



LOCAL LAW 43 – FUEL CONVERSION COST/BENEFIT ANALYSIS

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EXECUTIVE SUMMARY

- ❑ **Goal : Provide a straightforward framework for conducting a cost/benefit analysis of conversion from #6 oil**
 - Determining Conversion to Gas or Higher-Grade Heating Oil
 - Identifying Key and Secondary Cost/Benefit Factors

- ❑ **Differentiate and prioritize variables**
 - Known vs. Unknown
 - Free vs. Paid

- ❑ **Pursue a budget-first analytic approach**
 - Define the benefit, discover the cost

OUR INITIAL KNOWLEDGE FAVORS CONVERSION BENEFITS WHICH SERVE AS THE BASE FOR OUR ANALYSIS

	Known	Unknown
Cost	<ul style="list-style-type: none"> •Incentives and Rebates 	<p><u>No Cost of Information</u></p> <ul style="list-style-type: none"> •Service Expansion •Gas Booster •Boiler and Burner Equipment •Plumbing •Tank cleaning/Decommissioning <p><u>Possible Cost of Information</u></p> <ul style="list-style-type: none"> •Chimney Cleaning/Lining
Benefit	<ul style="list-style-type: none"> •Annual Fuel Spend •Maintenance Costs •Pre-Heater Electric Costs 	<ul style="list-style-type: none"> •Fuel-Cost Savings

ESTABLISHING A BUDGET FROM THE BEGINNING ANCHORS THE PROJECT, PROVIDING A BASIS FOR COST-GATHERING STEPS

Savings Projections		
Fuel-Cost:	\$30,000	+
Maintenance:	\$2,500	+
Pre-Heater:	\$1,000	+
Additional:	\$500	=
Total Savings:	\$34,000	

Budget Establishment		
Total Savings:	\$34,000	X
Preferred Payback Period:	6 years	=
Project Budget:	\$204,000	

- ❑ **Current Oil vs Natural Gas price spread is ~30% per BTU**
 - \$3.00/Gallon of Oil to \$1.40/Therm of Natural Gas
 - Baseline for fuel-cost savings is Total Fuel Spend * 0.3
 - Example property Annual Fuel Spend = \$100,000
- ❑ **Pre-Heater savings can be calculated as kWh rating of electric pre-heater X annual operating hours (likely 8,760 for continuous use)**

WITH AN ESTABLISHED BUDGET, FILLING IN COST VARIABLES ALLOWS FOR THE CONTINUATION OR ENDING OF THE ANALYSIS

<u>Item</u>	<u>Cost</u>
Utility Service Expansion:	\$60,000
Interior Plumbing:	\$40,000
Gas Booster:	\$0
Boiler and Burner:	\$0
Chimney Inspection:	\$5,000
Chimney Liner:	\$40,000
Total Cost:	\$145,000
Project Budget:	\$204,000
Budget Remaining:	\$59,000

Scenario 1

- Service costs immediately exceed Project Budget
- Property can end pursuit of natural gas, evaluate conversion to cleaner heating oil

Scenario 2

- Property exceeds budget after boiler evaluation
- Process ceases before costs incurred for chimney inspection

Scenario 3

- Total costs are within established budget
- Property proceeds with conversion to natural gas

IF GAS CONVERSION IS NOT FEASIBLE, CONVERTING TO A CLEANER GRADE OF HEATING OIL REQUIRES ANTICIPATION OF INCREASED ANNUAL FUEL COSTS

#4 Conversion, 60,000 Gal/year property

Savings Projections		
Conversion Cost:	\$10,000	
Fuel-Cost Increase:	\$4,200	-
Maintenance Saving:	\$500	-
Electric Reduction:	\$500	
Annual Cost Increase:	\$3,200	

#2 Conversion, 60,000 Gal/year property

Savings Projections		
Conversion Cost:	\$10,000	
Fuel-Cost Increase:	\$13,200	-
Maintenance Saving:	\$1,000	-
Electric Reduction:	\$500	
Annual Cost Increase:	\$11,700	

❑ Costs

- Up-front conversion cost
- #4 fuel-cost increase: ~\$0.07
- #2 fuel-cost increase: ~\$0.22

❑ Benefit

- Reduced maintenance costs
- Reduced electric usage