

**Fairview Care Center
of Bethlehem
Energy Savings Summary**

“A Proposal for Energy Services”

Presented by
National Energy Services Company, Inc.

Hot Water Usage & Cost Summary Pre- & Post-Ozone Laundry System (OLS)

Fairview Care Center of Bethlehem

Daily Hot Water Usage in Gallons

Pre-OLS	Post-OLS	Gallons Saved	% Savings
1,602	162	1,440	90%

Metered Days

Pre-OLS - 37	Post-OLS - 109
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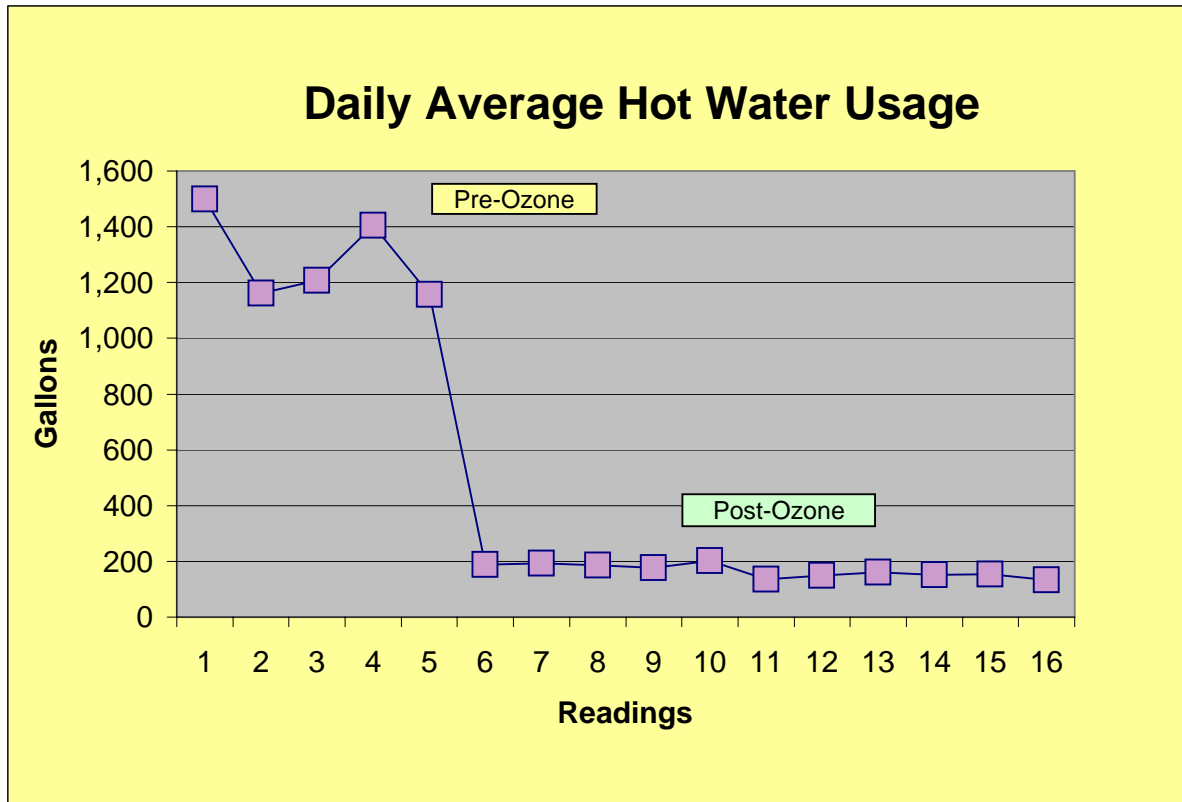
Total Hot Water Saved in Gallons

156,966

Hot Water Costs

	Pre-OLS	Post-OLS	Savings	% Savings
Daily	\$24.32	\$2.46	\$21.86	90%
Monthly	\$739.62	\$74.77	\$664.86	90%

Per Therm Cost \$1.30



Ozone Laundry System Savings Summary

Customer: Fairview Care Center of Bethlehem

Project Type: OLS

ANNUAL OPERATING SYSTEM COST COMPARISON

This section compares the Annual Operating cost of both systems

	Existing	Proposed	% Saved
Fuel*.....	\$ 24,117	\$ 12,332	49%
Electric*.....	\$ 6,131	\$ 5,413	12%
Water and Sewer*....	\$ 7,714	\$ 6,123	21%
Linen.....	\$ 17,094	\$ 15,898	7%
Softener.....	<u>\$ 1,220</u>	<u>\$ -</u>	<u>100%</u>
Total Cost.....	\$ 56,276	\$ 39,765	29%

TOTAL ANNUAL CUMULATIVE SAVINGS

	1st Year	2nd Year	3rd Year	4th Year	5th Year	10th Year
Fuel.....	\$ 11,785	\$ 23,569	\$ 35,354	\$ 47,139	\$ 58,924	\$ 117,847
Electric.....	\$ 718	\$ 1,435	\$ 2,153	\$ 2,871	\$ 3,588	\$ 7,177
Water and Sewer...	\$ 1,591	\$ 3,183	\$ 4,774	\$ 6,365	\$ 7,957	\$ 15,914
Linen.....	\$ 1,197	\$ 2,393	\$ 3,590	\$ 4,786	\$ 5,983	\$ 11,966
Softener.....	<u>\$ 1,220</u>	<u>\$ 2,440</u>	<u>\$ 3,660</u>	<u>\$ 4,880</u>	<u>\$ 6,100</u>	<u>\$ 12,200</u>
Total Savings.....	\$ 16,510	\$ 33,021	\$ 49,531	\$ 66,041	\$ 82,552	\$ 165,103

INVESTMENT SUMMARY

Project Cost	\$20,300
Investment Recapture Period	14.8 Months
1st Year Return on Investment	81 %
Total Monthly Savings.....	\$1,376
Carbon Footprint Reduction	179 Tons

* Unit Price Electric-kWhr \$0.100 Fuel -Therm \$1.300 Water/Sewer-k/gl \$1.77

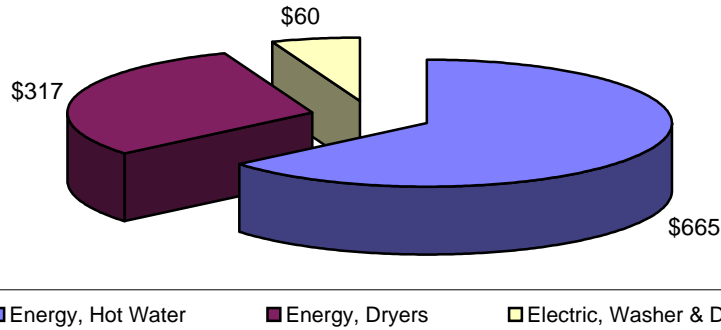
Laundry Savings Report

Fairview Care Center of Bethlehem
184 Bethlehem Pike, Bethlehem, PA

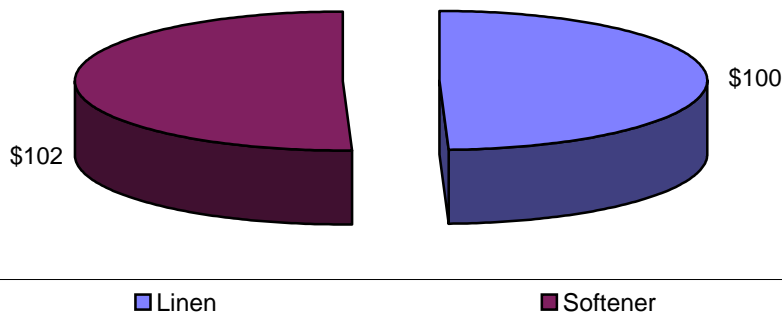
Project Cost \$ 20,300

Annual Loads	14,196	Pre Ozone	Post Ozone	Pre Ozone	Post Ozone	Annual Savings
	Percent Savings	Monthly Costs	Monthly Costs	Annual Costs	Annual Costs	
Hard Costs						
Energy, Hot Water	90%	\$ 741	\$ 76	\$ 8,891	\$ 913	\$ 7,978
Energy, Dryer	25%	\$ 1,269	\$ 952	\$ 15,225	\$ 11,419	\$ 3,806
Electric, Washer	7%	\$ 372	\$ 347	\$ 4,470	\$ 4,167	\$ 302
Electric, Dryer	25%	\$ 138	\$ 104	\$ 1,661	\$ 1,246	\$ 415
Water	21%	\$ 643	\$ 510	\$ 7,714	\$ 6,123	\$ 1,591
Sub Totals	37%	\$ 3,163	\$ 1,989	\$ 37,961	\$ 23,868	\$ 14,094
Soft Costs						
Linen	7%	\$ 1,425	\$ 1,325	\$ 17,094	\$ 15,898	\$ 1,197
Softener	100%	\$ 102	\$ -	\$ 1,220	\$ -	\$ 1,220
Sub Totals	13%	\$ 1,526	\$ 1,325	\$ 18,314	\$ 15,898	\$ 2,417
Grand Totals	29%	\$ 4,690	\$ 3,314	\$ 56,276	\$ 39,765	\$ 16,510

Monthly Utility Savings



Monthly Chemical & Linen Savings (Soft Savings)



Utility Savings		Soft Savings		Total Savings		Return On Investment
Monthly	Annually	Monthly	Annually	Monthly	Annually	
\$ 1,174	\$ 14,094	\$ 201	\$ 2,417	\$ 1,376	\$ 16,510	14.8 Months

See Analysis Assumptions for Formula Calculations

Laundry Analysis Report

Facility:		Fairview Care Center of Bethlehem			Page 1 of 2	
Address:		184 Bethlehem Pike, Bethlehem, PA				
Current Costs:						
Water & Sewer	\$ 1.77	per 1,000 gallons	Analyst: Rusty Gramiak			
Gas or Electric washer costs	\$ 1.30	per therm	Phone#: (609) 383 2940			
Linen replacment	\$ 0.03	per pound	Fax#: (609) 383 2736			
Electric costs	\$ 0.10	per Kwh	7%		Linen Replacement reduction	
Chemical costs	\$ 11.00	per gal average	10%		Washer time reduction	
			\$ 0.019		per pound	
Production:						
Rooms	180	capacity	Boiler temp		160	Efficiency
Occupancy	97.0%	average	Cold temp		55	75%
Average pounds per room per day	10.44	Lbs.	Hours of Production per Day		24	Temp Diff
Washer Fill Efficiency	85.0%	%	Production days per Week		7	105
Washer/extractor	Size	Fill	City water/lb	Hot water/lb	Horsepower	Wash time
Unimac	55	85%	2.824	1.694	5.5	38.0
Milnor	60	85%	2.824	1.694	6.0	38.0
Unimac	55	85%	2.824	1.694	5.5	38.0
Average lbs per day processed	1,823		663,663	Annual Total Pounds Processed		
Cost per Load:						
				Cost/load	Cost/day	Cost/month
Machine #1: Pre Ozone						
	13	loads		Cost/load	Cost/day	Cost/month
City water purchased	307	gal per load		\$ 0.543	\$ 7.06	\$ 214
Boiler (hot water)	33	gal per load		\$ 0.502	\$ 6.53	\$ 198
Softner	1	ounces per load		\$ 0.086	\$ 1.12	\$ 34
Linens	47	pounds per load		\$ 1.169	\$ 15.19	\$ 461
Electricity (HP @ minutes)	3.056	Kwh per load		\$ 0.306	\$ 3.97	\$ 121
Total Costs				\$ 2.606	\$ 33.88	\$ 1,028
Machine #1: Post Ozone						
	13	loads		Cost/load	Cost/day	Cost/month
City water purchased	248	gal per load		\$ 0.439	\$ 5.71	\$ 173
Boiler (hot water)	4	gal per load		\$ 0.067	\$ 0.87	\$ 26
Softner	-	ounces per load		\$ -	\$ -	\$ -
Linens	47	pounds per load		\$ 1.087	\$ 14.13	\$ 429
Electricity (HP @ minutes)	2.750	Kwh per load		\$ 0.275	\$ 3.58	\$ 108
Total Costs				\$ 1.868	\$ 24.28	\$ 737
Machine #2: Pre Ozone						
	13	loads		Cost/load	Cost/day	Cost/month
City water purchased	307	gal per load		\$ 0.543	\$ 7.06	\$ 214
Boiler (hot water)	57	gal per load		\$ 0.859	\$ 11.17	\$ 339
Softner	1	ounces per load		\$ 0.086	\$ 1.12	\$ 34
Linens	51	pounds per load		\$ 1.275	\$ 16.58	\$ 503
Electricity (HP @ minutes)	3.334	Kwh per load		\$ 0.333	\$ 4.33	\$ 131
Total Costs				\$ 3.097	\$ 40.26	\$ 1,221
Machine #2: Post Ozone						
	13	loads		Cost/load	Cost/day	Cost/month
City water purchased	235	gal per load		\$ 0.416	\$ 5.41	\$ 164
Boiler (hot water)	4	gal per load		\$ 0.059	\$ 0.77	\$ 23
Softner	-	ounces per load		\$ -	\$ -	\$ -
Linens	51	pounds per load		\$ 1.186	\$ 15.41	\$ 468
Electricity (HP @ minutes)	3.000	Kwh per load		\$ 0.300	\$ 3.90	\$ 118
Total Costs				\$ 1.961	\$ 25.49	\$ 773

Laundry Analysis Report

Machine #3: Pre Ozone		13	loads	Cost/load	Cost/day	Cost/month
City water purchased		307	gal per load	\$ 0.543	\$ 7.06	\$214
Boiler (hot water)		34	gal per load	\$ 0.518	\$ 6.73	\$204
Softner		1	ounces per load	\$ 0.086	\$ 1.12	\$34
Linens		47	pounds per load	\$ 1.169	\$ 15.19	\$461
Electricity (HP @ minutes)		3.056	KwH per load	\$ 0.306	\$ 3.97	\$121
Total Costs				\$ 2.621	\$ 34.08	\$1,034
Machine #3: Post Ozone		13	loads	Cost/load	Cost/day	Cost/month
City water purchased		248	gal per load	\$ 0.439	\$ 5.71	\$173
Boiler (hot water)		4	gal per load	\$ 0.067	\$ 0.87	\$26
Softner		-	ounces per load	\$ -	\$ -	\$0
Linens		47	pounds per load	\$ 1.087	\$ 14.13	\$429
Electricity (HP @ minutes)		3.056	KwH per load	\$ 0.306	\$ 3.97	\$121
Total Costs				\$ 1.898	\$ 24.68	\$749

Summary of costs: Pre Ozone		Units		Costs/ Hr.	Cost/load	Cost/day	Cost/month
Machine # 1		13			\$ 2.606	\$ 33.88	\$1,028
Machine # 2		13			\$ 3.097	\$ 40.26	\$1,221
Machine # 3		13			\$ 2.621	\$ 34.08	\$1,034
Total loads		39	100%	Percentage Dried in the Dryers			Number of Dryers
Dryer(s) rating in BTU's per hour		165,000	energy	Dryer Motors	2.00	HP	4
Dryer, time Avg in minutes		40	1.300	\$ 6.435	\$ 1.073	\$ 41.83	\$ 1,269
Dryer, motor electric (hrs of drying time)		26		\$ 0.70	\$ 0.117	\$ 4.56	\$ 138
Total Costs					\$ 3.964	\$ 154.60	\$ 4,690

Summary of costs: Post Ozone		Units		Costs/ Hr.	Cost/load	Cost/day	Cost/month
Machine # 1		13			\$ 1.868	\$ 24.28	\$737
Machine # 2		13			\$ 1.961	\$ 25.49	\$773
Machine # 3		13			\$ 1.898	\$ 24.68	\$749
Total loads		39	100%	Percentage Dried in the Dryers			Number of Dryers
Dryer(s) rating in BTU's per hour		165,000	energy	Dryer Motors	2.00	HP	4
Dryer, time Avg in minutes		30	1.300	\$ 6.435	\$ 0.804	\$ 31.37	\$ 952
Dryer, motor electric (hrs of drying time)		20		\$ 0.70	\$ 0.088	\$ 3.42	\$ 104
Total Costs				KwH	\$ 2.801	\$ 109.25	\$ 3,314

	Per Load	Per day	Per Month
Savings	\$ 1.163	\$ 45.36	\$ 1,376