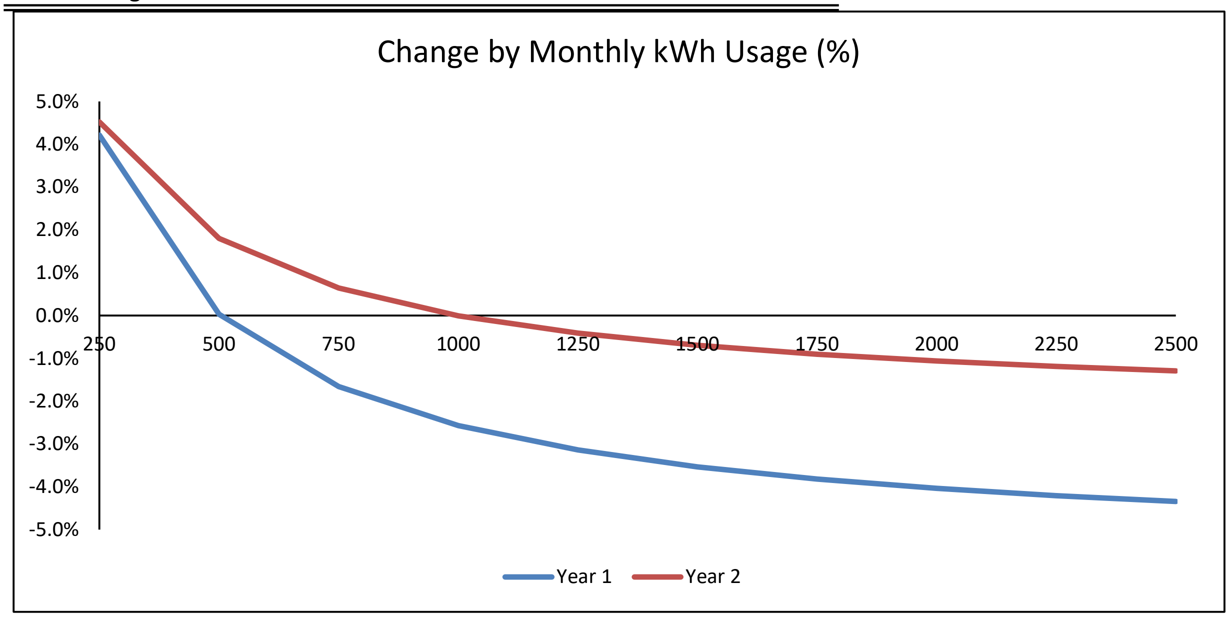
Monthly Bill By Energy Usage			
All Energy	Current $	Year 1 $	Year 2 $
250	$ 43.83	$ 44.04	$ 45.54
500	$ 78.65	$ 77.08	$ 78.08
750	$ 113.48	$ 110.12	$ 110.62
1000	$ 148.30	$ 143.16	$ 143.16
1250	$ 183.13	$ 176.19	$ 175.69
1500	$ 217.95	$ 209.23	$ 208.23
1750	$ 252.78	$ 242.27	$ 240.77
2000	$ 287.60	$ 275.31	$ 273.31
2250	$ 322.43	$ 308.35	$ 305.85
2500	$ 357.25	$ 341.39	$ 338.39

Monthly % Change by Energy Usage		
All Energy	Year 1	Year 2
250	0.5%	3.4%
500	-2.0%	1.3%
750	-3.0%	0.5%
1000	-3.5%	0.0%
1250	-3.8%	-0.3%
1500	-4.0%	-0.5%
1750	-4.2%	-0.6%
2000	-4.3%	-0.7%
2250	-4.4%	-0.8%
2500	-4.4%	-0.9%

Monthly $ Change by Energy Usage		
All Energy	Year 1	Year 2
250	$ 0.21	$ 1.50
500	$ (1.57)	$ 1.00
750	$ (3.36)	$ 0.50
1000	**$ (5.14)**	**$ -**
1250	$ (6.93)	$ (0.50)
1500	$ (8.72)	$ (1.00)
1750	$ (10.50)	$ (1.50)
2000	$ (12.29)	$ (2.00)
2250	$ (14.07)	$ (2.50)
2500	$ (15.86)	$ (3.00)

City of Danville, VA
Rate Design
Projected Small General (SGS-40) Rates

Rates	Current	Year 1	Year 2
Monthly Facilities Charge:			
All Customers	$ 12.50	$ 16.50	$ 19.50
Energy Charge:			
All Energy	$ 0.11940	$ 0.1230	$ 0.1200
Power Cost Adjustment:			
All Energy	$ 0.02170	$ 0.01016	$ 0.01016
Revenue from Rate	$ 7,783,411	$ 7,571,081	$ 7,562,423
Change from Previous		-2.7%	-0.1%



City of Danville, VA
Rate Design
Projected Outdoor Rental Lighting (OL) Rates

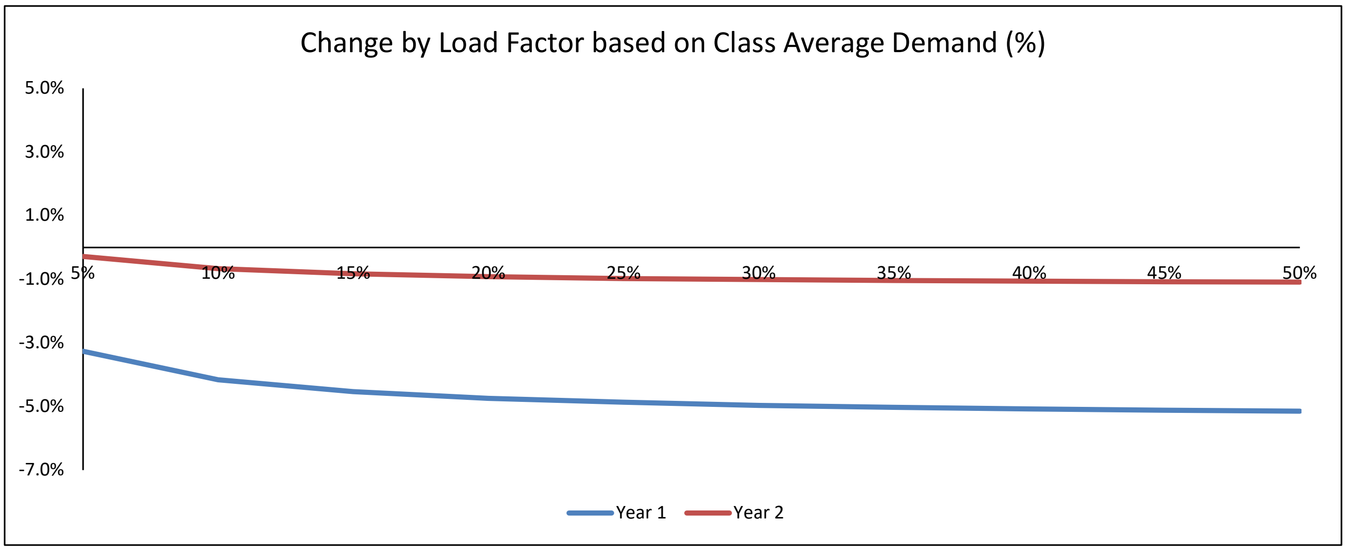
Rates	Current	Year 1	Year 2
Monthly Facilities Charge:			
1 175W MV Existing	$ 9.75	$ 9.95	$ 9.95
2 400W MV Existing	$ 14.20	$ 14.48	$ 14.48
3 100W HPS Contempory Wood	$ 14.90	$ 15.20	$ 15.20
4 175W MV Contempory Wood	$ 14.90	$ 15.20	$ 15.20
6 100W High Pressure Sodium Contemporary Wood	$ 15.75	$ 16.07	$ 16.07
7 175W MV?	$ 14.00	$ 14.28	$ 14.28
8 400W MV?	$ 18.45	$ 18.82	$ 18.82
9 High Pressure Sodium (100W)	$ 9.75	$ 9.95	$ 9.95
10 High Pressure Sodium (250W)	$ 14.20	$ 14.48	$ 14.48
11 175W MV Wood	$ 14.00	$ 14.28	$ 14.28
12 400W MV Wood	$ 18.45	$ 18.82	$ 18.82
13 High Pressure Sodium (100W)	$ 14.00	$ 14.28	$ 14.28
14 High Pressure Sodium (250W)	$ 18.45	$ 18.82	$ 18.82
17 100W High Pressure Sodium Contemporary Aluminum	$ 17.50	$ 17.85	$ 17.85
18 100W High Pressure Sodium Colonial Wood	$ 15.75	$ 16.07	$ 16.07
19 100W High Pressure Sodium Colonial Aluminum	$ 17.10	$ 17.44	$ 17.44
20 High Pressure Sodium (100W) Flood	$ 10.15	$ 10.35	$ 10.35
21 High Pressure Sodium (100W) Flood	$ 14.40	$ 14.69	$ 14.69
22 Metal Halide (400W) Flood	$ 18.50	$ 18.87	$ 18.87
23 Metal Halide (400W) Flood	$ 24.50	$ 24.99	$ 24.99
24 High Pressure Sodium (250W) Flood	$ 14.20	$ 14.48	$ 14.48
25 High Pressure Sodium (250W) Flood	$ 14.20	$ 14.48	$ 14.48
26 High Pressure Sodium (400W) Flood	$ 19.45	$ 19.84	$ 19.84
27 High Pressure Sodium (400W) Flood	$ 23.70	$ 24.17	$ 24.17
30 LED (53W) these are 55W-7,800 lumen, originally rate was for 53W-	$ 8.40	$ 8.57	$ 8.57
31 LED (53W) these are 55W- 7,800 lumen, originally rate was for 53W-	$ 12.40	$ 12.65	$ 12.65
32 LED (73W) these are 55W- 7,800 lumen	$ 9.20	$ 9.38	$ 9.38
33 LED (73W) these are 55W- 7,800 lumen	$ 13.20	$ 13.46	$ 13.46
34 LED (106W) 12,800 lumen	$ 10.35	$ 10.56	$ 10.56
35 LED (106W) 12,800 lumen	$ 14.35	$ 14.64	$ 14.64
36 LED (161W) 17,800 lumen	$ 11.60	$ 11.83	$ 11.83
37 LED (161W) 17,800 lumen	$ 15.60	$ 15.91	$ 15.91
All Energy	$ 0.02170	$ 0.01016	$ 0.01016
Revenue from Rate	$ 1,237,597	$ 1,190,361	$ 1,190,361
Change from Previous		-3.8%	0.0%

City of Danville, VA
Rate Design
Projected Street Lighting (SL) Rates

Rates	Current	Year 1	Year 2
Monthly Facilities Charge:			
80 LED (53W)	$ 9.75	$ 9.95	$ 9.95
81 LED (53W)	$ 15.80	$ 16.12	$ 16.12
82 LED (53W)	$ 17.50	$ 17.85	$ 17.85
83 LED (53W)	$ 22.55	$ 23.00	$ 23.00
84 LED (73W)	$ 22.25	$ 22.70	$ 22.70
85 LED (73W)	$ 26.65	$ 27.18	$ 27.18
86 LED (73W)	$ 14.20	$ 14.48	$ 14.48
87 LED (73W)	$ 20.25	$ 20.66	$ 20.66
88 LED (106W)	$ 21.95	$ 22.39	$ 22.39
89 LED (106W)	$ 27.00	$ 27.54	$ 27.54
90 LED (106W)	$ 30.00	$ 30.60	$ 30.60
91 LED (106W)	$ 12.95	$ 13.21	$ 13.21
92 LED (161W)	$ 34.90	$ 35.60	$ 35.60
93 LED (161W)	$ 38.25	$ 39.02	$ 39.02
94 LED (161W)	$ 16.30	$ 16.63	$ 16.63
95 LED (161W)	$ 8.40	$ 8.57	$ 8.57
LED63-70B	$ 9.00	$ 9.18	$ 9.18
LED64-70B	$ 9.00	$ 9.18	$ 9.18
LED69-70B	$ 9.00	$ 9.18	$ 9.18
LED70-70B	$ 8.20	$ 8.36	$ 8.36
LED71-70B	$ 8.20	$ 8.36	$ 8.36
LED72-70B	$ 9.00	$ 9.18	$ 9.18
LED73-70B	$ 9.00	$ 9.18	$ 9.18
Power Cost Adjustment:			
All Energy	$ 0.02170	$ 0.01016	$ 0.01016
Revenue from Rate	$ 1,577,035	$ 1,574,497	$ 1,574,497
Change from Previous		-0.2%	0.0%

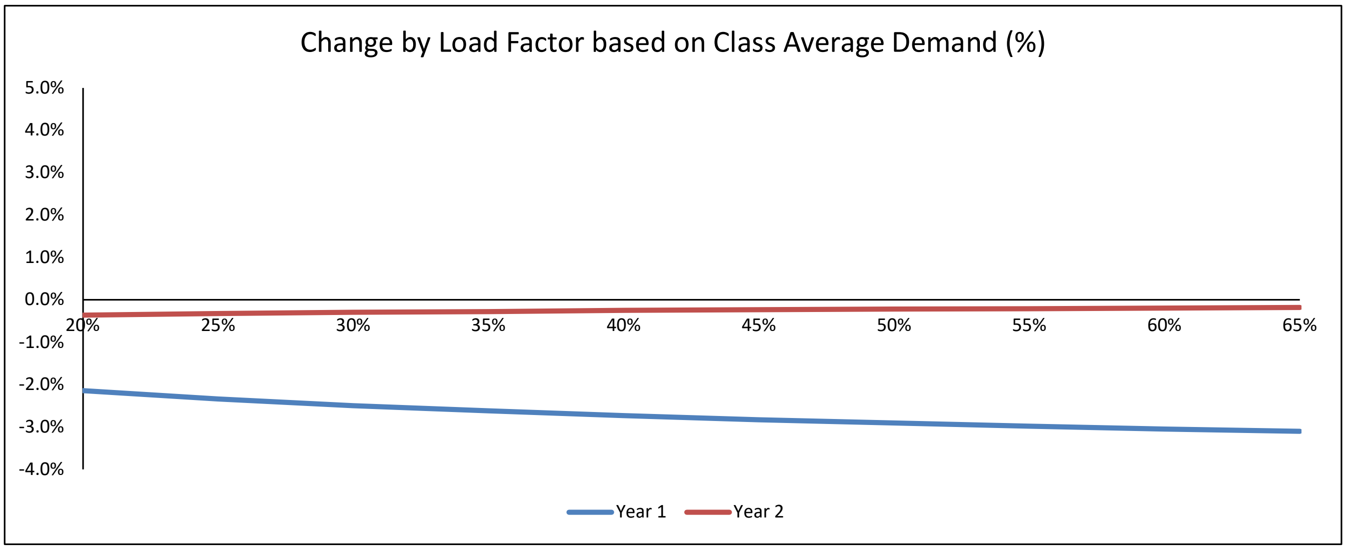
City of Danville, VA
Rate Design
Projected Worship (WSS-15) Rates

Rates		Current		Year 1		Year 2
Monthly Facilities Charge:						
All Customers	$	50.00	$	50.00	$	50.00
Energy Charge:						
All Energy	$	0.10750	$	0.11200	$	0.11050
Demand Charge						
Block 1 (0 - 25 kW)	$	-	$	-	$	-
Block 2 (Excess)	$	2.60	$	3.10	$	3.60
Power Cost Adjustment:						
All Energy	$	0.02170	$	0.01016	$	0.01016
Revenue from Rate	$	1,505,748	$	1,450,093	$	1,449,825
Change from Previous				-3.7%		0.0%



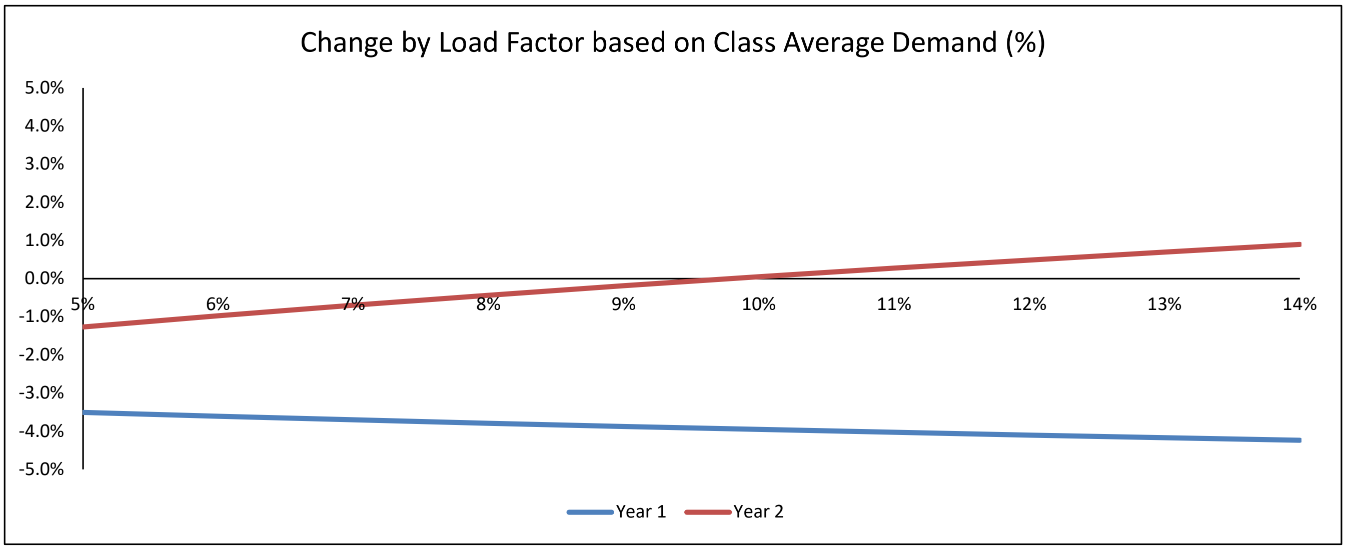
City of Danville, VA
Rate Design
Projected Medium General Sec (MGS1-50) Rates

Rates	Current	Year 1	Year 2
Monthly Facilities Charge:			
Monthly Charge	$ 75.00	$ 100.00	$ 125.00
Energy Charge:			
All Energy	$ 0.06530	$ 0.07330	$ 0.07330
Demand Charge			
All Demand	$ 15.00	$ 14.50	$ 14.00
Power Cost Adjustment:			
All Energy	$ 0.02170	$ 0.01016	$ 0.01016
Revenue from Rate	$ 25,595,761	$ 24,891,989	$ 24,829,600
Change from Previous		-2.7%	-0.3%



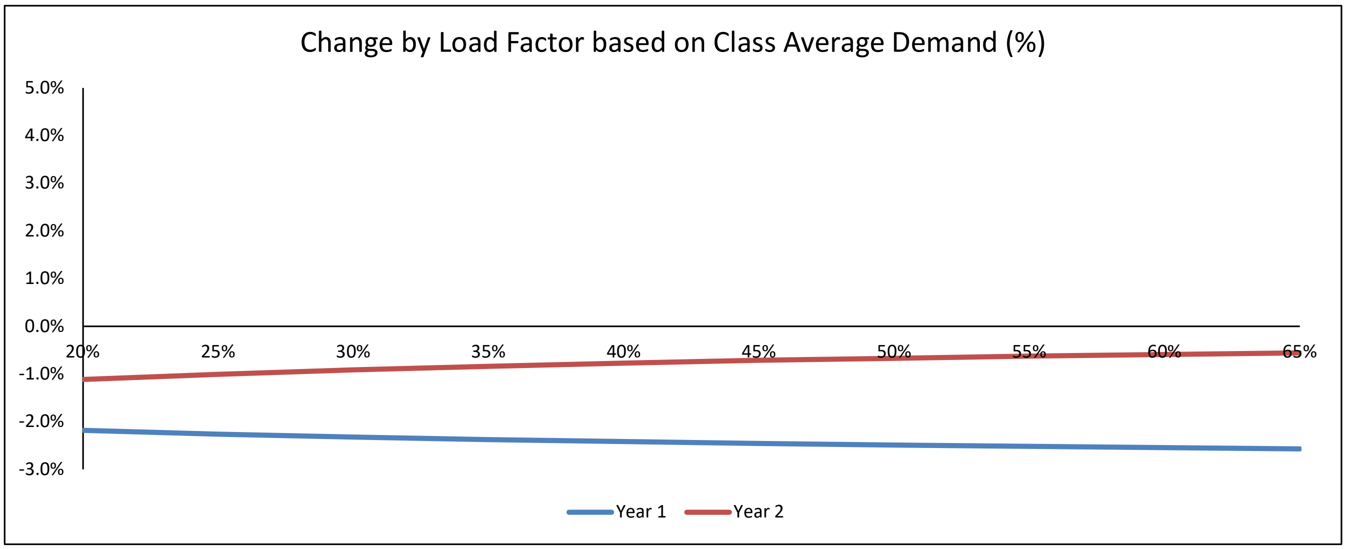
City of Danville, VA
Rate Design
Projected Medium General Pri (MGS2-55, customer-owned xfmr) Rates

Rates	Current	Year 1	Year 2
Monthly Facilities Charge:			
Monthly Charge	$ 75.00	$ 75.00	$ 75.00
Energy Charge:			
All Energy	$ 0.05680	$ 0.06280	$ 0.06980
Demand Charge			
All Demand	$ 14.14	$ 13.64	$ 13.14
Power Cost Adjustment:			
All Energy	$ 0.02170	$ 0.01016	$ 0.01016
Revenue from Rate	$ 13,529	$ 13,000	$ 12,989
Change from Previous		-3.9%	-0.1%



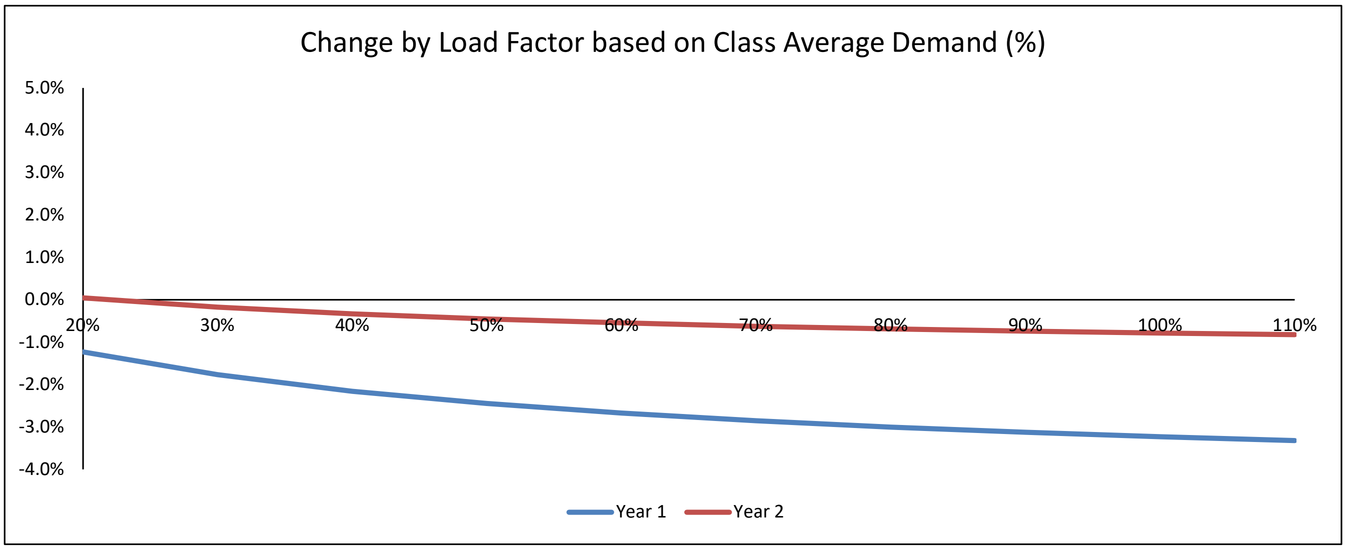
City of Danville, VA
Rate Design
Projected Medium General Pri (MGS3-56, utility-owned xfmr) Rates

Rates		Current		Year 1		Year 2
Monthly Facilities Charge:						
Monthly Charge	$	80.00	$	120.00	$	150.00
Energy Charge:						
All Energy	$	0.06450	$	0.07350	$	0.07350
Demand Charge						
All Demand	$	15.00	$	14.50	$	14.00
Power Cost Adjustment:						
All Energy	$	0.02170	$	0.01016	$	0.01016
Revenue from Rate	$	983,030	$	958,836	$	951,978
Change from Previous				-2.5%		-0.7%



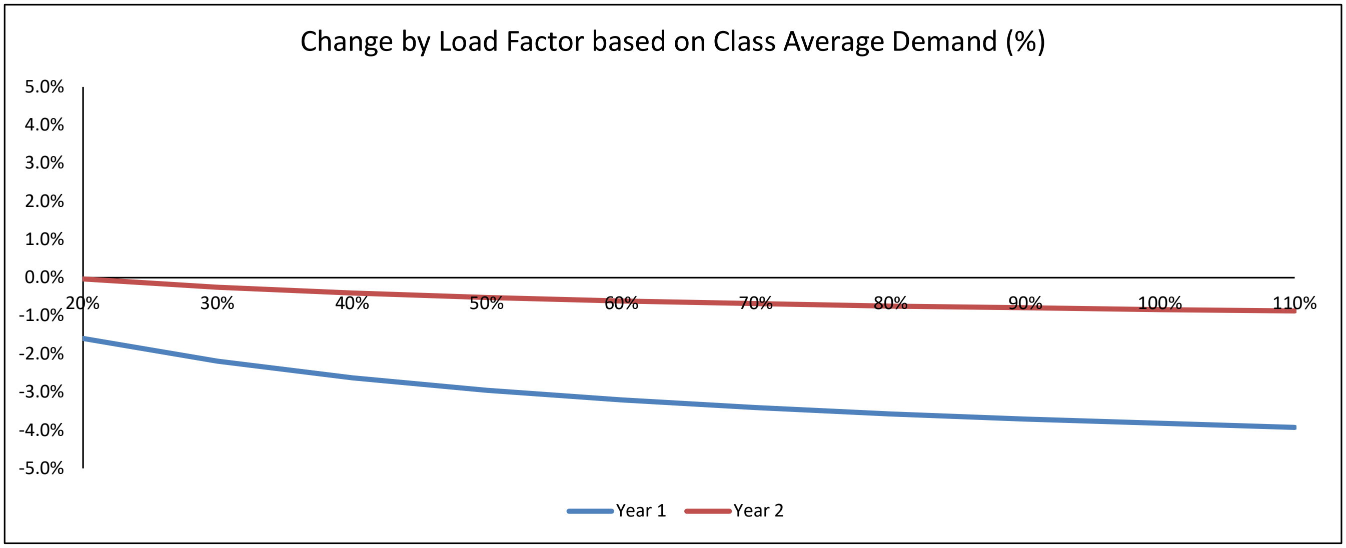
City of Danville, VA
Rate Design
Projected Large General Sec (LGS1-60) Rates

Rates	Current	Year 1	Year 2
Monthly Facilities Charge:			
Monthly Charge	$ 350.00	$ 450.00	$ 550.00
Energy Charge:			
All Energy	$ 0.05700	$ 0.06500	$ 0.06400
Demand Charge			
All Demand	$ 17.04	$ 17.04	$ 17.04
Power Cost Adjustment:			
All Energy	$ 0.02170	$ 0.01016	$ 0.01016
Revenue from Rate	$ 2,274,590	$ 2,214,988	$ 2,203,339
Change from Previous		-2.6%	-0.5%



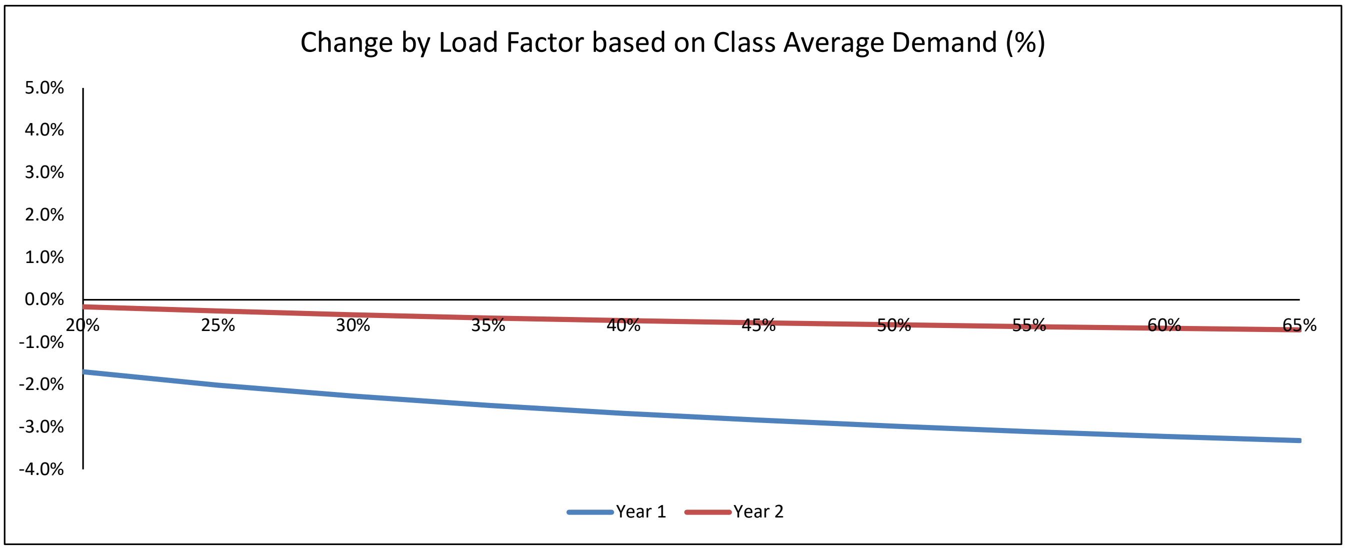
City of Danville, VA
Rate Design
Projected Large General Pri (LGS2-65, customer-owned xfmr) Rates

Rates	Current	Year 1	Year 2
Monthly Facilities Charge:			
Monthly Charge	$ 350.00	$ 450.00	$ 550.00
Energy Charge:			
All Energy	$ 0.05550	$ 0.06300	$ 0.06200
Demand Charge			
All Demand	$ 16.79	$ 16.79	$ 16.79
Power Cost Adjustment:			
All Energy	$ 0.02170	$ 0.01016	$ 0.01016
Revenue from Rate	$ 1,818,474	$ 1,769,185	$ 1,761,514
Change from Previous		-2.7%	-0.4%



City of Danville, VA
Rate Design
Projected Large General Pri (LGS3-66, utility-owned xfmr) Rates

Rates	Current	Year 1	Year 2
Monthly Facilities Charge:			
Monthly Charge	$ 350.00	$ 450.00	$ 550.00
Energy Charge:			
All Energy	$ 0.05700	$ 0.06450	$ 0.06350
Demand Charge			
All Demand	$ 17.04	$ 17.04	$ 17.04
Power Cost Adjustment:			
All Energy	$ 0.02170	$ 0.01016	$ 0.01016
Revenue from Rate	$ 6,452,509	$ 6,264,332	$ 6,228,640
Change from Previous		-2.9%	-0.6%



City of Danville, VA
Rate Design
Residential TOU

Rates	Year 1	TOU
Monthly Facilities Charge:		
All Customers	$ 11.00	$ 23.00
Energy Charge:		
On Peak Energy	$ 0.12200	$ 0.21093
Off Peak Energy	$ 0.12200	$ 0.08073
Power Cost Adjustment:		
All Energy	$ 0.01016	$ 0.01016
Revenue from Rate	$ 66,308,162	$ 66,308,162

City of Danville, VA
Rate Design
Small General Sec TOU

Rates	Year 1	TOU
Monthly Facilities Charge:		
All Customers	$ 16.50	$ 34.00
Energy Charge:		
Summer		
On Peak Energy	$ 0.12300	$ 0.24690
Off Peak Energy	$ 0.12300	$ 0.07011
Winter		
On Peak Energy	$ 0.12300	$ 0.19834
Off Peak Energy	$ 0.12300	$ 0.07520
Power Cost Adjustment:		
All Energy	$ 0.01016	$ 0.01016
Revenue from Rate	$ 7,571,081	$ 7,571,081

City of Danville, VA
Rate Design
Medium General Sec TOU

Rates	Year 1	TOU
Monthly Facilities Charge:		
All Customers	$ 100.00	$ 190.00
Energy Charge:		
Summer		
On Peak Energy	$ 0.07330	$ 0.23606
Off Peak Energy	$ 0.07330	$ 0.05927
Winter		
On Peak Energy	$ 0.07330	$ 0.18750
Off Peak Energy	$ 0.07330	$ 0.06436
Demand Charge:		
Winter Demand	$ 14.50	$ 6.42
Summer Demand	$ 14.50	$ 6.42
Power Cost Adjustment:		
All Energy	$ 0.01016	$ 0.01016
Revenue from Rate	$ 24,891,989	$ 24,891,989

City of Danville, VA
Rate Design
Large General Sec TOU

Rates		Year 1		TOU
Monthly Facilities Charge:				
All Customers	$	450.00	$	1,142.00
Energy Charge:				
Summer				
On Peak Energy	$	0.06500	$	0.22705
Off Peak Energy	$	0.06500	$	0.05026
Winter				
On Peak Energy	$	0.06500	$	0.17849
Off Peak Energy	$	0.06500	$	0.05535
Demand Charge:				
Winter Demand	$	17.04	$	7.24
Summer Demand	$	17.04	$	7.24
Power Cost Adjustment:				
All Energy	$	0.01016	$	0.01016
Revenue from Rate	$	2,214,988	$	2,196,139

City of Danville - Gas Fund
Gas Rate Design for 2022 & 2023

11/22/2020

Utility Financial Solutions, LLC
185 Sun Meadow Court
Holland, MI 49424
(616)-402-7045

dkasbohm@ufsweb.com

Submitted Respectfully by:
Dan Kasbohm
Manager, Utility Financial Solutions

City of Danville - Gas Fund
Gas Rate Design for 2022 & 2023
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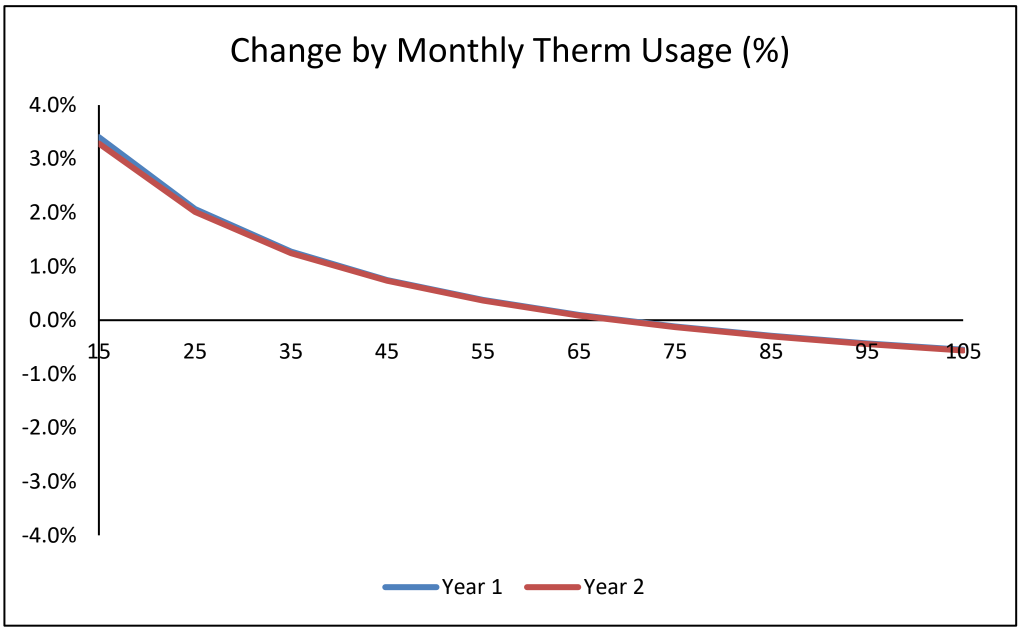
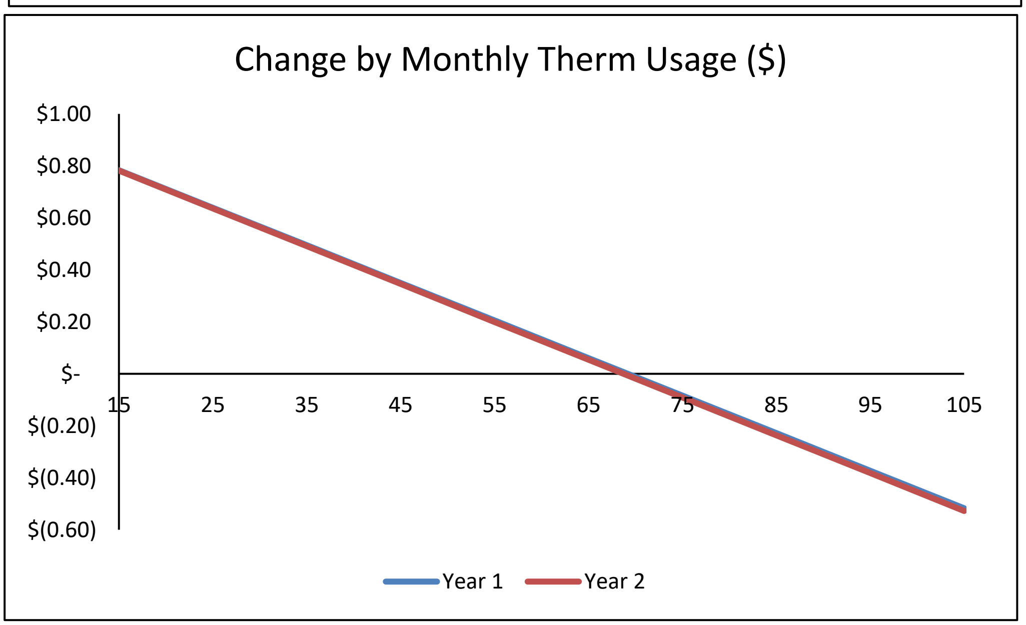
City of Danville - Gas Fund
Gas Rate Design for 2022 & 2023
Rate Design Summary

Customer Class	Projected Revenues Under Current Rates	Projected Revenues Under Proposed Rates Year 1	Projected Revenues Under Proposed Rates Year 2	Projected Percentage Change Year 1	Projected Percentage Change Year 2
Residential (10)	$ 8,346,714	$ 8,384,426	$ 8,421,306	**0.45%**	**0.44%**
Firm Commercial (20)	4,369,609	4,345,931	4,323,429	**-0.54%**	**-0.52%**
Interruptible Commercial (25)	437,382	435,195	433,019	**-0.50%**	**-0.50%**
Firm Industrial (30)	1,065,184	1,059,637	1,054,118	**-0.52%**	**-0.52%**
Interruptible Industrial (40)	736,553	729,556	722,625	**-0.95%**	**-0.95%**
Interruptible Industrial w/ Hedging (45)	5,404,797	5,404,797	5,404,797	**0.00%**	**0.00%**
Firm Industrial Transportation (50)	431,796	431,796	431,796	**0.00%**	**0.00%**
Totals	$ 20,792,034	$ 20,791,337	$ 20,791,089	**0.00%**	**0.00%**

City of Danville - Gas Fund
Gas Rate Design for 2022 & 2023
Residential (10)

Rates	Current		Year 1		Year 2	
Monthly Facilities Charge:						
All Customers	$	11.15	**$**	**12.15**	**$**	**13.15**
Distribution Charge:						
All Therms	$	0.2825	**$**	**0.2681**	**$**	**0.2535**
Purchased Gas Adjustment:						
All Therms	$	0.5085	$	0.5085	$	0.5085
Revenue from Rate	$	8,346,714	$	8,384,426	$	8,421,306
Change from Previous				**0.5%**		**0.4%**





City of Danville - Gas Fund

Gas Rate Design for 2022 & 2023

Residential (10)

Monthly Bill By Gas Usage			
All Therms	Current $	Year 1 $	Year 2 $
15	$ 23.01	$ 23.80	$ 24.58
25	$ 30.92	$ 31.56	$ 32.20
35	$ 38.83	$ 39.33	$ 39.82
45	$ 46.74	$ 47.09	$ 47.44
55	$ 54.65	$ 54.86	$ 55.06
65	$ 62.56	$ 62.62	$ 62.68
75	$ 70.47	$ 70.39	$ 70.30
85	$ 78.38	$ 78.15	$ 77.92
95	$ 86.29	$ 85.92	$ 85.54
105	$ 94.20	$ 93.68	$ 93.16

Monthly % Change by Gas Usage		
All Therms	Year 1	Year 2
15	3.4%	3.3%
25	2.1%	2.0%
35	1.3%	1.2%
45	0.7%	0.7%
55	0.4%	0.4%
65	0.1%	0.1%
75	-0.1%	-0.1%
85	-0.3%	-0.3%
95	-0.4%	-0.4%
105	-0.5%	-0.6%

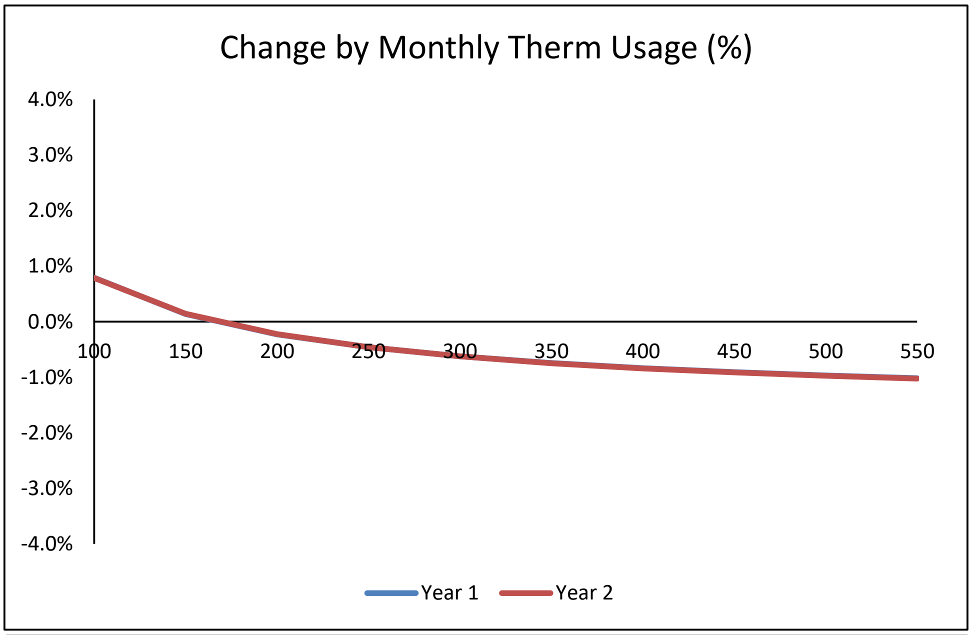
Monthly $ Change by Gas Usage		
All Therms	Year 1	Year 2
15	$ 0.78	$ 0.78
25	$ 0.64	$ 0.64
35	$ 0.49	$ 0.49
45	$ 0.35	$ 0.35
55	$ 0.21	$ 0.20
65	$ 0.06	$ 0.05
75	$ (0.08)	$ (0.09)
85	$ (0.23)	$ (0.24)
95	$ (0.37)	$ (0.38)
105	$ (0.52)	$ (0.53)

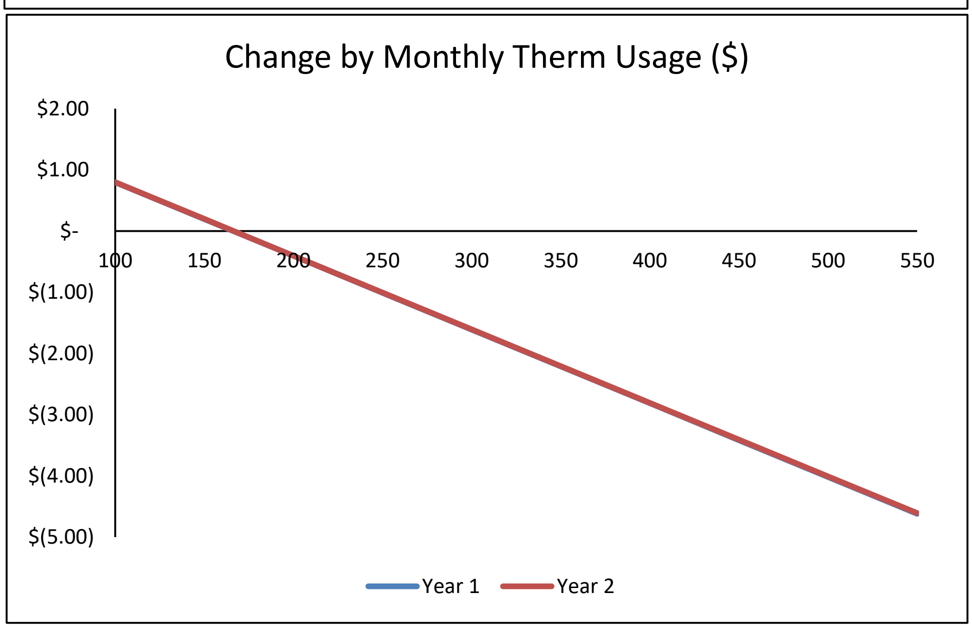
City of Danville - Gas Fund

Gas Rate Design for 2022 & 2023

Firm Commercial (20)

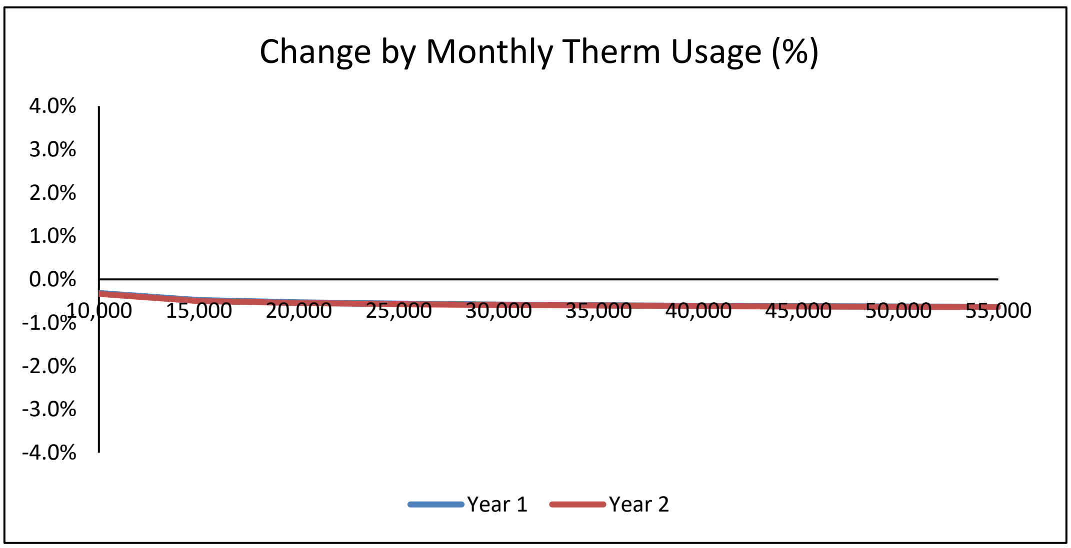
Rates	Current	Year 1	Year 2
Monthly Facilities Charge:			
All Customers	$ 22.30	**$ 24.30**	**$ 26.30**
Distribution Charge:			
Block 1 (0 - 5,000 therms)	$ 0.2825	**$ 0.2705**	**$ 0.2585**
Block 2 (Excess)	$ 0.2525	**$ 0.2417**	**$ 0.2310**
Purchased Gas Adjustment:			
All Therms	$ 0.5022	$ 0.5022	$ 0.5022
Revenue from Rate	$ 4,369,609	$ 4,345,931	$ 4,323,429
Change from Previous		**-0.5%**	**-0.5%**

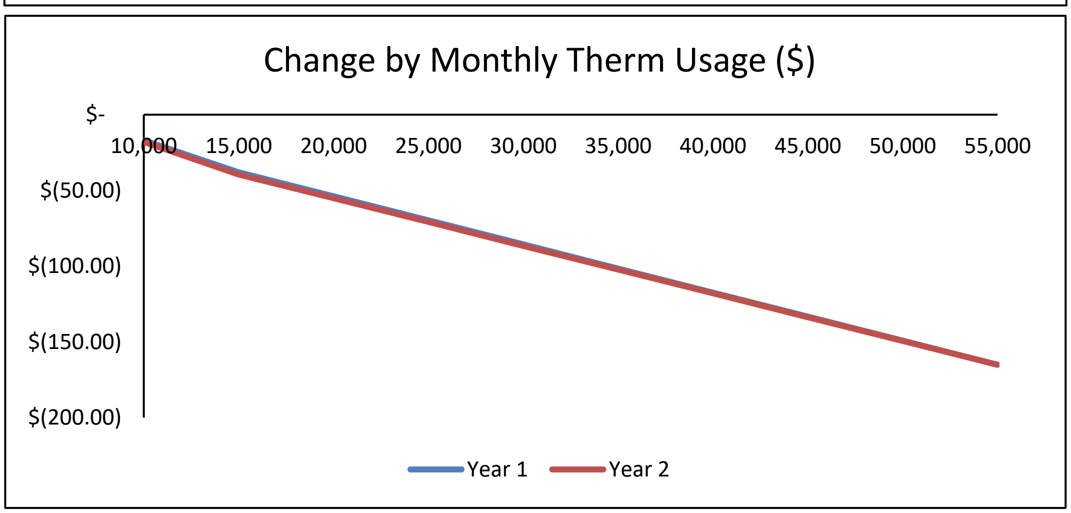




City of Danville - Gas Fund
Gas Rate Design for 2022 & 2023
Interruptible Commercial (25)

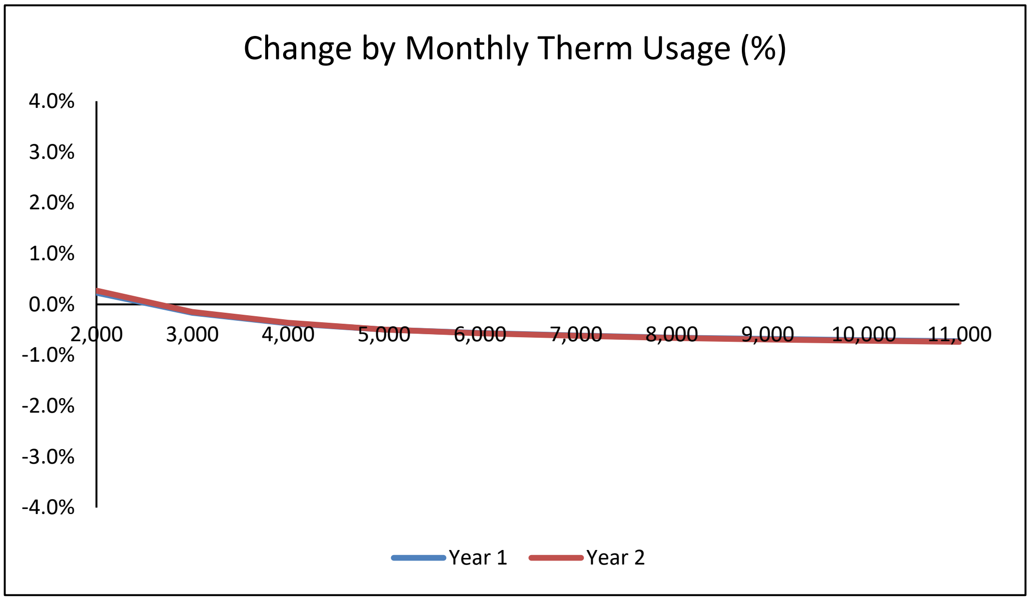
Rates	Current	Year 1	Year 2
Monthly Facilities Charge:			
All Customers	$ 375.00	**$ 400.00**	**$ 425.00**
Distribution Charge:			
Winter Block 1 (0 - 15,000 therms)	$ 0.1560	**$ 0.1501**	**$ 0.1463**
Winter Block 2 (Excess)	$ 0.1100	**$ 0.1051**	**$ 0.1024**
Summer Block 1 (0 - 15,000 therms)	$ 0.1510	**$ 0.1501**	**$ 0.1463**
Summer Block 2 (Excess)	$ 0.1050	**$ 0.1051**	**$ 0.1024**
Purchased Gas Adjustment:			
All Therms	$ 0.2828	$ 0.2828	$ 0.2828
Revenue from Rate	$ 437,382	$ 435,195	$ 433,019
Change from Previous		**-0.5%**	**-0.5%**

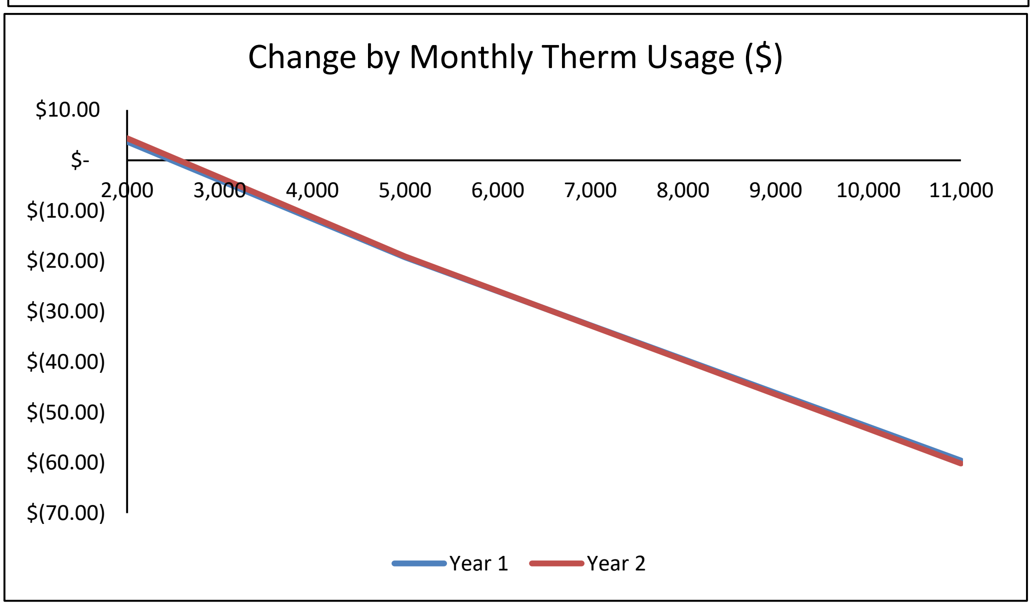




City of Danville - Gas Fund
Gas Rate Design for 2022 & 2023
Firm Industrial (30)

Rates		Current		Year 1		Year 2
Monthly Facilities Charge:						
All Customers	$	106.00	**$**	**125.00**	**$**	**145.00**
Distribution Charge:						
Block 1 (0 - 5,000 Therms)	$	0.2450	**$**	**0.2373**	**$**	**0.2295**
Block 2 (5,001 - 100,000 Therms)	$	0.2150	**$**	**0.2083**	**$**	**0.2014**
Block 3 (Excess)	$	0.1200	**$**	**0.1163**	**$**	**0.1124**
Purchased Gas Adjustment:						
All Therms	$	0.5085	$	0.5085	$	0.5085
Revenue from Rate	$	1,065,184	$	1,059,637	$	1,054,118
Change from Previous				-0.5%		-0.5%



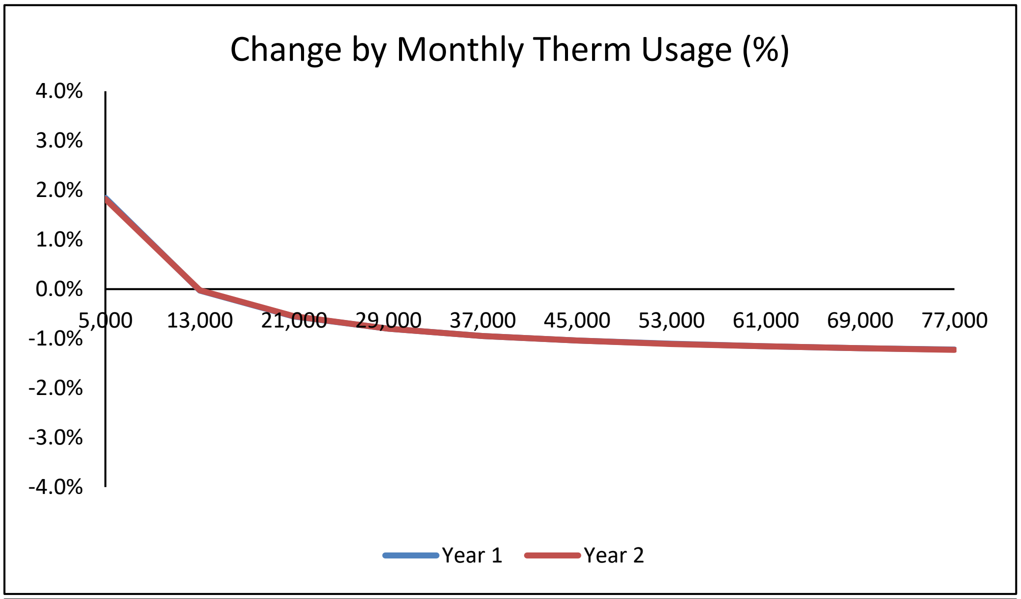


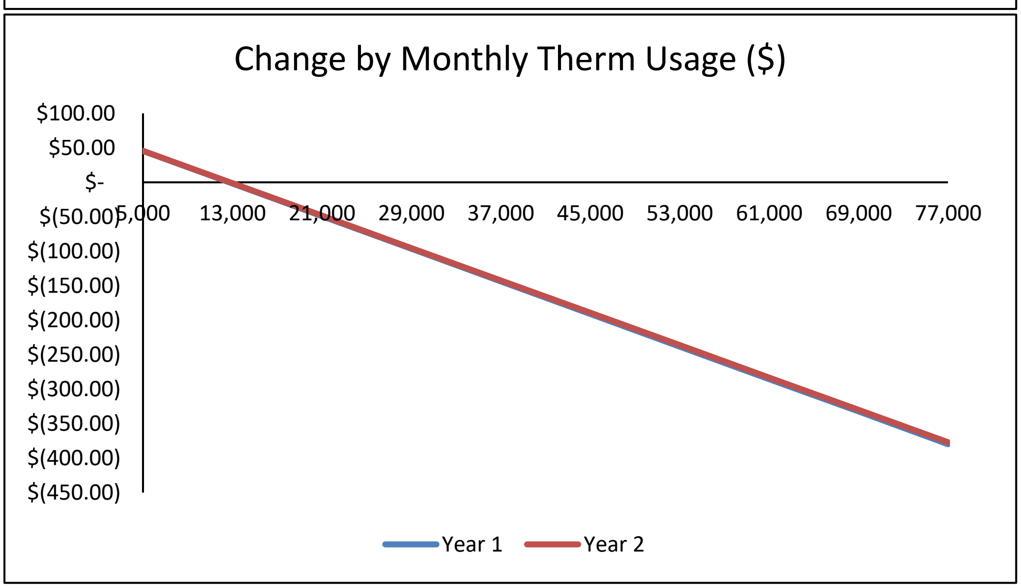
City of Danville - Gas Fund

Gas Rate Design for 2022 & 2023

Interruptible Industrial (40)

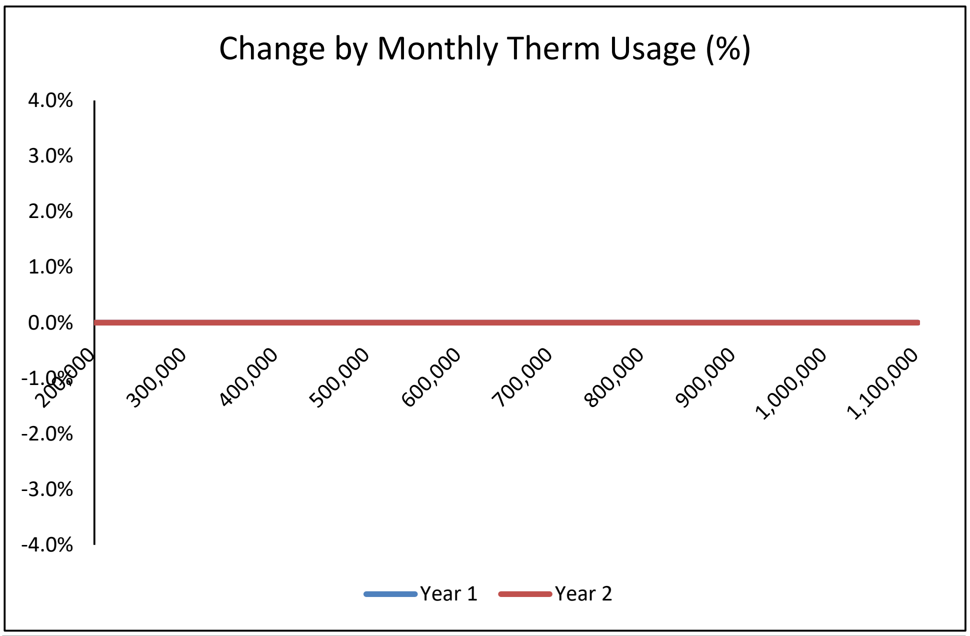
Rates		Current		Year 1		Year 2
Monthly Facilities Charge:						
All Customers	$	475.00	**$**	**550.00**	**$**	**625.00**
Distribution Charge:						
All Therms	$	0.1150	**$**	**0.1091**	**$**	**0.1032**
Purchased Gas Adjustment:						
All Therms	$	0.2828	$	0.2828	$	0.2828
Revenue from Rate	$	736,553	$	729,556	$	722,625
Change from Previous				-0.9%		-0.9%

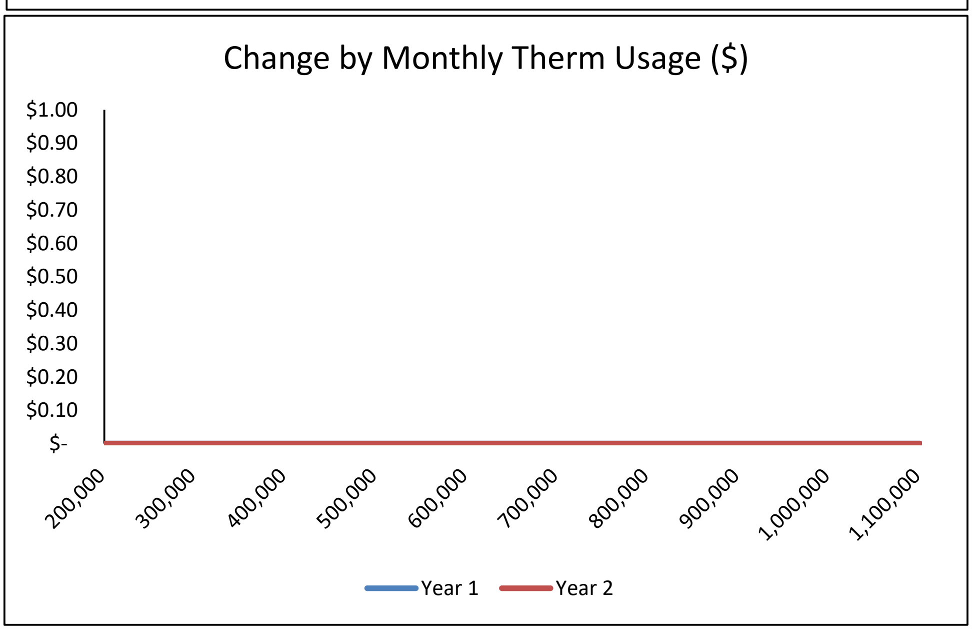




City of Danville - Gas Fund
Gas Rate Design for 2022 & 2023
Interruptible Industrial w/ Hedging (45)

Rates		Current		Year 1		Year 2
Monthly Facilities Charge:						
All Customers	$	475.00	**$**	**475.00**	**$**	**475.00**
Distribution Charge:						
Block 1 (0 - 400,000 Therms)	$	0.1500	**$**	**0.1500**	**$**	**0.1500**
Block 2 (Excess)	$	0.0750	**$**	**0.0750**	**$**	**0.0750**
Hedging Units Rate:						
All Therms	$	0.2260	$	0.2260	$	0.2260
Revenue from Rate	$	5,404,797	$	5,404,797	$	5,404,797
Change from Previous				0.0%		0.0%





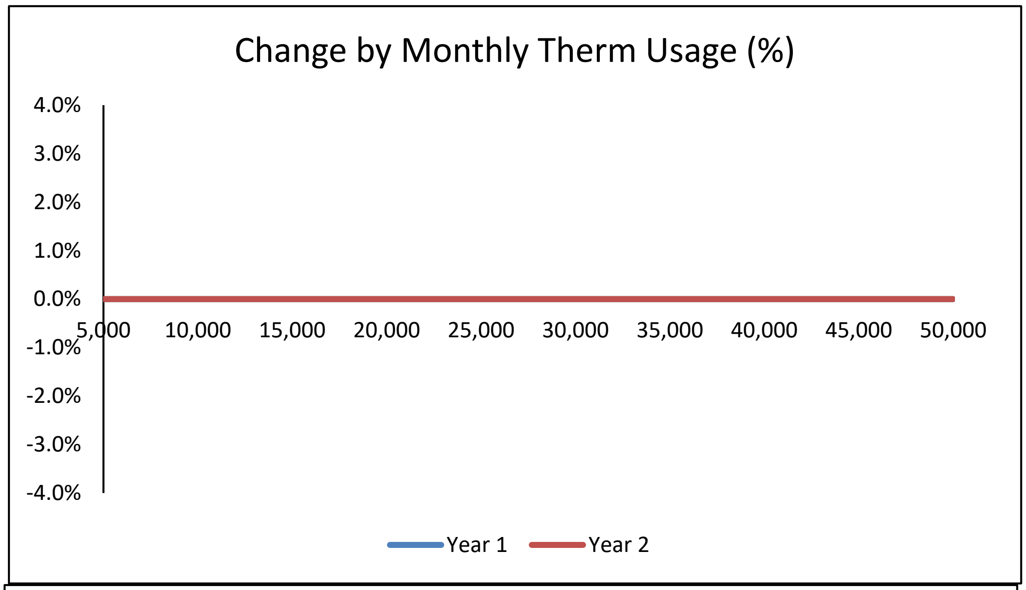
City of Danville - Gas Fund

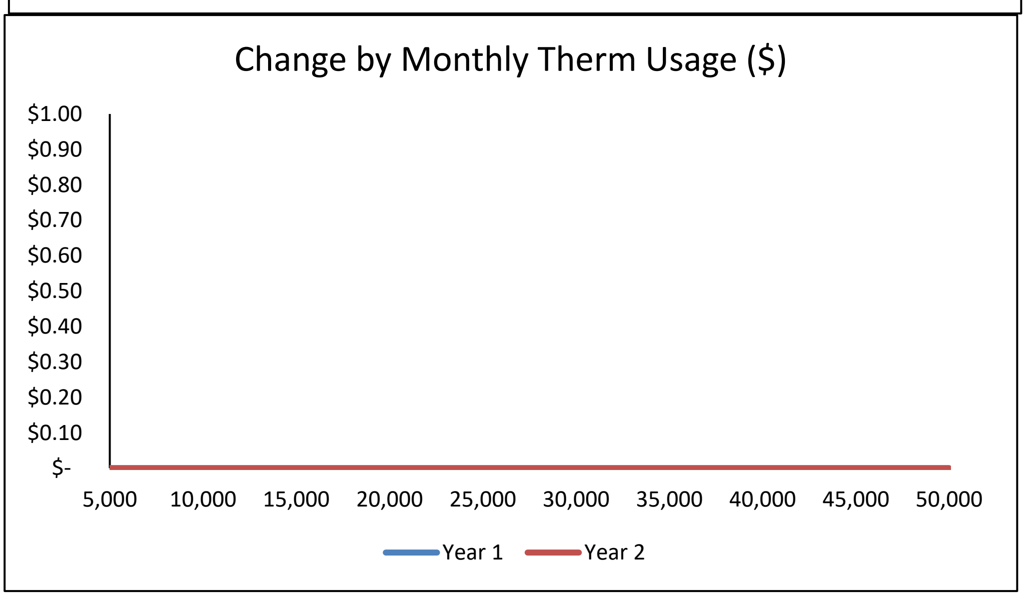
Gas Rate Design for 2022 & 2023

Firm Industrial Transportation (50)

**No PGA*

Rates		Current		Year 1		Year 2
Monthly Facilities Charge:						
All Customers	$	375.00	**$**	**375.00**	**$**	**375.00**
Distribution Charge:						
All Therms	$	0.1450	**$**	**0.1450**	**$**	**0.1450**
Purchased Gas Adjustment:						
All Therms	$	-	$	-	$	-
Revenue from Rate	$	431,796	$	431,796	$	431,796
Change from Previous				0.0%		0.0%





UFS
Utility Financial Solutions, LLC

Specializing in Cost of Service,
Rate Design, and Financial Analysis

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October 16, 2020

Mr. Jason Grey
Director of Utilities
1040 Monument Street
Danville, VA 24541

Dear Mr. Grey,

We are pleased to present this executive summary report for a cost of service, financial projection and rate design study completed for the City of Danville water utility. This report was prepared to provide the utility with a comprehensive examination of its existing financials by an outside party.

The specific purposes of this long-term financial projection and rate study are:

1) Determine the water utility's revenue requirements for 2022
2) Project rate adjustments needed to meet targeted revenue requirements
3) Determine the cost to serve retail customers
4) Develop two-year of retail rates

This report includes results of the cost of service, financial projection, and identifies future rate adjustments for the water operation. Specific findings included in this report are:

1) Rate adjustments that are based on the utility's ability to work toward three factors listed below:
    - Debt Coverage Ratio
    - Minimum Cash Reserves
    - Optimal Operating Income
2) Rate adjustments are designed to work toward cost of service results.
    - A comparison of current and proposed rates and the impact to rate payers is included

This report is intended for information and use by management and the Board of Directors for purposes stated above and is not intended to be used by anyone except the specified parties.

Sincerely,

Dawn Lund

Utility Financial Solutions, LLC
Dawn Lund, Vice-President

UTILITY REVENUE REQUIREMENTS FOR 2021-2024

To determine revenue requirements, the revenues and expenses for Fiscal Year 2019, 2020 and Budget 2021 were analyzed, with adjustments made to reflect projected operating characteristics. ***The projected financial statements are for cost of service purposes only.***

Table 1 is the projected financial statement for the water operation from 2021-2024 without any rate changes; with 2022 being the test year. Projected operating income is forecasted at $2.0 million in 2022 and decreases to $1.7 million in 2024. The cash balance is projected at $10.7 million in 2022 and maintains at that level for 2024 with the current capital improvement program. The debt coverage ratio meets the targeted minimum throughout the projection period; debt principal decreases in 2023 as that debt schedule seems to be "front-loaded" prior to that period. Overall, the water utility is financially healthy and meets or is near financial targets.

Table 1 – Financial Projection Summary (without Rate Adjustments)

Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
2021	0.0%	8,788,011	6,716,072	2,213,644	9,331,333	5,500,000	-	8.78
2022	0.0%	8,788,011	6,875,953	2,053,764	10,689,565	2,000,000	-	8.31
2023	0.0%	8,788,011	7,064,545	1,865,172	12,268,062	2,000,000	-	21.12
2024	0.0%	8,788,011	7,201,456	1,728,261	10,785,865	5,000,000	-	20.76
Targeted in 2022				**$ 2,059,446**				
Targeted in 2024				**$ 2,223,215**				
MINIMUM/CRITICAL Reserves 2022					**$ 4,948,712**			**1.45**
MINIMUM/CRITICAL Reserves 2024					**$ 5,037,115**			**1.45**

Projected Operating Income is stable and the cash balance and Debt Coverage Ratio meet the targets throughout the projection period.

PROJECTED CASH FLOW

Table 2 is the projected cash flow for 2021-2024, including projections of capital improvements as provided by the Utility. Changes in the capital improvement plan can greatly affect the cash balance and minimum cash reserve target. The cash balance for 2021 is projected at $9.3 million and increases to $10.8 million in 2024.

Table 2 - Projected Cash Flows (without Rate Adjustments)

Projected Cash Flows	Projected 2021	Projected 2022	Projected 2023	Projected 2024
Add Net Income	$ 2,150,922	$ 1,989,447	$ 1,834,146	$ 1,719,708
Add Back Depreciation Expense	1,675,198	1,761,448	1,875,085	1,935,691
Subtract Debt Principal	359,700	392,663	130,734	137,596
Add Bond Sale Proceeds	-	-	-	-
Cash Available from Operations	**$ 3,466,420**	**$ 3,358,232**	**$ 3,578,497**	**$ 3,517,803**
Estimated Annual Capital Additions	5,500,000	2,000,000	2,000,000	5,000,000
Net Cash From Operations	**$ (2,033,580)**	**$ 1,358,232**	**$ 1,578,497**	**$ (1,482,197)**
Beginning Cash Balance	11,364,913	9,331,333	10,689,565	12,268,062
Ending Cash Balance	**$ 9,331,333**	**$ 10,689,565**	**$ 12,268,062**	**$ 10,785,865**
Total Cash Available	**$ 9,331,333**	**$ 10,689,565**	**$ 12,268,062**	**$ 10,785,865**
Targeted Minimum	**$ 5,201,293**	**$ 4,948,712**	**$ 4,978,105**	**$ 5,037,115**

Projected Cash Balances meet targeted minimums throughout the projection period.

DEVELOPMENT OF FINANCIAL TARGETS

When evaluating rates to charge customers, three factors must be considered:

1. Debt Coverage Ratio
2. Minimum Cash Reserves
3. Optimal Net Income

Each of these factors is discussed below:

Debt Coverage Ratio - Table 3 is the projected debt coverage ratios. Current operations have sufficient cash flow to meet the debt coverage ratio. The minimum targeted debt coverage ratio for prudent financial planning purposes is 1.45 for revenue bonds. Maintaining a 1.45 debt coverage ratio is good business practice and would help to achieve the following:

- Helps to ensure adequate funds are available to meet debt service payments in years when sales are low due to cold or wet summers or loss of a major customer(s).
- Obtain higher bond rating, if revenue bonds are sold in the future, to lower interest cost.

Table 3 – Projected Debt Coverage Ratios

	Projected 2021	Projected 2022	Projected 2023	Projected 2024
Add Net Income	$ 2,150,922	$ 1,989,447	$ 1,834,146	$ 1,719,708
Add Depreciation Expense	1,675,198	1,761,448	1,875,085	1,935,691
Add Interest Expense	85,577	66,835	47,127	40,439
Cash Available for Debt Service	$ 3,911,697	$ 3,817,731	$ 3,756,358	$ 3,695,838
Debt Principal and Interest	$ 445,277	$ 459,499	$ 177,861	$ 178,035
Projected Debt Coverage Ratio (Covenants)	8.78	8.31	21.12	20.76
Minimum Debt Coverage Ratio	**1.45**	**1.45**	**1.45**	**1.45**

The Debt Coverage Ratio is sufficient throughout the projection period; principal decreases in 2023 as the debt appears to be front-loaded in prior years.

Minimum Cash Reserve - Table 4 is the minimum level of cash reserves required to help ensure timely replacement of assets and to provide financial stability of the water utility. The methodology used to establish this minimum is based on certain assumptions related to a percentage of operating expense, historical investment, capital improvements, and debt service to be kept in cash reserves. Minimum cash reserve attempts to quantify the minimum amount of cash the utility should keep in reserve, and is considered at critical levels if cash approaches this minimum.

Actual cash reserves may vary substantially above the minimum and is dependent on the life cycle of assets that are currently in service. If a minimum cash reserve policy is established, and the utility's cash balance falls below the established amount, it should require the Board to take action to rebuild cash. The typical action includes a rate increase or the consideration of a bond issuance. Based on these assumptions, the City of Danville should maintain a minimum of $5.0 million in cash reserves.

Table 4 – Minimum Cash Reserves

	Percent Allocated	Projected 2021	Projected 2022	Projected 2023	Projected 2024
O&M Less Depreciation Expense	**12.3%**	$ 620,028	$ 629,084	$ 638,304	$ 647,689
Historical Rate Base	**1%**	821,767	841,767	861,767	911,767
Max Debt Payment	**100%**	459,499	177,861	178,035	177,659
Five Year Capital Imprv - Net of bond proceeds	**20%**	3,300,000	3,300,000	3,300,000	3,300,000
Targeted Minimum		**$ 5,201,293**	**$ 4,948,712**	**$ 4,978,105**	**$ 5,037,115**
Projected Cash Reserves		**$ 9,331,333**	**$ 10,689,565**	**$ 12,268,062**	**$ 10,785,865**

Projected Cash Balances meet targeted minimum throughout the projection period.

Operating income targets - The optimal target for setting rates is the establishment of a target operating income to help ensure the following:

1) Funding of Interest Expense on the outstanding principal on debt. Interest expense is below the operating income line and needs to be recouped through the operating income balance.
2) Funding of the inflationary increase on the assets invested in the system. The inflation on the replacement of assets invested in the utility should be recouped through the Operating Income
3) Adequate rate of return on investment to help ensure current customers are paying their fair share of the use of the infrastructure and not deferring the charge to future generations.

As improvements are made to the system, the optimal operating income target will increase unless annual depreciation expense is greater than yearly capital improvements. The target established is about $2.0 million over the projection period and equates to approximately a 5.0% rate of return.

Table 5 - Optimal Operating Income Targets Compared to Projected

	Percent Allocated	Projected 2021	Projected 2022	Projected 2023	Projected 2024
Interest Expense	**5.3%**	$ 85,577	$ 66,835	$ 47,127	$ 40,439
Contributed Capital Estimated	**1.8%**	84,173	84,173	84,173	84,173
System Equity	**5.5%**	1,873,721	1,908,438	1,922,498	2,098,603
Target Operating Income		**$ 2,043,471**	**$ 2,059,446**	**$ 2,053,798**	**$ 2,223,215**
Projected Operating Income		**$ 2,213,644**	**$ 2,053,764**	**$ 1,865,172**	**$ 1,728,261**
Rate of Return in %		**5.1%**	**5.1%**	**5.0%**	**5.1%**

Operating income is relatively stable throughout the projection period.

REVENUE FORECAST:

Sales were projected and adjusted for known or anticipated changes in customer usage and a growth for the projection period. Table 6 and 7 below projects the billed units and number of customers in 2022.

TABLE 6 – PROJECTED BILLED UNITS

Meter Size	Projected 2022
Residential	
5/8"	784,272
1"	43,226
1 1/2"	1,956
2"	310
3"	-
4"	-
6"	-
8"	-
Commercial	
5/8"	63,980
1"	77,963
1 1/2"	85,936
2"	169,224
3"	113,137
4"	54,116
6"	231,950
8"	80,881
Municipal	
5/8"	1,287
1"	10,830
1 1/2"	1,807
2"	13,987
3"	20,799
4"	-
6"	-
8"	4
Industrial	
5/8"	790
1"	2,133
1 1/2"	2,847
2"	13,619
3"	15,104
4"	103,265
6"	98,664
8"	66,894
Total	**2,058,981**

TABLE 7 – PROJECTED NUMBER OF CUSTOMERS

Meter Size	Projected 2022
Residential	
5/8"	14,207
1"	608
1 1/2"	10
2"	1
3"	-
4"	-
6"	-
8"	-
Commercial	
5/8"	1,116
1"	562
1 1/2"	202
2"	220
3"	52
4"	26
6"	9
8"	4
Municipal	
5/8"	49
1"	40
1 1/2"	12
2"	38
3"	6
4"	-
6"	-
8"	-
Industrial	
5/8"	10
1"	8
1 1/2"	2
2"	6
3"	5
4"	2
6"	3
8"	1
Hydrant	
Total	262
Total	**17,461**

SUMMARY OF FINANCIAL POSITION

PROJECTED RATE TRACK

Increasing rates requires balancing the financial health of the utility with the financial impact on customers and cost of service results. Table 8 below shows the utility is currently financially healthy and meets or is near financial targets. No rate increases are needed at this time however, the utility could consider a revenue neutral rate adjustment to work rate components closer to cost of service results on the next page. The rate track should be reviewed annually to ensure it is sufficient as changes in revenues, expenses and capital can impact the rate track.

Table 8 – Financial Projection Summary

Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
2021	0.0%	8,788,011	6,716,072	2,213,644	9,331,333	5,500,000	-	8.78
2022	0.0%	8,788,011	6,875,953	2,053,764	10,689,565	2,000,000	-	8.31
2023	0.0%	8,788,011	7,064,545	1,865,172	12,268,062	2,000,000	-	21.12
2024	0.0%	8,788,011	7,201,456	1,728,261	10,785,865	5,000,000	-	20.76
Targeted in 2022				**$ 2,059,446**				
Targeted in 2024				**$ 2,223,215**				
MINIMUM/CRITICAL Reserves 2022					**$ 4,948,712**			**1.45**
MINIMUM/CRITICAL Reserves 2024					**$ 5,037,115**			**1.45**

Operating Income is stable and projected Cash Balance and Debt Coverage Ratio meet targeted levels throughout the projection period.

Cost of Service Results

The purpose of a cost of service study is to allocate costs between flow (Commodity Costs) and customer service costs (Customer Costs). The cost of service study was based on recognized procedures from the American Water Works Association.

Commodity Costs are costs that tend to vary with the quantity of water used, as well as costs associated with purchasing, pumping and distributing water to customers. Commodity costs include water purchase/treatment costs plus pumping stations and transmission lines.

Customer Costs are costs associated with serving customers regardless of their usage or demand characteristics. Customer costs include the operation and maintenance expenses related to meters and services, meter reading costs, billing and collection costs. The customer costs were allocated on the basis of the relative cost of meters and services and the number of customers.

Table 9 compares the City of Danville's current customer and commodity charges with the results of the cost of service analysis. The table shows the current fixed monthly customer charge is under cost to serve. The utility could consider a revenue neutral rate adjustment to raise fixed monthly customer charges and lower the commodity rate.

Table 9 – Comparison of Current Customer Service Charge with Cost of Service

Meter Size	Current Monthly Meter Charges	Cost of Service Monthly Meter Charges
5/8"	$ 8.85	$ 12.00
1"	22.13	26.64
1 1/2"	44.25	52.35
2"	70.80	82.01
3"	141.60	147.92
4"	221.25	243.29
6"	442.50	478.65
8"	708.00	763.01

Commodity	Current Average Cost per CCU	Cost of Service Average Cost per CCU
All Units	$ 2.60	$ 2.40

SIGNIFICANT ASSUMPTIONS

This section outlines the procedures used to develop the cost of service study and rate design for the Water Utility the related significant assumptions.

Forecasted Operating Expenses

Forecasted expenses were based on 2019 and 2020 actual and Budget 2021 and adjusted for inflation.

Inflation

Inflation was assumed at 1.8% annually.

Depreciation Expense

Depreciation expense was projected based on historical capital additions and discussions with management on future capital additions.

Interest Income

Interest income was forecasted based on projected cash balances and an interest rate of 1.0%.

Capital Improvements

The capital improvement projections were provided by the City of Danville. Projections for 2021-2024 are listed below:

Fiscal Year	Capital Improvements
2021	5,500,000
2022	2,000,000
2023	2,000,000
2024	5,000,000

WATER OPERATION FINDINGS

1. The City of Danville's water utility is currently financial health and no projected rate increases are needed. However, to more closely align the cost to serve customers and rate components, a revenue neutral rate design could be considered. The rate track should be reviewed annually to ensure it is sufficient as changes in revenues, expenses and capital can affect the rate track.

Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
2021	0.0%	8,788,011	6,716,072	2,213,644	9,331,333	5,500,000	-	8.78
2022	0.0%	8,788,011	6,875,953	2,053,764	10,689,565	2,000,000	-	8.31
2023	0.0%	8,788,011	7,064,545	1,865,172	12,268,062	2,000,000	-	21.12
2024	0.0%	8,788,011	7,201,456	1,728,261	10,785,865	5,000,000	-	20.76
Targeted in 2022				**$ 2,059,446**				
Targeted in 2024				**$ 2,223,215**				
MINIMUM/CRITICAL Reserves 2022					**$ 4,948,712**			**1.45**
MINIMUM/CRITICAL Reserves 2024					**$ 5,037,115**			**1.45**

2. The financial projection revenue, expenses and cash flow should be updated annually with the budget process to determine if rate track is on target. Any changes in revenues, expenses and capital improvements can greatly affect the rate track and bonding requirements.

Projected Rate Design Year One - 0.0% Rate Increase – Revenue Neutral

	Current Rates	COS Rates	Proposed Rate
Commodity Rate	$ 2.60	$ 2.40	$ 2.55
5/8"	$ 8.85	$ 12.00	$ 9.50
1"	22.13	26.64	23.00
1 1/2"	44.25	52.35	48.50
2"	70.80	82.01	76.50
3"	141.60	147.92	145.00
4"	221.25	243.29	232.50
6"	442.50	478.65	460.50
8"	708.00	763.01	735.50
Overall Revenue Increase			**0.0%**

Projected Rate Design Year One - 0.0% Rate Increase Impacts by Meter Size

5/8"	Current Rates	Proposed Rates
Customer Service Charge	$ 8.85	$ 9.50
Commodity Rate	2.60	2.55

Consumption	Current Rates	Proposed Rates	Dollar Impact	Percent Change
3	$ 16.65	$ 17.15	$ 0.50	3.00%
4	19.25	19.70	0.45	2.34%
5	21.85	22.25	0.40	1.83%
9	32.25	32.45	0.20	0.62%
11	37.45	37.55	0.10	0.27%

1"	Current Rates	Proposed Rates
Customer Service Charge	$ 22.13	$ 23.00
Commodity Rate	$ 2.60	2.55

Consumption	Current Rates	Proposed Rates	Dollar Impact	Percent Change
4	$ 32.53	$ 33.20	$ 0.67	2.06%
5	$ 35.13	$ 35.75	0.62	1.76%
6	$ 37.73	$ 38.30	0.57	1.51%
10	$ 48.13	$ 48.50	0.37	0.77%
12	$ 53.33	$ 53.60	0.27	0.51%

1 1/2"	Current Rates	Proposed Rates
Customer Service Charge	$ 44.25	$ 48.50
Commodity Rate	2.60	2.55

Consumption	Current Rates	Proposed Rates	Dollar Impact	Percent Change
15	$ 83.25	$ 86.75	$ 3.50	4.20%
25	$ 109.25	$ 112.25	3.00	2.75%
35	$ 135.25	$ 137.75	2.50	1.85%
45	$ 161.25	$ 163.25	2.00	1.24%
55	$ 187.25	$ 188.75	1.50	0.80%

2"	Current Rates	Proposed Rates
Customer Service Charge	$ 70.80	$ 76.50
Commodity Rate	$ 2.60	2.55

Consumption	Current Rates	Proposed Rates	Dollar Impact	Percent Change
30	$ 148.80	$ 153.00	$ 4.20	2.82%
50	$ 200.80	$ 204.00	3.20	1.59%
64	$ 237.20	$ 239.70	2.50	1.05%
75	$ 265.80	$ 267.75	1.95	0.73%
100	$ 330.80	$ 331.50	0.70	0.21%

Projected Rate Design Year One - 0.0% Rate Increase Impacts by Meter Size

3"	Current Rates	Proposed Rates		
Customer Service Charge	$ 141.60	$ 145.00		
Commodity Rate	$ 2.60	2.55		

Consumption	Current Rates	Proposed Rates	Dollar Impact	Percent Change
150	$ 531.60	$ 527.50	$ (4.10)	-0.77%
180	$ 609.60	$ 604.00	(5.60)	-0.92%
250	$ 791.60	$ 782.50	(9.10)	-1.15%
300	$ 921.60	$ 910.00	(11.60)	-1.26%
400	$ 1,181.60	$ 1,165.00	(16.60)	-1.40%

4"	Current Rates	Proposed Rates		
Customer Service Charge	$ 221.25	$ 232.50		
Commodity Rate	2.60	2.55		

Consumption	Current Rates	Proposed Rates	Dollar Impact	Percent Change
175	$ 676.25	$ 678.75	$ 2.50	0.37%
1000	$ 2,821.25	$ 2,782.50	(38.75)	-1.37%
2000	$ 5,421.25	$ 5,332.50	(88.75)	-1.64%
3000	$ 8,021.25	$ 7,882.50	(138.75)	-1.73%
4000	$10,621.25	$10,432.50	(188.75)	-1.78%

6"	Current Rates	Proposed Rates		
Customer Service Charge	$ 442.50	$ 460.50		
Commodity Rate	$ 2.60	$ 2.55		

Consumption	Current Rates	Proposed Rates	Dollar Impact	Percent Change
1000	$ 3,042.50	$ 3,010.50	$ (32.00)	-1.05%
1500	$ 4,342.50	$ 4,285.50	(57.00)	-1.31%
2150	$ 6,032.50	$ 5,943.00	(89.50)	-1.48%
2550	$ 7,072.50	$ 6,963.00	(109.50)	-1.55%
3000	$ 8,242.50	$ 8,110.50	(132.00)	-1.60%

8"	Current Rates	Proposed Rates		
Customer Service Charge	$ 708.00	$ 735.50		
Commodity Rate	$ 2.60	2.55		

Consumption	Current Rates	Proposed Rates	Dollar Impact	Percent Change
600	$ 2,268.00	$ 2,265.50	$ (2.50)	-0.11%
850	$ 2,918.00	$ 2,903.00	(15.00)	-0.51%
1500	$ 4,608.00	$ 4,560.50	(47.50)	-1.03%
2000	$ 5,908.00	$ 5,835.50	(72.50)	-1.23%
5000	$13,708.00	$13,485.50	(222.50)	-1.62%

Projected Rate Design Year Two - 0.0% Rate Increase – Revenue Neutral

	Current Rates	COS Rates	Proposed Rate
Commodity Rate	$ 2.55	$ 2.40	$ 2.50
5/8"	$ 9.50	$ 12.00	$ 10.25
1"	23.00	26.64	24.00
1 1/2"	48.50	52.35	52.75
2"	76.50	82.01	82.25
3"	145.00	147.92	148.00
4"	232.50	243.29	243.50
6"	460.50	478.65	479.00
8"	735.50	763.01	763.00
Overall Revenue Increase			**0.0%**

Projected Rate Design Year Two - 0.0% Rate Increase Impacts by Meter Size

5/8"	Current Rates	Proposed Rates
Customer Service Charge	$ 9.50	$ 10.25
Commodity Rate	2.55	2.50

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Consumption	Current Rates	Proposed Rates	Dollar Impact	Percent Change
3	$ 17.15	$ 17.75	$ 0.60	3.50%
4	19.70	20.25	0.55	2.79%
5	22.25	22.75	0.50	2.25%
9	32.45	32.75	0.30	0.92%
11	37.55	37.75	0.20	0.53%

1"	Current Rates	Proposed Rates
Customer Service Charge	$ 23.00	$ 24.00
Commodity Rate	$ 2.55	2.50

Consumption	Current Rates	Proposed Rates	Dollar Impact	Percent Change
4	$ 33.20	$ 34.00	$ 0.80	2.41%
5	$ 35.75	$ 36.50	0.75	2.10%
6	$ 38.30	$ 39.00	0.70	1.83%
10	$ 48.50	$ 49.00	0.50	1.03%
12	$ 53.60	$ 54.00	0.40	0.75%

1 1/2"	Current Rates	Proposed Rates
Customer Service Charge	$ 48.50	$ 52.75
Commodity Rate	2.55	2.50

Consumption	Current Rates	Proposed Rates	Dollar Impact	Percent Change
15	$ 86.75	$ 90.25	$ 3.50	4.03%
25	$ 112.25	$ 115.25	3.00	2.67%
35	$ 137.75	$ 140.25	2.50	1.81%
45	$ 163.25	$ 165.25	2.00	1.23%
55	$ 188.75	$ 190.25	1.50	0.79%

2"	Current Rates	Proposed Rates
Customer Service Charge	$ 76.50	$ 82.25
Commodity Rate	$ 2.55	2.50

Consumption	Current Rates	Proposed Rates	Dollar Impact	Percent Change
30	$ 153.00	$ 157.25	$ 4.25	2.78%
50	$ 204.00	$ 207.25	3.25	1.59%
64	$ 239.70	$ 242.25	2.55	1.06%
75	$ 267.75	$ 269.75	2.00	0.75%
100	$ 331.50	$ 332.25	0.75	0.23%

Projected Rate Design Year Two - 0.0% Rate Increase Impacts by Meter Size

3"	**Current Rates**	**Proposed Rates**
Customer Service Charge	$ 145.00	$ 148.00
Commodity Rate	$ 2.55	2.50

Consumption	**Current Rates**	**Proposed Rates**	**Dollar Impact**	**Percent Change**
150	$ 527.50	$ 523.00	$ (4.50)	-0.85%
180	$ 604.00	$ 598.00	(6.00)	-0.99%
250	$ 782.50	$ 773.00	(9.50)	-1.21%
300	$ 910.00	$ 898.00	(12.00)	-1.32%
400	$ 1,165.00	$ 1,148.00	(17.00)	-1.46%

4"	**Current Rates**	**Proposed Rates**
Customer Service Charge	$ 232.50	$ 243.50
Commodity Rate	2.55	2.50

Consumption	**Current Rates**	**Proposed Rates**	**Dollar Impact**	**Percent Change**
175	$ 678.75	$ 681.00	$ 2.25	0.33%
1000	$ 2,782.50	$ 2,743.50	(39.00)	-1.40%
2000	$ 5,332.50	$ 5,243.50	(89.00)	-1.67%
3000	$ 7,882.50	$ 7,743.50	(139.00)	-1.76%
4000	$10,432.50	$10,243.50	(189.00)	-1.81%

6"	**Current Rates**	**Proposed Rates**
Customer Service Charge	$ 460.50	$ 479.00
Commodity Rate	$ 2.55	$ 2.50

Consumption	**Current Rates**	**Proposed Rates**	**Dollar Impact**	**Percent Change**
1000	$ 3,010.50	$ 2,979.00	$ (31.50)	-1.05%
1500	$ 4,285.50	$ 4,229.00	(56.50)	-1.32%
2150	$ 5,943.00	$ 5,854.00	(89.00)	-1.50%
2550	$ 6,963.00	$ 6,854.00	(109.00)	-1.57%
3000	$ 8,110.50	$ 7,979.00	(131.50)	-1.62%

8"	**Current Rates**	**Proposed Rates**
Customer Service Charge	$ 735.50	$ 763.00
Commodity Rate	$ 2.55	2.50

Consumption	**Current Rates**	**Proposed Rates**	**Dollar Impact**	**Percent Change**
600	$ 2,265.50	$ 2,263.00	$ (2.50)	-0.11%
850	$ 2,903.00	$ 2,888.00	(15.00)	-0.52%
1500	$ 4,560.50	$ 4,513.00	(47.50)	-1.04%
2000	$ 5,835.50	$ 5,763.00	(72.50)	-1.24%
5000	$13,485.50	$13,263.00	(222.50)	-1.65%

Executive Report

City of Danville, VA

Wastewater Cost of Service and Rate Design Report

October 15, 2020

UFS
Utility Financial Solutions, LLC

Specializing in Cost of Service,
Rate Design, and Financial Analysis

Rate Design, and Financial Analysis

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October 15, 2020

Mr. Jason Grey
Director of Utilities
1040 Monument Street
Danville, VA 24541

Dear Mr. Grey,

We are pleased to present this executive summary report for a cost of service, financial projection and rate design study completed for the City of Danville wastewater utility. This report was prepared to provide the utility with a comprehensive examination of its existing financials by an outside party.

The specific purposes of this long-term financial projection and rate study are:

1) Determine the wastewater utility's revenue requirements for 2022
2) Project rate adjustments needed to meet targeted revenue requirements
3) Determine the cost to serve retail customers
4) Develop two-years of retail rates; if proposed changes

This report includes results of the cost of service, financial projection, and identifies future rate adjustments for the wastewater operation. Specific findings included in this report are:

1) Rate adjustments that are based on the utility's ability to work toward three factors listed below:
    - Debt Coverage Ratio
    - Minimum Cash Reserves
    - Optimal Operating Income
2) Rate adjustments are designed to work toward cost of service results.
    - A comparison of current and proposed rates and the impact to rate payers if new rate design is proposed

This report is intended for information and use by management and the Board of Directors for purposes stated above and is not intended to be used by anyone except the specified parties.

Sincerely,

Dawn Lund

Utility Financial Solutions, LLC
Dawn Lund, Vice-President

UTILITY REVENUE REQUIREMENTS FOR 2021-2024

To determine revenue requirements, the revenues and expenses for Fiscal Year 2019, 2020, and Budget 2021 were analyzed, with adjustments made to reflect projected operating characteristics. **The projected financial statements are for cost of service purposes only.**

Table 1 is the projected financial statement for the wastewater operation from 2021-2024 without any rate changes; with 2022 being the test year. Projected operating income is $1.85 million in 2022 and decreases to $1.56 million in 2024. The cash balance is projected at $10.5 million in 2022 and increases to $14.1 million in 2024 with the current capital improvement program. The debt coverage ratio meets the targeted minimum throughout the projection period; debt principal decreases in 2023 as that debt schedule seems to be "front-loaded" prior to that period. Overall, the wastewater utility is financially healthy and meets or is near financial targets.

Table 1 – Financial Projection Summary (without Rate Adjustments)

Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
2021	0.00%	9,418,103	7,478,132	2,058,848	9,532,380	6,150,000	-	10.12
2022	0.00%	9,418,103	7,677,598	1,859,382	10,586,388	2,650,000	-	9.58
2023	0.00%	9,418,103	7,829,374	1,707,606	12,406,586	2,050,000	-	20.76
2024	0.00%	9,418,103	7,972,769	1,564,211	14,164,114	2,050,000	-	20.43
Targeted in 2022				**$ 2,705,739**	**$ 5,212,701**			**1.45**
Targeted in 2024				**$ 2,662,848**	**$ 5,314,429**			**1.45**

PROJECTED CASH FLOW

Table 2 is the projected cash flow for 2021-2024, including projections of capital improvements as provided by the Utility. Changes in the capital improvement plan can greatly affect the cash balance and minimum cash reserve target. Cash balances meet the targeted minimum throughout the projection period with the current capital improvement program.

Table 2 – Projected Cash Flows (without Rate Adjustments)

Projected Cash Flows	Projected 2021	Projected 2022	Projected 2023	Projected 2024
Add Net Income	$ 2,002,708	$ 1,797,908	$ 1,675,483	$ 1,558,293
Add Back Depreciation Expense	2,157,154	2,268,821	2,340,033	2,402,154
Subtract Debt Principal	333,334	362,722	145,320	152,922
Add Bond Sale Proceeds	-	-	-	-
Cash Available from Operations	**$ 3,826,529**	**$ 3,704,008**	**$ 3,870,198**	**$ 3,807,528**
Estimated Annual Capital Additions	6,150,000	2,650,000	2,050,000	2,050,000
Net Cash From Operations	**$ (2,323,471)**	**$ 1,054,008**	**$ 1,820,198**	**$ 1,757,528**
Beginning Cash Balance	11,855,851	9,532,380	10,586,388	12,406,586
Ending Cash Balance	**9,532,380**	**10,586,388**	**12,406,586**	**14,164,114**
Total Cash Available	**$ 9,532,380**	**$ 10,586,388**	**$ 12,406,586**	**$ 14,164,114**
Targeted Minimum	**$ 5,384,534**	**$ 5,212,701**	**$ 5,263,797**	**$ 5,314,429**

Development of Financial Targets

When evaluating rates to charge customers, three factors must be considered:

1. Debt Coverage Ratio
2. Minimum Cash Reserves
3. Optimal Net Income

Each of these factors is discussed below:

Debt Coverage Ratio - Table 3 is the projected debt coverage ratios. Current operations have sufficient cash flow to meet debt coverage ratios. The minimum targeted debt coverage ratio for prudent financial planning purposes is 1.45 for revenue bonds. Maintaining a 1.45 debt coverage ratio is good business practice and would help to achieve the following:

- Helps to ensure adequate funds are available to meet debt service payments in years when sales are low due to cold or wet summers or loss of a major customer(s).
- Obtain higher bond rating, if revenue bonds are sold in the future, to lower interest cost.

Table 3 - Current Debt Coverage Ratio (without Rate Adjustments)

Debt Coverage Ratio	Projected 2021	Projected 2022	Projected 2023	Projected 2024
Add Net Income	$ 2,002,708	$ 1,797,908	$ 1,675,483	$ 1,558,293
Add Depreciation Expense	2,157,154	2,268,821	2,340,033	2,402,154
Add Interest Expense	86,107	68,752	50,497	43,058
Cash Available for Debt Service	$ 4,245,970	$ 4,135,482	$ 4,066,013	$ 4,003,505
Debt Principal and Interest	$ 419,441	$ 431,474	$ 195,817	$ 195,981
Projected Debt Coverage Ratio (Covenants)	10.12	9.58	20.76	20.43
Minimum Debt Coverage Ratio	**1.45**	**1.45**	**1.45**	**1.45**

Debt Coverage Ratio meets the minimum targets throughout the projection period; debt principal decreases in 2023 as that debt schedule seems to be "front-loaded" prior to that period.

Minimum Cash Reserve Target – Table 4 is the minimum level of cash reserves required to help ensure timely replacement of assets and to provide financial stability of the wastewater utility. The methodology used to establish this minimum is based on certain assumptions related to a percentage of operating expense, historical investment, capital improvements, and debt service to be kept in cash reserves. Minimum cash reserve attempts to quantify the minimum amount of cash the utility should keep in reserve and is considered at critical levels if cash approaches this minimum.

Actual cash reserves may vary substantially above the minimum and is dependent on the life cycle of assets that are currently in service. If a minimum cash reserve policy is established, and the utility's cash balance falls below the established amount, it should require the Board to take action to rebuild cash. The typical action includes a rate increase or the consideration of a bond issuance. Based on these assumptions, the City of Danville should maintain a minimum of $5.3 million in cash reserves.

Table 4 – Minimum Cash Reserves

	Percent Allocated	Projected 2021	Projected 2022	Projected 2023	Projected 2024
Operation & Maintenance Less Depreciation Expense	**12.3%**	$ 670,667	$ 681,492	$ 691,424	$ 701,444
Historical Rate Base	**2%**	2,112,393	2,165,393	2,206,393	2,247,393
Current Portion of Debt Service Reserve	**100%**	431,474	195,817	195,981	195,592
Five Year Capital Improvements - Net of bond proceeds	**20%**	2,170,000	2,170,000	2,170,000	2,170,000
Minimum Cash Reserve Levels		**$ 5,384,534**	**$ 5,212,701**	**$ 5,263,797**	**$ 5,314,429**
Projected Cash Reserves		**$ 9,532,380**	**$ 10,586,388**	**$ 12,406,586**	**$ 14,164,114**

Cash reserves meet minimum targets starting in throughout the projection period.

Notes:

1. Rate base is historical investment in plant and equipment
2. Five-year capital includes budgeted capital improvements for the next six years and excludes capital improvements funded through debt issuances

Optimal operating income targets - The optimal target for setting rates is the establishment of a target operating income to help ensure the following:

1) Funding of Interest Expense on the outstanding principal on debt. Interest expense is below the operating income line and needs to be recouped through the operating income balance.

2) Funding of the inflationary increase on the assets invested in the system. The inflation on the replacement of assets invested in the utility should be recouped through the Operating Income

3) Adequate rate of return on investment to help ensure current customers are paying their fair share of the use of the infrastructure and not deferring the charge to future generations.

As improvements are made to the system, the optimal operating income target will increase unless annual depreciation expense is greater than yearly capital improvements. The target established is about $2.6 million over the projection period and equates to approximately a 5.0% rate of return.

Table 5 - Optimal Operating Income Targets Compared to Projected

	Percent Allocated	Projected 2021	Projected 2022	Projected 2023	Projected 2024
Outstanding Principal on Debt	**5.1%**	86,107	68,752	50,497	43,058
Contributed Capital Estimated	**3.0%**	117,688	117,688	117,688	117,688
System Equity	**5.0%**	2,482,104	2,519,299	2,512,063	2,502,102
Target Operating Income		**$ 2,685,899**	**$ 2,705,739**	**$ 2,680,248**	**$ 2,662,848**
Projected Adjusted Operating Income		**$ 2,058,848**	**$ 1,859,382**	**$ 1,707,606**	**$ 1,564,211**
Rate of Return in %		**4.9%**	**4.9%**	**4.8%**	**4.8%**

Projected Operating Income is close to minimum targets throughout the projection period.

REVENUE FORECAST

Sales were projected and adjusted for known or anticipated changes in customer usage and a growth for the projection period. Table 6 and 7 below projects the billed units and number of customers in 2022.

TABLE 6 – PROJECTED BILLED UNITS

Meter Size	Projected 2022
Residential	
5/8"	784,272
1"	43,226
1 1/2"	1,956
2"	310
3"	-
4"	-
6"	-
8"	-
Commercial	
5/8"	63,980
1"	77,963
1 1/2"	85,936
2"	169,224
3"	113,137
4"	54,116
6"	231,950
8"	80,881
Municipal	
5/8"	1,287
1"	10,830
1 1/2"	1,807
2"	13,987
3"	20,799
4"	-
6"	-
8"	4
Industrial	
5/8"	790
1"	2,133
1 1/2"	2,847
2"	13,619
3"	15,104
4"	103,265
6"	98,664
8"	66,894
Total	**2,058,981**

TABLE 7 – PROJECTED NUMBER OF CUSTOMERS

Meter Size	Projected 2022
Residential	
5/8"	14,207
1"	608
1 1/2"	10
2"	1
3"	-
4"	-
6"	-
8"	-
Commercial	
5/8"	1,116
1"	562
1 1/2"	202
2"	220
3"	52
4"	26
6"	9
8"	4
Municipal	
5/8"	49
1"	40
1 1/2"	12
2"	38
3"	6
4"	-
6"	-
8"	-
Industrial	
5/8"	10
1"	8
1 1/2"	2
2"	6
3"	5
4"	2
6"	3
8"	1
Total	**17,199**

SUMMARY OF FINANCIAL POSITION

PROJECTED RATE TRACK

Increasing rates requires balancing the financial health of the utility with the financial impact on customers and cost of service results. Table 8 below shows the utility is currently financially healthy and meets or is near financial targets. No rate increases are needed at this time however, the operating income declined should be watched; but is currently not critical due to the projected cash balance. The rate track should be reviewed annually to ensure it is sufficient as changes in revenues, expenses and capital can impact the rate track.

Table 8 – Financial Projection Summary (without Rate Adjustments)

Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
2021	0.00%	9,418,103	7,478,132	2,058,848	9,532,380	6,150,000	-	10.12
2022	0.00%	9,418,103	7,677,598	1,859,382	10,586,388	2,650,000	-	9.58
2023	0.00%	9,418,103	7,829,374	1,707,606	12,406,586	2,050,000	-	20.76
2024	0.00%	9,418,103	7,972,769	1,564,211	14,164,114	2,050,000	-	20.43
Targeted in 2022				**$ 2,705,739**	**$ 5,212,701**			**1.45**
Targeted in 2024				**$ 2,662,848**	**$ 5,314,429**			**1.45**

Operating Income is stable and projected Cash Balance and Debt Coverage Ratio meet targeted levels throughout the projection period.

Cost of Service Results

The purpose of a cost of service study is to allocate costs between flow (Commodity Costs) and customer service costs (Customer Costs). The cost of service study was based on recognized procedures from the American Public Works Association.

Commodity Costs are costs that tend to vary with the quantity of wastewater treated, as well as costs associated with the collection system.

Customer Costs are costs associated with serving customers regardless of their usage or demand characteristics. Customer costs include the operation and maintenance expenses related to meters and services, meter reading costs, billing and collection costs. The customer costs were allocated based on the relative size of water meters and services and the number of customers.

Table 10 compares the City of Danville's current monthly customer charge and current commodity rate with results of the cost of service analysis.

Table 10 – Comparison of Current Customer Rates with Actual Cost of Service

Meter Size	Current Monthly Charges	Cost of Service Monthly Charges
5/8"	$ 14.00	14.52
1"	$ 34.75	36.29
1 1/2"	$ 70.50	72.59
2"	$ 113.00	116.14
3"	$ 229.00	217.77
4"	$ 362.00	362.95
6"	$ 720.00	725.90
8"	$ 1,160.00	1,161.44

Meter size	Current Average Cost per CCU	Cost of Service Average Cost per CCU
All	$ 2.38	$ 2.73

SIGNIFICANT ASSUMPTIONS

This section outlines the procedures used to develop the cost of service and rate design for the Wastewater Utility and the related significant assumptions.

Forecasted Operating Expenses
Forecasted expenses were based on 2019 actual, 2020 actual, and Budget 2021 and adjusted for inflation.

Inflation
Inflation was assumed at 1.8% annually.

Depreciation Expense
Depreciation expense was projected based on historical capital additions and discussions with management on future capital additions.

Interest Income
Interest income was forecasted based on projected cash balances and an interest rate of 1.0%.

Capital Improvements
The capital improvement projections were provided by the City of Danville. Projections for 2021-2024 are listed below:

Fiscal Year	Capital Improvements
2021	6,150,000
2022	2,650,000
2023	2,050,000
2024	2,050,000

WASTEWATER OPERATION FINDINGS

1. Below is a financial projection summary reflecting the financial stability of the wastewater operations and at this time no projected rate increases are proposed. The rate track should be reviewed annually as changes in revenues, expenses and capital can affect the rate track and bonding requirements.

Fiscal Year	Projected Rate Adjustments	Projected Revenues	Projected Expenses	Adjusted Operating Income	Projected Cash Balances	Capital Improvements	Bond Issues	Debt Coverage Ratio
2021	0.00%	9,418,103	7,478,132	2,058,848	9,532,380	6,150,000	-	10.12
2022	0.00%	9,418,103	7,677,598	1,859,382	10,586,388	2,650,000	-	9.58
2023	0.00%	9,418,103	7,829,374	1,707,606	12,406,586	2,050,000	-	20.76
2024	0.00%	9,418,103	7,972,769	1,564,211	14,164,114	2,050,000	-	20.43
Targeted in 2022				**$ 2,705,739**	**$ 5,212,701**			**1.45**
Targeted in 2024				**$ 2,662,848**	**$ 5,314,429**			**1.45**

2. The financial projection revenue, expenses and cash flow should be updated annually with the budget process to determine if the rate track is on target. Any changes in revenues, expenses and capital improvements can greatly affect the rate track and bonding requirements.

Commission Item Number: DUC2011130 - 3
Utility Commission Meeting: November 30, 2020
Item: II. D. 2021 Biennial Rate Study

Battery Energy Storage System Proposal

The City has received several battery storage system proposals that would allow the City to discharge energy stored during transmission and capacity peak hours. Jason Grey will discuss one proposal that would provide cost savings and lower transmission and capacity costs.

Recommendation: Suggested motion follows:

I move that the Danville Utility Commission recommend to City Council allowing the City Manager to enter into a capacity agreement for 10.6 megawatts of battery storage capacity to be constructed, owned and operated by Delorean Power.

Battery Energy Storage System Project

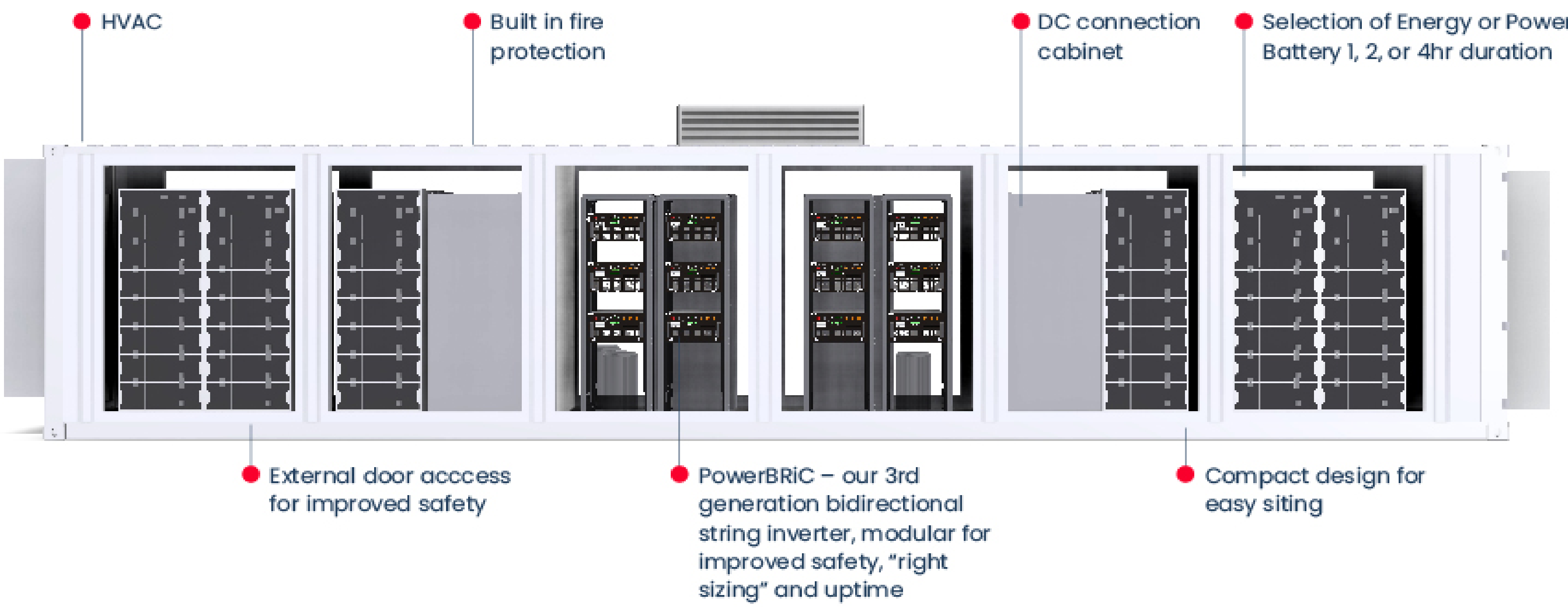
Danville Utility Commission
November 30, 2020

Peaking Capacity

- Seeking summer/winter resource
- Rising transmission and capacity costs
  - 2021 AEP Transmission rate-November 2nd 19% increase
- Low cost non-fossil fueled resource
- Dispatch based on AEP transmission peak hour
- Dispatch based on PJM capacity peak hours

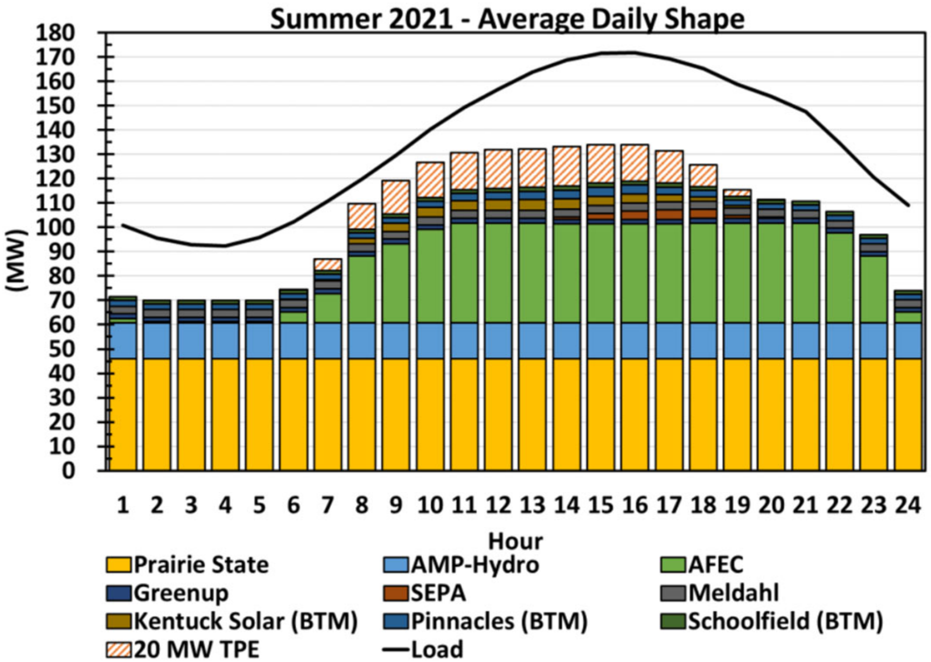
Battery Energy Storage Technology

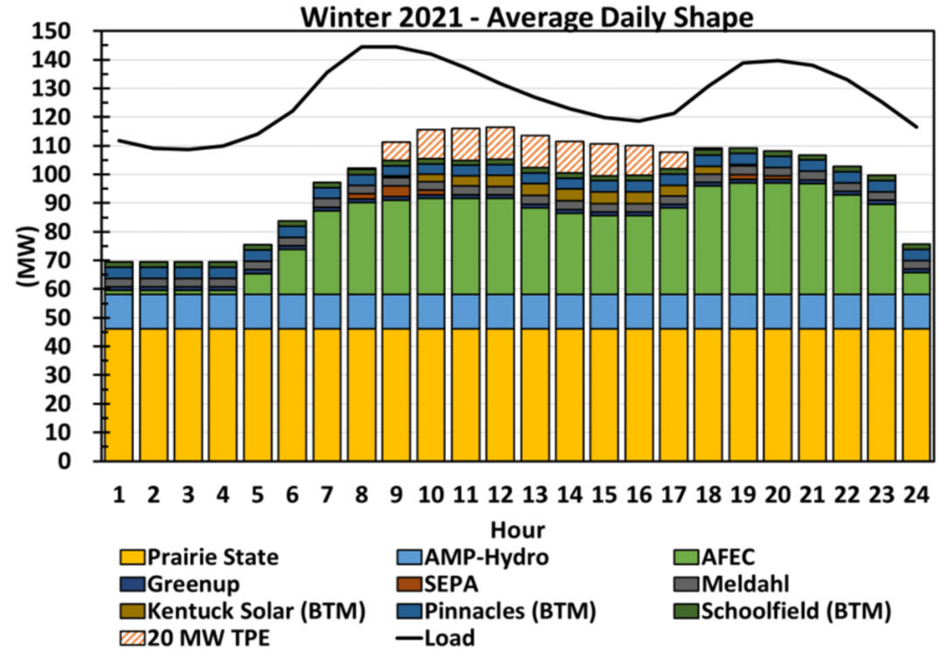
- Used solely for peak shaving
  - Charge during off-peak hours and discharge during on-peak periods
  - Reduce exposure to rising transmission and capacity rates
  - Batteries and production degrade approximately 1.5% annually

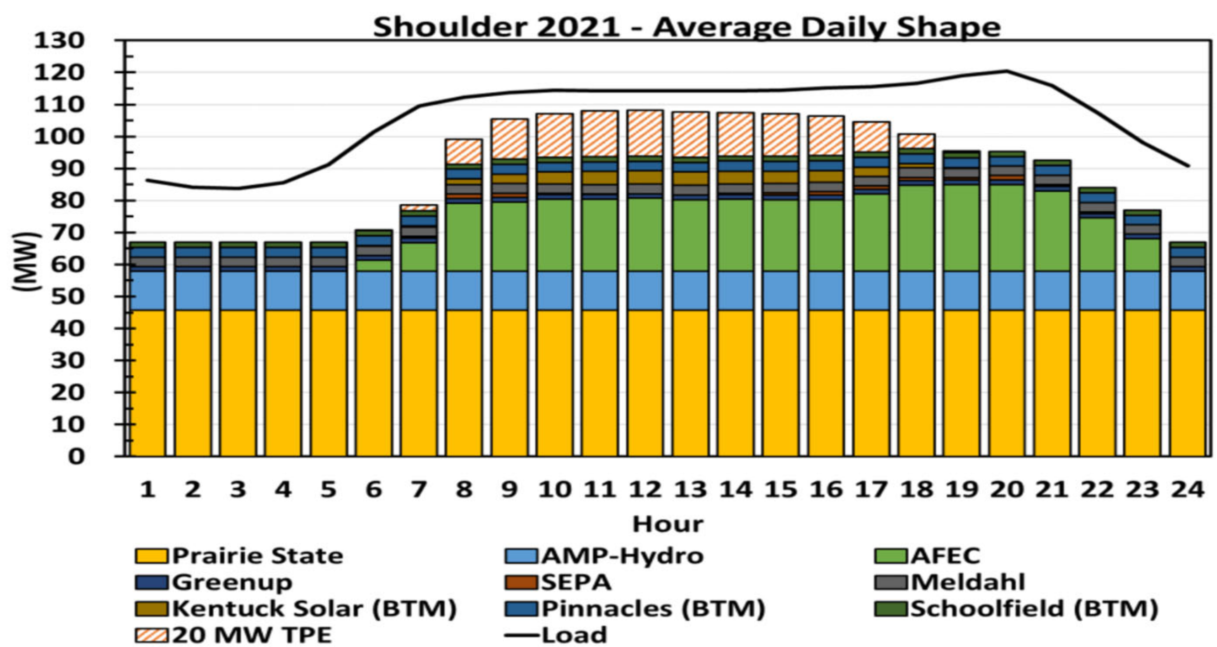


Danville Utilities Warehouse site project 10.6 MW/2 Hour Battery Storage System

- Delorean Power
- 20-year capacity agreement
  - City would not be responsible for the capital costs or maintenance of the battery facility
- Fixed, non-escalating price proposal
- $4.25/kW-month or ~$541,000/year one
- Danville to realize transmission and capacity avoidance benefits
- Capacity rate would be based on prior year's performance
- Delorean Power would monitor AEP/PJM peaks dispatch batteries based on analytical software.
- Allow Delorean Power to operate the batteries in the PJM Frequency Regulation market to lower capacity rate. Delorean be responsible for their own energy costs.


Summer 2021 - Average Daily Shape
(MW)
Hour
Prairie State
AMP-Hydro
AFEC
Greenup
SEPA
Meldahl
Kentuck Solar (BTM)
Pinnacles (BTM)
Schoolfield (BTM)
20 MW TPE
Load


Winter 2021 - Average Daily Shape
(MW)
Hour
Prairie State
AMP-Hydro
AFEC
Greenup
SEPA
Meldahl
Kentuck Solar (BTM)
Pinnacles (BTM)
Schoolfield (BTM)
20 MW TPE
Load


Shoulder 2021 - Average Daily Shape
(MW)
Hour
Prairie State
AMP-Hydro
AFEC
Greenup
SEPA
Meldahl
Kentuck Solar (BTM)
Pinnacles (BTM)
Schoolfield (BTM)
20 MW TPE
Load

Project Site

- 864 Monument Street
- Utilities Warehouse site-unused 90'x60' area
- Delorean Power would need a Special Use Permit- No setback requirements
- Delorean Power has included all of the costs associated with the property in the PPA (taxes, permitting, etc).

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Economics

Delorean Proposal						
	kW-month price	Escalation	Capacity (kW)	Yearly costs	Transmission and Capacity costs (5% annual Increase)	Estimated Savings
Year 1	$ 4.25	0%	10600.0	$ 540,600.00	$ 1,753,200.00	$ 1,212,600.00
Year 2	$ 4.25	0%	10467.500	$ 533,842.50	$ 1,840,860.00	$ 1,307,017.50
Year 3	$ 4.25	0%	10336.656	$ 527,169.47	$ 1,932,903.00	$ 1,405,733.53
Year 4	$ 4.25	0%	10207.448	$ 520,579.85	$ 2,029,548.15	$ 1,508,968.30
Year 5	$ 4.25	0%	10079.855	$ 514,072.60	$ 2,131,025.56	$ 1,616,952.96
Year 6	$ 4.25	0%	9953.857	$ 507,646.69	$ 2,237,576.84	$ 1,729,930.14
Year 7	$ 4.25	0%	9829.434	$ 501,301.11	$ 2,349,455.68	$ 1,848,154.57
Year 8	$ 4.25	0%	9706.566	$ 495,034.85	$ 2,466,928.46	$ 1,971,893.61
Year 9	$ 4.25	0%	9585.234	$ 488,846.91	$ 2,590,274.88	$ 2,101,427.97
Year 10	$ 4.25	0%	9465.418	$ 482,736.33	$ 2,719,788.63	$ 2,237,052.30
Year 11	$ 4.25	0%	9347.100	$ 476,702.12	$ 2,855,778.06	$ 2,379,075.94
Year 12	$ 4.25	0%	9230.262	$ 470,743.34	$ 2,998,566.96	$ 2,527,823.62
Year 13	$ 4.25	0%	9114.883	$ 464,859.05	$ 3,148,495.31	$ 2,683,636.26
Year 14	$ 4.25	0%	9000.947	$ 459,048.31	$ 3,305,920.08	$ 2,846,871.76
Year 15	$ 4.25	0%	8888.436	$ 453,310.21	$ 3,471,216.08	$ 3,017,905.87
Year 16	$ 4.25	0%	8777.330	$ 447,643.83	$ 3,644,776.88	$ 3,197,133.05
Year 17	$ 4.25	0%	8667.613	$ 442,048.29	$ 3,827,015.73	$ 3,384,967.44
Year 18	$ 4.25	0%	8559.268	$ 436,522.68	$ 4,018,366.51	$ 3,581,843.83
Year 19	$ 4.25	0%	8452.277	$ 431,066.15	$ 4,219,284.84	$ 3,788,218.69
Year 20	$ 4.25	0%	8346.624	$ 425,677.82	$ 4,430,249.08	$ 4,004,571.26
				$ 9,619,452.12		**$ 48,351,778.61**
				Total Spent (20 years)		Total Savings

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