

Wegowise - Q3 2017

Property Performance Executive Summary

All

+6.74%

\$80,995.20

	All utilities	Water	Electric	Gas
Q3 2016	\$1,202,016.66	\$743,793.22	\$332,990.49	\$125,232.95
Q3 2017	\$1,283,011.85	\$812,374.81	\$349,619.56	\$121,017.48
Difference	\$80,995.20	\$68,581.60	\$16,629.07	-\$4,215.46
	+6.74%	+9.22%	+4.99%	-3.37%

Water

+9.22%

\$68,581.60

Consumption (Gallons) **Q3 2016:** 80,273,584 **Q3 2017:** 85,466,252 **Difference:** 5,192,668/+6.47%**Highlighted properties**

- ▲ Property 2 has seen a +17.2% (444,430 gal) increase in water usage and a \$1,657.18 increase in cost
- ▲ Property 3 has seen a -0.0188% (-164 gal) decrease in water usage and a \$526.94 increase in cost
- ▲ Property 1 has seen a +25.9% (260,687 gal) increase in water usage and a \$1,109.91 increase in cost

Electric

+4.99%

\$16,629.07

Consumption (kWh) **Q3 2016:** 1,737,282 **Q3 2017:** 1,707,915 **Difference:** -29,367/-1.69%**Highlighted properties**

- ▲ Property 2 has seen a -7.5% (-2,896 kWh) decrease in electric usage and a \$158.44 increase in cost
- ▲ Property 1 has seen a -3.01% (-396 kWh) decrease in electric usage and a \$105.59 increase in cost
- ▼ Property 3 has seen a -21.3% (-2,291 kWh) decrease in electric usage and a -\$567.49 decrease in cost

Gas

-3.37%

\$4,215.46

Consumption (Therms) **Q3 2016:** 108,199 **Q3 2017:** 109,754 **Difference:** 1,555/+1.44%**Highlighted properties**


- ▼ Property 2 has seen a -1.08% (-54 thm) decrease in gas usage and a -\$465.98 decrease in cost
- ▲ Property 1 has seen a +10.0% (276 thm) increase in gas usage and a \$84.33 increase in cost
- ▲ Property 3 has seen a +4.97% (77 thm) increase in gas usage and a \$112.10 increase in cost


Property 2 - Q3 2017


Property Performance Report

All		All utilities	Water	Electric	Gas
—	Q3 2016	\$29,894.55	\$13,545.52	\$9,950.48	\$6,398.55
+4.08%	Q3 2017	\$31,113.95	\$15,202.70	\$9,978.68	\$5,932.56
\$1,219.39	Difference	\$1,219.39	\$1,657.18	\$28.20	-\$465.98
		+4.08%	+12.2%	+0.283%	-7.28%

Detailed Breakdown

Water 		Gallons	Cost	Rate (\$/Gallons)
Whole building	Q3 2016	2,579,031	\$13,545.52	\$0.0053
—	Q3 2017	3,023,461	\$15,202.70	\$0.0050
+12.2%	Difference	444,430	\$1,657.18	-\$0.0002
\$1,657.18		+17.2%	+12.2%	-4.26%

Electric 		kWh	Cost	Rate (\$/kWh)
Mostly whole building	Q3 2016	40,022	\$9,950.48	\$0.2486
—	Q3 2017	36,315	\$9,978.68	\$0.2748
+0.283%	Difference	-3,708	\$28.20	\$0.0262
\$28.20		-9.26%	+0.283%	+10.5%

Gas 		Therms	Cost	Rate (\$/Therms)
Whole building	Q3 2016	4,991	\$6,398.55	\$1.2821
—	Q3 2017	4,937	\$5,932.56	\$1.2017
-7.28%	Difference	-54	-\$465.98	-\$0.0805
\$465.98		-1.08%	-7.28%	-6.28%

Low-Flow Toilets

Building 2.

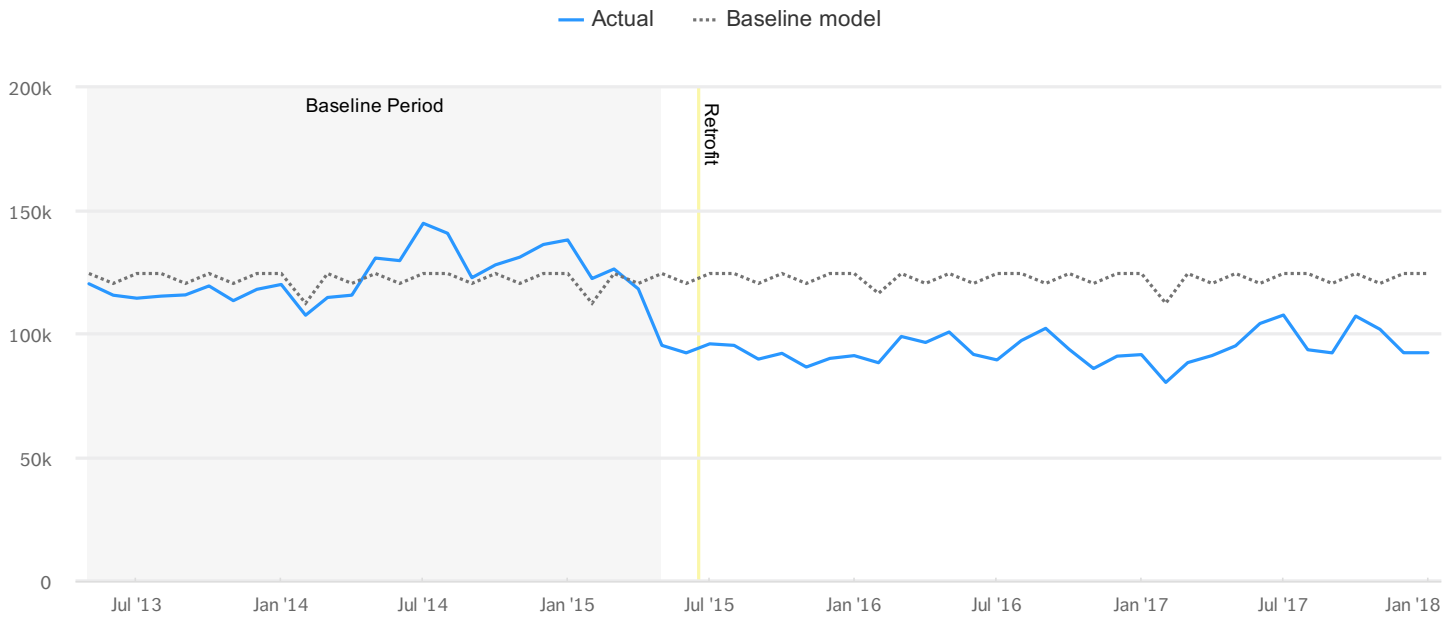
Actual Savings

23.23% per year	341k Gallons per year	882k Gallons after 31 months
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Project Cost	Cost Avoidance ¹	ROI ²
\$57,370	\$5,737 per year	10%
	\$14,820 after 31 months	

Actual vs. estimated monthly usage in Gallons

The baseline model is an estimate of the building's expected usage in the absence of the upgrade. Both the actual usage and baseline model use the same historical weather data, allowing a direct comparison of performance.³

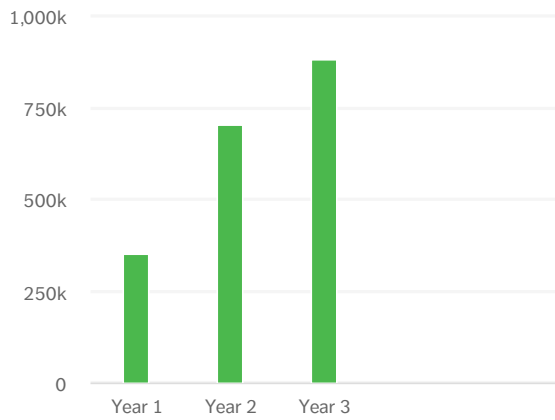


Actual savings in Gallons

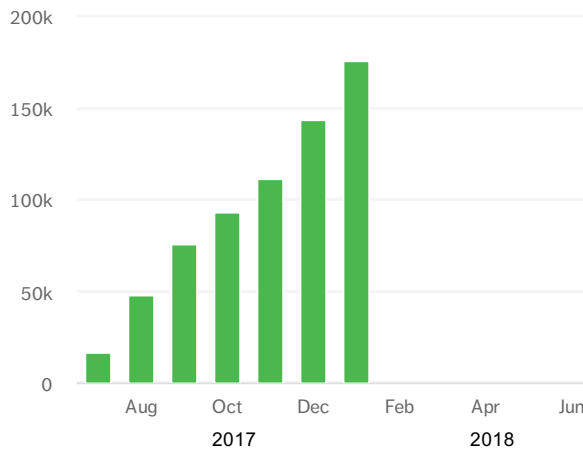
Water savings (Gallons). The charts below show cumulative water savings.

Actual cumulative savings

Cumulative Annual Savings



Year 3 (Jul 2017 - Jan 2018)

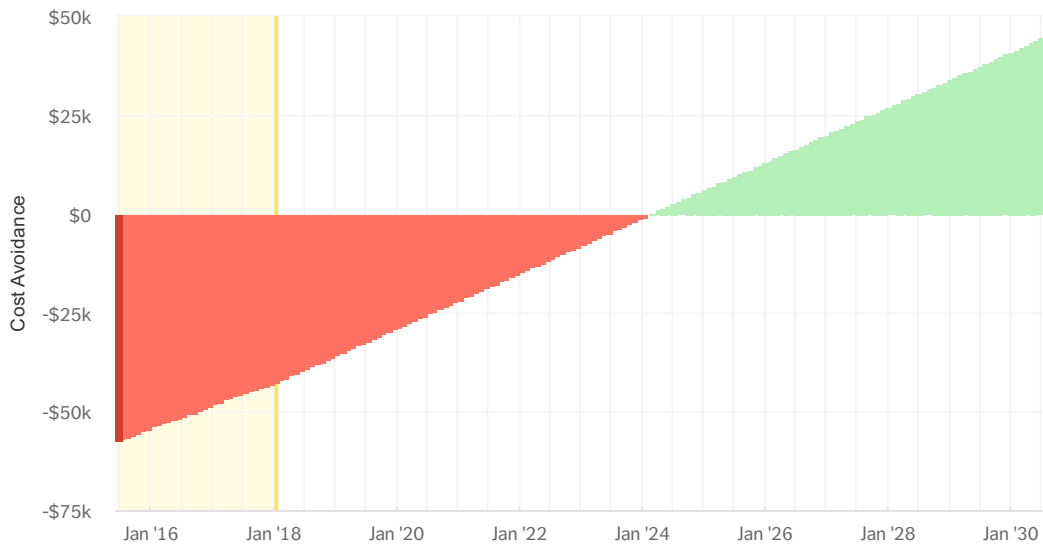


Payback

Project cost: \$57,370 **Annual cost avoidance:** \$5,737 **Cumulative cost avoidance:** \$14,820

Based on your project costs, and the data we have collected during the 31 months since the retrofit ended, we estimate that the project will break even in March, 2024. Future savings shown in the chart are projected using the most recent full-year of savings.

Elapsed time Cost minus savings Cumulative savings after breakeven



1. Cost avoidance is calculated using the utility accounts' blended rate. See attached CSV for detailed information.
2. ROI is calculated as the annualized return divided by the cost of the project.
3. The baseline model complies with ASHRAE 14-2014 and Option C (Whole Building Performance Approach) of the IPMVP protocol. The root mean square (R2) is 0.99, the coefficient of variation (CV) is .9% and net determination bias is 0.01%.

Utility Focus: Gas
 Based on our analysis, to achieve the highest potential savings, you should focus on this utility

Building 1A

Property 1
 2016 - 2017

		Oct 2016 - Sep 2017	Median	Potential Savings
Total		\$711,973	\$420,716	\$141,112
Electric	Cost	\$211,665	\$170,614	\$41,051
	Usage (kWh)	1,639,133	1,321,236	317,897
Gas	Cost	\$277,628	\$191,884	\$55,526
	Usage (therms)	253,584	175,266	50,717
Water	Cost	\$222,680	\$58,218	\$44,536
	Usage (gal)	52,387,818	13,912,900	10,475,764

Recommendations

Natural gas is the main focus for Building 1A, with large opportunities for savings. Check out these suggestions on how to reduce your gas consumption and cut down your bills:

- **Tune up or replace heating system.** There are financial incentives available from utilities to retro-commission or replace heating equipment. This is by far the largest driver of gas usage in a gas-heated building.
- **Hot water.** You may be able to save energy by insulating pipes and reducing the water temperature in your domestic hot water system.
- **Appliances.** Check the age and condition of cooking and laundry equipment. Modern appliances use significantly less gas.

About this analysis

Utility costs are based on actual billing information (when available) or regional cost averages from US EIA. Median building performance is obtained from the WegoWise database or publicly available datasets, and potential savings is either the difference between this building and the median or a 20% savings for extreme outliers. Recommendations are developed by WegoWise, applying regression analysis where applicable.




While this analysis uses all available data and rigorous statistical analysis, these recommendations should be viewed as suggested areas to investigate. Onsite experts will be able to determine if the savings suggested here are feasible.



Building Opportunity Summary Report

WegoWise

2016 - 2017

		Oct 2016 - Sep 2017	Potential Savings
Total		\$12,106,074	\$2,136,978
 Electric	Cost	\$3,537,352	\$443,193
	Usage (kWh)	29,932,114	4,025,581
 Gas	Cost	\$3,678,248	\$668,944
	Usage (therms)	5,259,315	939,607
 Water	Cost	\$4,890,474	\$1,024,841
	Usage (gal)	960,124,531	201,202,403

Note: This report shows the sum total of your entire portfolio usage and cost for all utilities over the past year for all buildings with an available benchmark. While this uses all available data and rigorous statistical analysis, these recommendations should be viewed as suggested to investigate. Onsite experts will be able to determine if the savings suggested here are feasible.

How was this calculated?

Utility costs are based on actual billing information (when available) or regional cost averages from US EIA. Median building performance is obtained from the WegoWise database or publicly available datasets, and potential savings is either the difference between this building and the median or a 20% savings for extreme outliers. Recommendations are developed by WegoWise, applying regression analysis where applicable. All buildings with available benchmarks are included in this summary.


Electric

Property	Building	Oct 2016 - Sep 2017		Median Building		Potential Savings	
		Cost (\$)	Usage (kWh)	Cost (\$)	Usage (kWh)	Cost (\$)	Usage (kWh)
Property 2	Building 2A	\$225,771	1,686,554	\$91,464	683,256	\$45,154	337,311
Property 8	Building 8D	\$267,843	2,236,558	\$222,947	1,861,667	\$44,896	374,891
Property 1	Building 1A	\$211,665	1,639,133	\$170,614	1,321,236	\$41,051	317,897
Property 7	Building 7A	\$325,879	2,969,462	\$290,935	2,651,047	\$34,944	318,415
Property 4	Building 4A	\$198,982	1,614,941	\$166,470	1,351,077	\$32,512	263,864
Property 3	Building 3B	\$210,014	1,783,131	\$181,104	1,537,669	\$28,910	245,462
Property 11	Building 11A	\$156,451	1,075,599	\$133,808	919,926	\$22,643	155,673
Property 11	Building 11C	\$151,201	1,039,505	\$129,317	889,056	\$21,883	150,449
Property 11	Building 11B	\$146,301	1,005,817	\$125,127	860,244	\$21,174	145,573
Property 12	Building 12B	\$168,107	1,273,476	\$152,364	1,154,216	\$15,743	119,260
Property 12	Building 12C	\$168,098	1,273,400	\$152,355	1,154,147	\$15,742	119,253
Property 12	Building 12A	\$162,110	1,228,040	\$146,928	1,113,035	\$15,181	115,005
Property 12	Building 12D	\$162,110	1,228,040	\$146,928	1,113,035	\$15,181	115,005
Property 14	Building 14B	\$155,246	1,189,992	\$144,248	1,105,695	\$10,997	84,297
Property 14	Building 14A	\$147,222	1,128,492	\$136,793	1,048,551	\$10,429	79,941
Property 6	Building 6C	\$110,295	109,324	\$100,039	99,158	\$10,256	10,166
Property 6	Building 6A	\$103,991	103,076	\$94,321	93,491	\$9,670	9,585
Property 6	Building 6D	\$103,600	102,688	\$93,966	93,139	\$9,634	9,549
Property 6	Building 6B	\$103,600	102,688	\$93,966	93,139	\$9,634	9,549
Property 6	Building 6E	\$103,600	102,688	\$93,966	93,139	\$9,634	9,549
Property 5	Building 5A	\$46,384	3,676,118	\$38,778	3,073,280	\$7,606	602,838
Property 3	Building 3C	\$20,999	1,782,972	\$18,109	1,537,532	\$2,891	245,440
Property 11	Building 11E	\$14,490	996,192	\$12,393	852,012	\$2,097	144,180
Property 10	Building 10A	\$24,872	197,981	\$23,066	183,603	\$1,806	14,378
Property 10	Building 10B	\$24,338	193,730	\$22,570	179,661	\$1,768	14,070
Property 10	Building 10C	\$24,185	192,516	\$22,429	178,534	\$1,756	13,981


Gas

Property	Building	Oct 2016 - Sep 2017		Median Building		Potential Savings	
		Cost (\$)	Usage (Thm)	Cost (\$)	Usage (Thm)	Cost (\$)	Usage (Thm)
Property 3	Building 3B	\$278,821	265,480	\$214,227	203,977	\$55,764	53,096
Property 3	Building 3C	\$278,796	265,456	\$214,208	203,958	\$55,759	53,091
Property 1	Building 1A	\$277,628	253,584	\$191,884	175,266	\$55,526	50,717
Property 4	Building 4A	\$258,551	241,603	\$191,797	179,225	\$51,710	48,321
Property 2	Building 2A	\$235,901	256,234	\$83,444	90,636	\$47,180	51,247
Property 6	Building 6C	\$207,085	233,714	\$113,570	128,174	\$41,417	46,743
Property 9	Building 9E	\$200,931	192,355	\$126,141	120,757	\$40,186	38,471
Property 6	Building 6A	\$195,250	220,357	\$107,079	120,848	\$39,050	44,071
Property 6	Building 6D	\$194,514	219,527	\$106,675	120,393	\$38,903	43,905
Property 6	Building 6B	\$194,514	219,527	\$106,675	120,393	\$38,903	43,905
Property 9	Building 9C	\$191,997	183,803	\$120,532	115,388	\$38,399	36,761
Property 9	Building 9A	\$191,051	182,897	\$119,938	114,819	\$38,210	36,579
Property 9	Building 9B	\$190,483	182,353	\$119,582	114,478	\$38,097	36,471
Property 12	Building 12B	\$179,656	173,121	\$158,890	153,110	\$20,766	20,011
Property 11	Building 11A	\$146,263	134,628	\$132,577	122,031	\$13,686	12,597
Property 11	Building 11C	\$141,355	130,110	\$128,128	117,936	\$13,226	12,174
Property 11	Building 11B	\$136,774	125,894	\$123,976	114,114	\$12,798	11,780
Property 8	Building 8D	\$26,573	334,471	\$19,620	246,956	\$5,315	66,894
Property 14	Building 14B	\$21,820	209,125	\$15,304	146,674	\$4,364	41,825
Property 14	Building 14A	\$20,692	198,318	\$14,513	139,094	\$4,138	39,664
Property 6	Building 6E	\$19,451	219,527	\$10,668	120,393	\$3,890	43,905
Property 9	Building 9D	\$19,381	185,542	\$12,167	116,480	\$3,876	37,108
Property 12	Building 12C	\$17,964	173,111	\$15,888	153,101	\$2,076	20,010
Property 12	Building 12A	\$17,325	166,944	\$15,322	147,648	\$2,003	19,297
Property 12	Building 12D	\$17,325	166,944	\$15,322	147,648	\$2,003	19,297
Property 11	Building 11E	\$18,147	124,689	\$16,449	113,022	\$1,698	11,667


Water

Property	Building	Oct 2016 - Sep 2017		Median Building		Potential Savings	
		Cost (\$)	Usage (Gal)	Cost (\$)	Usage (Gal)	Cost (\$)	Usage (Gal)
Property 3	Building 3C	\$465,230	91,336,491	\$94,995	18,650,000	\$93,046	18,267,298
Property 3	Building 3B	\$377,473	74,107,501	\$178,211	34,987,400	\$75,495	14,821,500
Property 5	Building 5A	\$345,657	67,861,236	\$124,254	24,394,200	\$69,131	13,572,247
Property 7	Building 7A	\$302,372	59,363,355	\$93,095	18,277,000	\$60,474	11,872,671
Property 8	Building 8D	\$234,122	45,964,152	\$75,616	14,845,400	\$46,824	9,192,830
Property 2	Building 2A	\$232,605	45,666,283	\$96,325	18,911,100	\$46,521	9,133,257
Property 1	Building 1A	\$222,680	43,717,753	\$70,867	13,912,900	\$44,536	8,743,551
Property 4	Building 4A	\$175,843	34,522,432	\$76,756	15,069,200	\$35,169	6,904,486
Property 12	Building 12B	\$175,680	34,490,535	\$68,207	13,390,700	\$35,136	6,898,107
Property 12	Building 12C	\$175,670	34,488,435	\$65,357	12,831,200	\$35,134	6,897,687
Property 12	Building 12A	\$169,412	33,259,889	\$63,077	12,383,600	\$33,882	6,651,978
Property 12	Building 12D	\$169,412	33,259,889	\$61,937	12,159,800	\$33,882	6,651,978
Property 14	Building 14B	\$158,331	31,084,406	\$64,217	12,607,400	\$31,666	6,216,881
Property 14	Building 14A	\$150,148	29,477,855	\$59,657	11,712,200	\$30,030	5,895,571
Property 11	Building 11A	\$136,015	26,703,247	\$52,817	10,369,400	\$27,203	5,340,649
Property 6	Building 6C	\$135,502	26,602,551	\$64,217	12,607,400	\$27,100	5,320,510
Property 11	Building 11C	\$131,451	25,807,139	\$52,247	10,257,500	\$26,290	5,161,428
Property 9	Building 9E	\$128,619	25,251,149	\$52,817	10,369,400	\$25,724	5,050,230
Property 6	Building 6D	\$127,277	24,987,661	\$52,817	10,369,400	\$25,455	4,997,532
Property 6	Building 6B	\$127,277	24,987,661	\$52,817	10,369,400	\$25,455	4,997,532
Property 6	Building 6E	\$127,277	24,987,661	\$52,817	10,369,400	\$25,455	4,997,532
Property 11	Building 11B	\$127,191	24,970,755	\$60,037	11,786,800	\$25,438	4,994,151
Property 11	Building 11E	\$125,973	24,731,793	\$60,037	11,786,800	\$25,195	4,946,359
Property 9	Building 9D	\$124,063	24,356,816	\$52,627	10,332,100	\$24,813	4,871,363
Property 9	Building 9C	\$122,900	24,128,446	\$53,957	10,593,200	\$24,580	4,825,689
Property 9	Building 9A	\$122,294	24,009,439	\$52,627	10,332,100	\$24,459	4,801,888