



CPC Green Financing Initiative

Simple, Sensible Sustainable
Solutions



The Speakers



Sadie McKeown, Senior Vice President, Director of CPC's Green Financing Initiative has been Director of Lending in CPC's Hudson Valley Region since 1996. She has been tapped to head up CPC's newly created Green Financing Initiative.



Andy Padian, Vice President for Energy Initiatives of The Community Preservation Corporation has worked on energy efficiency for over 25 years and is an esteemed resource in this ever-growing arena. At CPC, he trains mortgage officers, property owners and maintenance staff to identify appropriate efficiency measures. He also performs energy audits.



Patrick Logan, Mortgage Officer, Bronx/Manhattan Regional Office, is responsible for finding and establishing new business opportunities in residential development. He meets with developers who are interested in borrowing from CPC for new construction and rehabilitation projects that maintain affordability for families with low and moderate incomes.



The Community Preservation Corporation (CPC)

- Non-profit 501 c(3) Mortgage Finance Company
- Founded in 1974 by NY Clearinghouse Banks
- Funded via consortium of more than 70 banks and insurance companies
- 136,000 units financed, more than \$7.2 billion in public and private investment
- Affordable low and moderate income housing



CPC is a Community Lender

- The CPC Approach
 - Evaluate the needs of a community
 - Identify the resources within that community
 - Create strategic partnerships
 - Provide investment capital
 - Stimulate revitalization
- Retrofit of Existing Buildings
 - ***An identified community need***



The CPC Green Initiative

- **Simple**
 - \$1 Billion for building owners who want to retrofit
 - A One Stop Shop: Construction and Permanent Financing blended with public incentives
- **Sensible**
 - Improve property cash flow & increase value
 - Comply with pending state & federal legislation
- **Sustainable**
 - Extend efficiency and life cycle of building systems
 - Provide a better environment for residents



Target Markets

- Existing **multifamily** housing stock throughout New York State
- Occupied cash-flowing rental properties
- Cooperative Apartment Buildings
- Measure energy usage up front so savings can be measured post retrofit
- Typical buildings are 20 units and larger

Goals of Retrofit

- Benchmark the Building – Measure Usage
 - Create a Database of energy consumption
- Identify the Work Scope with an Energy Audit
 - What is cost effective?
 - What is the return on investment?
- Monitor the construction
 - Insure best practices
- One year post retrofit: Measure the savings!
 - Goal is 20% savings on overall energy and water consumption



Benefits to Building & Residents

- Heating, Electric & Water usage reduction
- Improved systems
- Improved energy management
 - Training of maintenance staff
 - Engage employees and tenants
- Improved affordability, durability, health, safety, efficiency and comfort

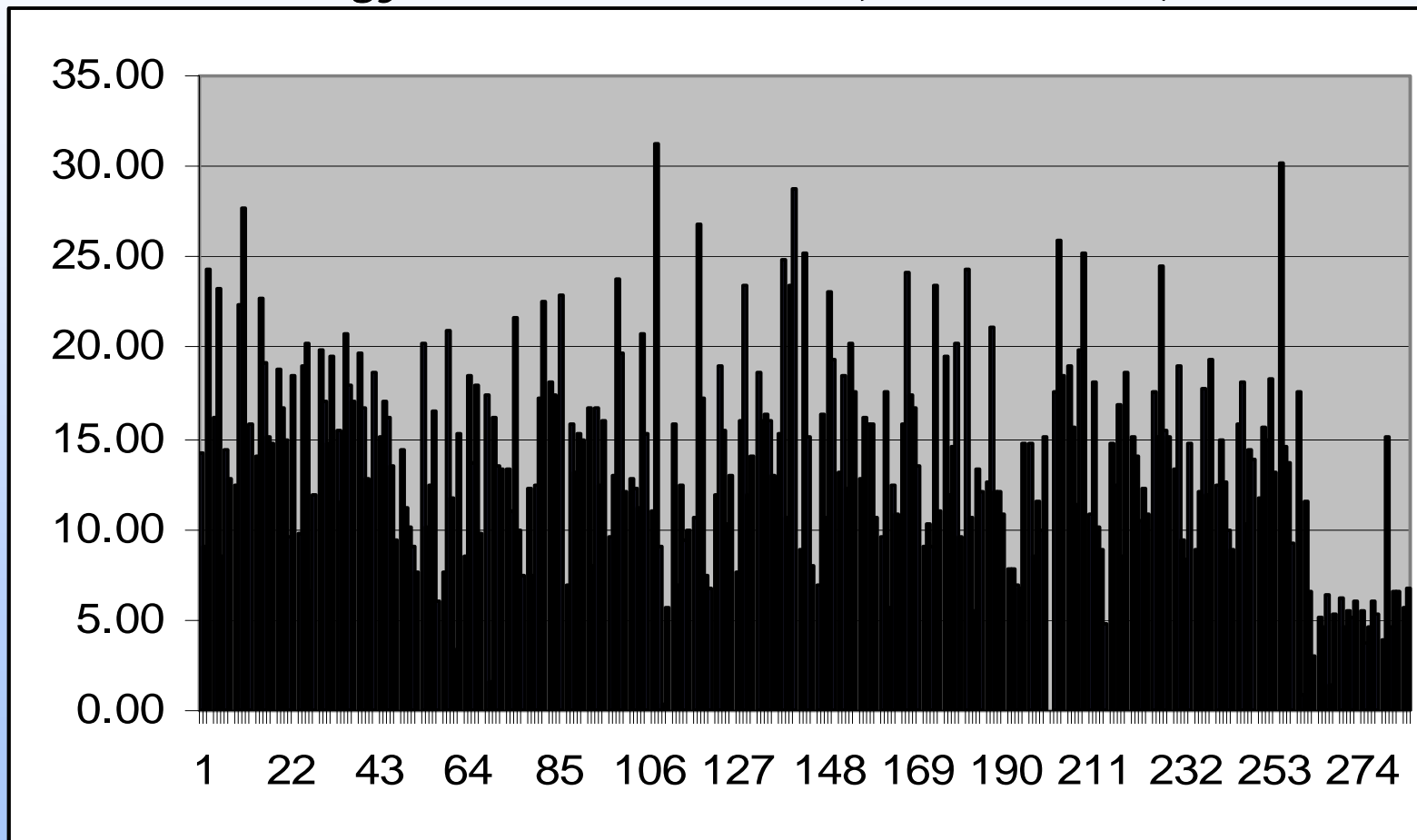
Create a Reliable Database

- Economic benefits are not yet empirically proven
 - Prove the economic upside of building retrofit
 - Work with public partners to “incentivize” owners
 - One Stop Shop for public money and private debt
- Create a platform for Retrofit Financing
 - Make an energy audit and building retrofit a standard part of the Mortgage Process

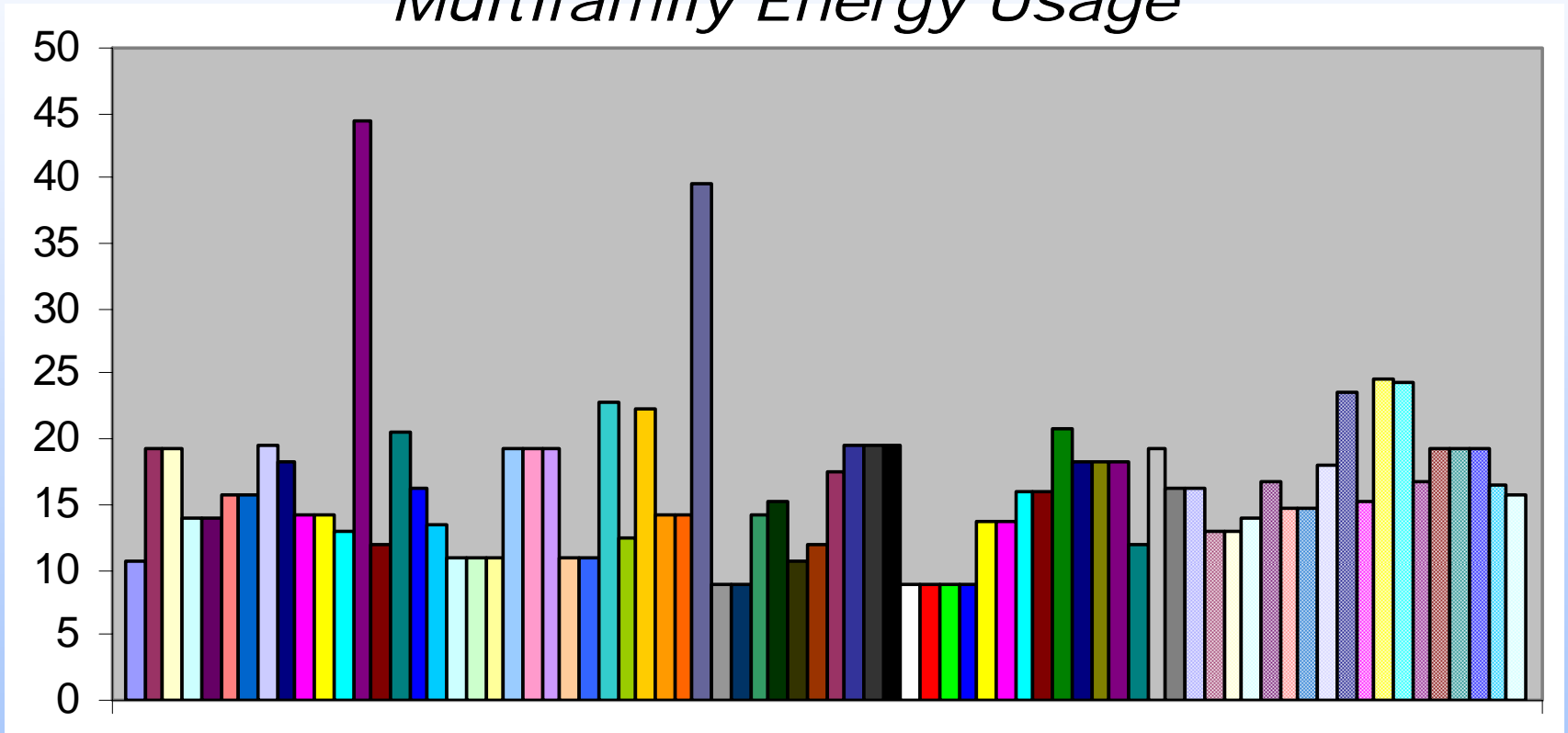
*Energy Analysis:
Who's the Pig,
Who's the Gnat?*



*Almost 300 NYS Buildings requesting
Energy Audits 2001-2005 (BTU/ft²/HDD)*

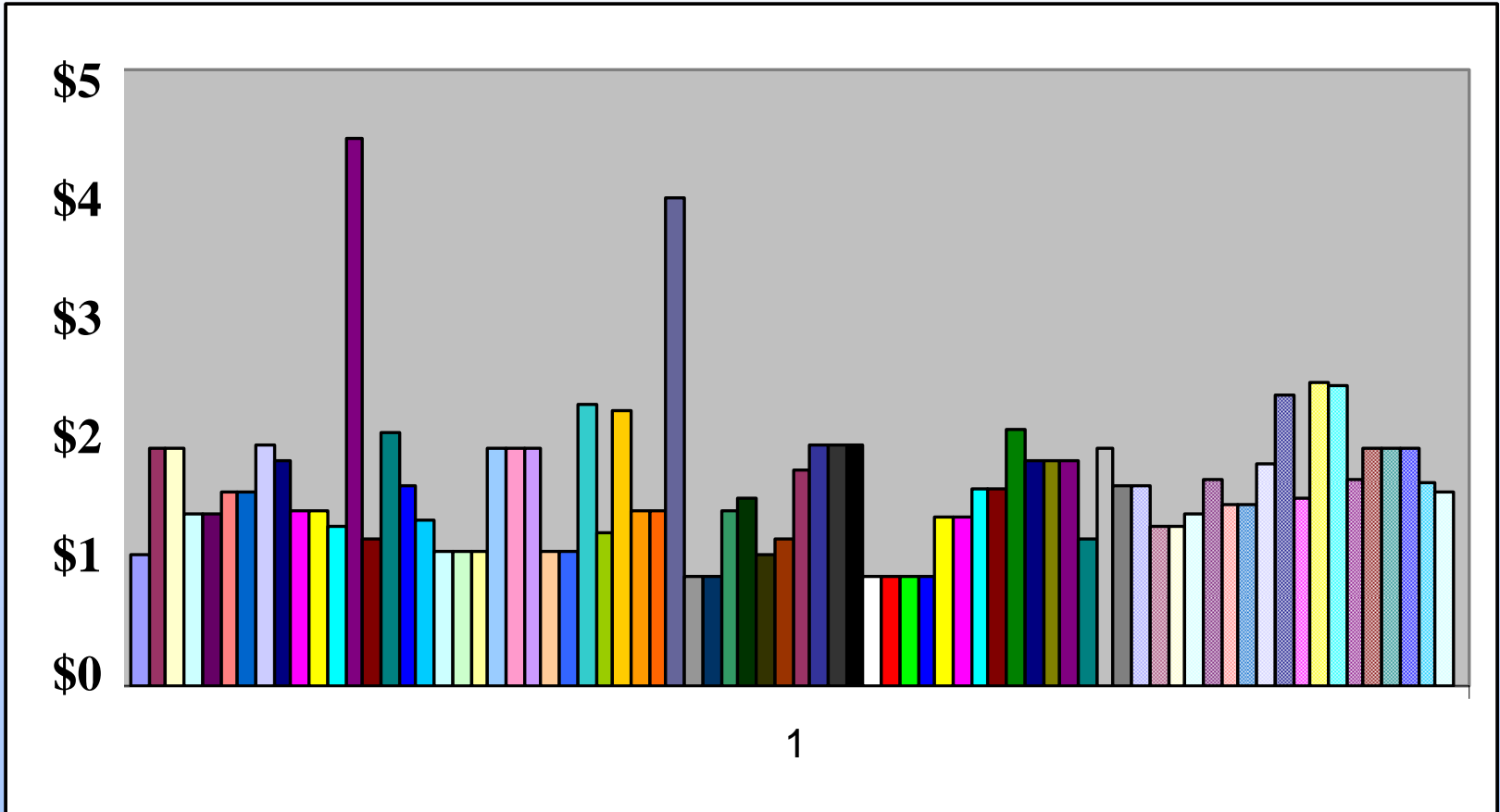


A Top 10 Owner of NYC Properties: Multifamily Energy Usage



All in Btu/ft2/HDD

(\$/ft²/Year)



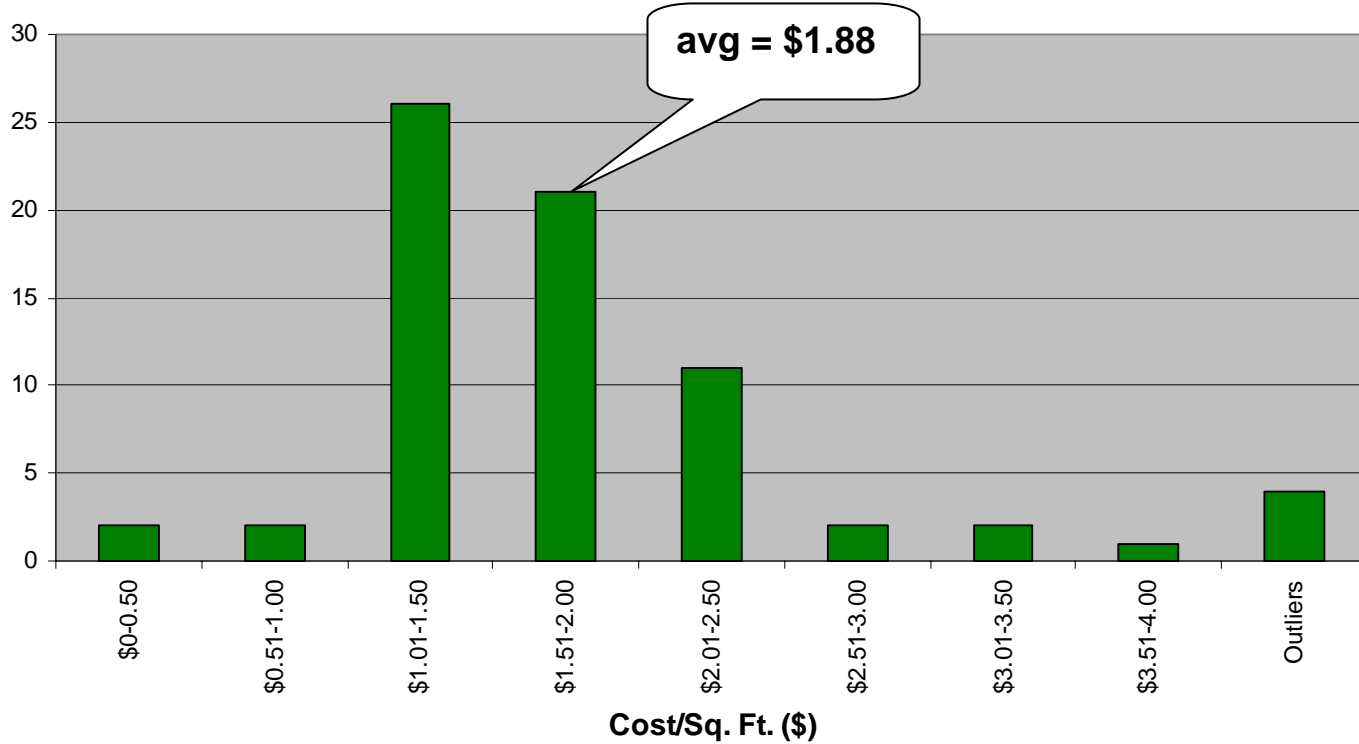


Boston Property Maintenance Costs

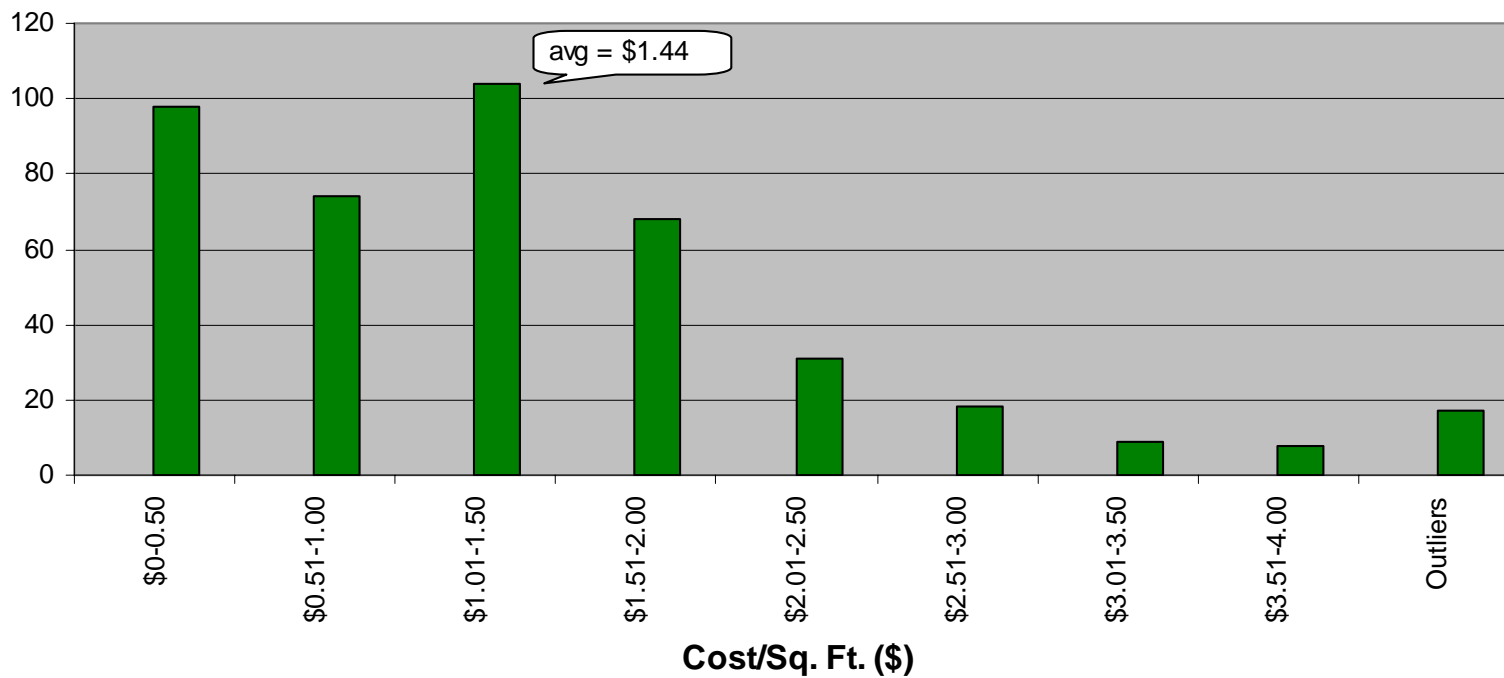
	Low	Mean	High
Water and sewer	\$117	\$516	\$977*
Pest control	\$32	\$75	\$156
Painting	\$13	\$72	\$189
Landscaping	\$0	\$72	\$187
Appliances	\$0	\$22	\$79
Cabinets - Maintenance	\$0	\$34	\$83
Cleaning supplies	\$2	\$33	\$65
Lighting fixtures and bulbs	\$6	\$17	\$38
Ovens and ranges	\$0	\$15	\$26
Windows	\$0	\$5	\$26
Lighting – Fixtures only	\$0	\$9	\$18
Kitchen and bath fans	\$0	\$9	\$2
Lighting - Bulbs only	\$0	\$3	\$6

* High costs are due to an unnoticed water usage with an outside hose.

CPC buildings - Fuel (#2, #4 & #6) Costs Per Sq. Ft.



CPC buildings - Fuel/Gas Costs Per Sq. Ft.



Where does the heating fuel go?

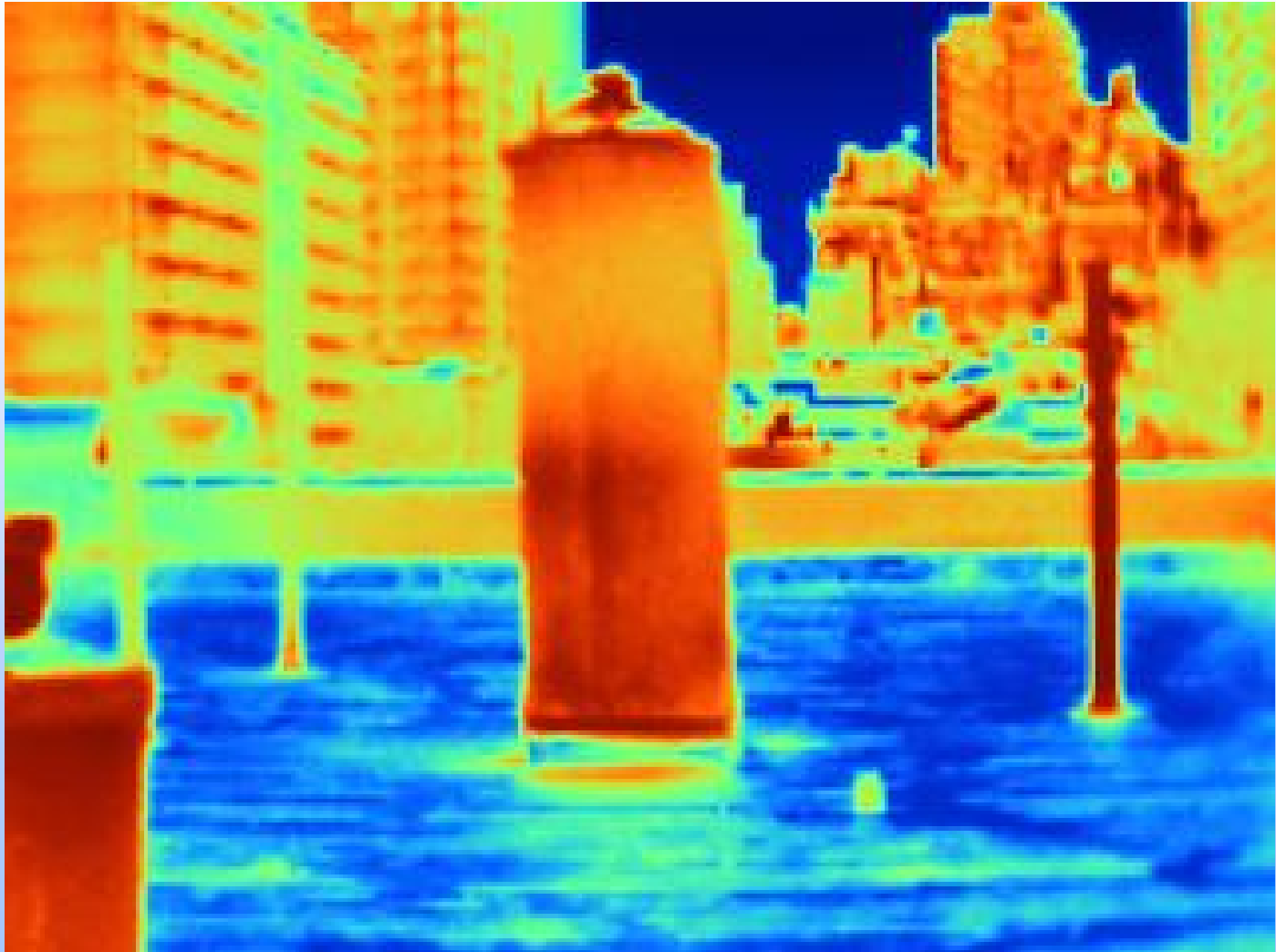
1. Through holes from inside to out
2. Up the chimney of an inefficient boiler
3. Overheating buildings and water
4. Insulation in attics/roofs, walls, pipes, ducts
5. Heating Empty spaces
6. Did I say through holes inside to out?

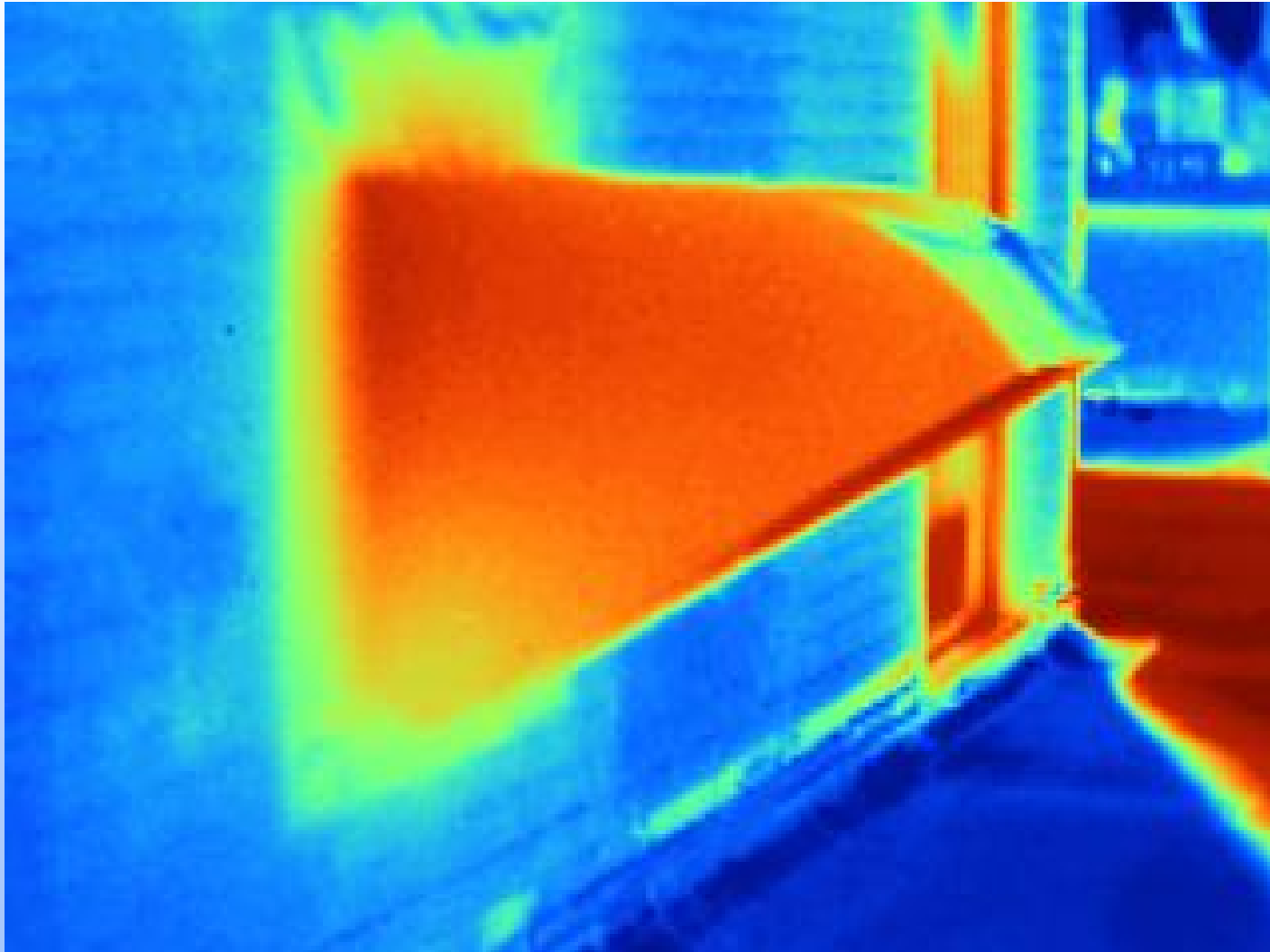






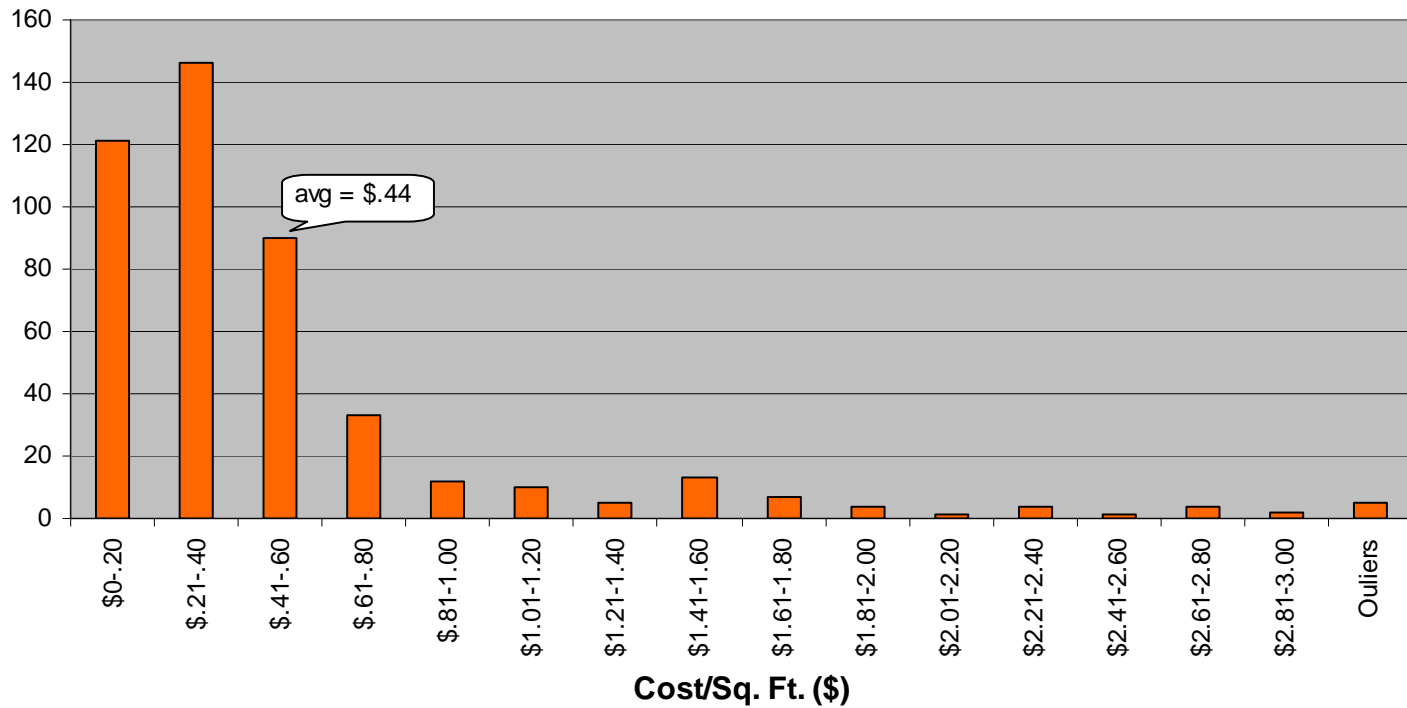




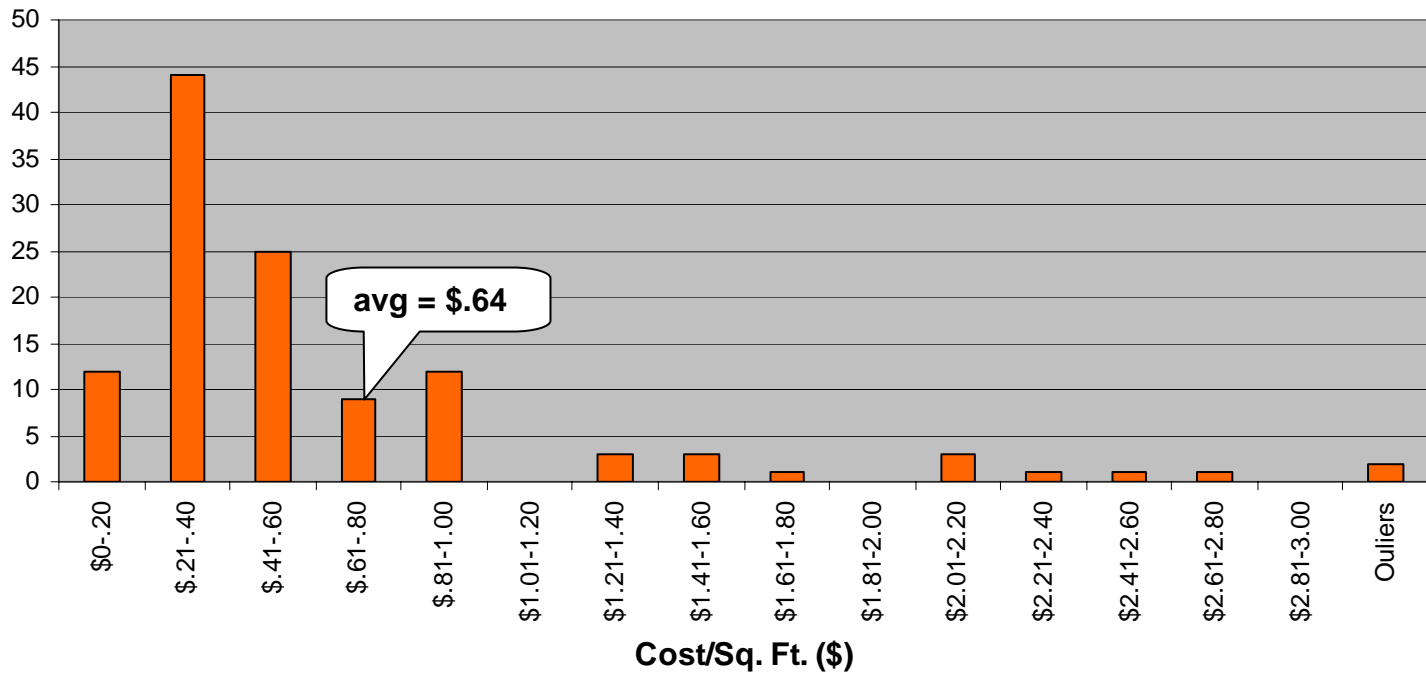




CPC Buildings - Electric (Walkup) Costs Per Sq. Ft.



CPC Buildings - Electric (Elevator) Costs Per Sq. Ft.



Where do we waste electricity?

1. Lighting, lighting, lighting, lighting, lighting!
2. Leaving stuff on that should be off
3. Inefficient appliances
4. Inefficient and oversized air conditioning
5. Electric appliances that should be gas (hot water makers, dryers, heating appliances)
6. Empty rooms that are lit with the A/C on





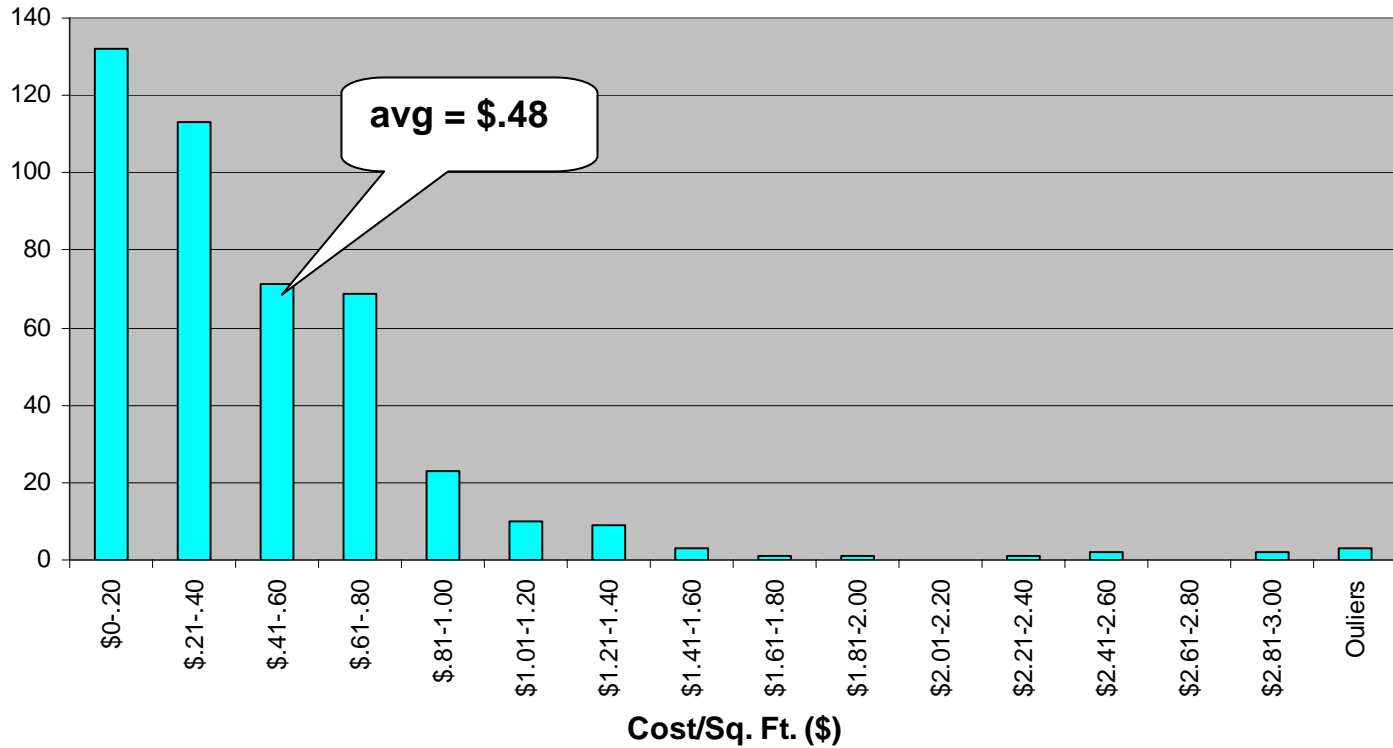


Energy Star Appliances

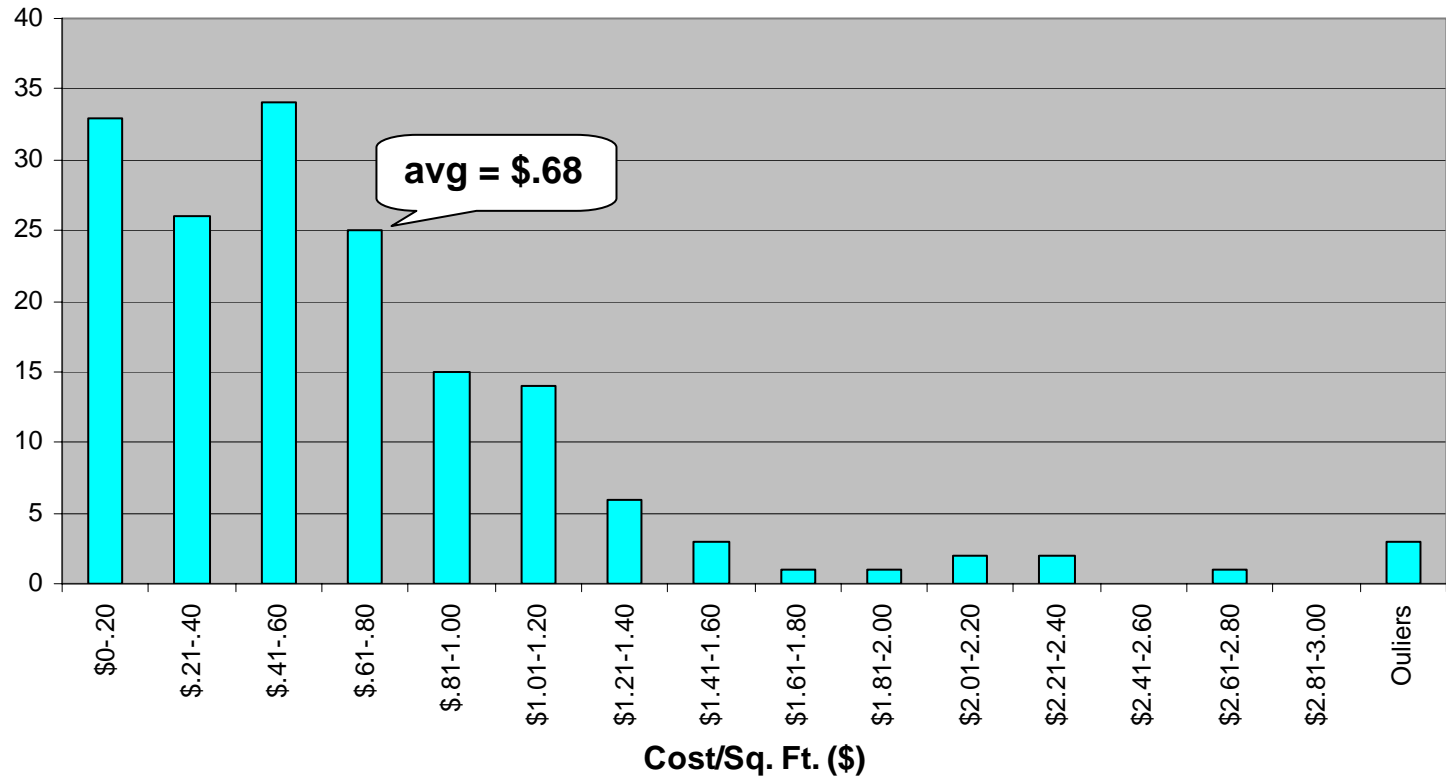


<http://www.energystar.gov/>

CPC Buildings - Water and Sewer Costs Per Sq. Ft.

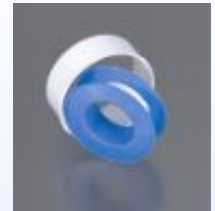


CPC Buildings - Water Meter Costs Per Sq. Ft.



Where do we waste so much water?

1. Toilets
2. Showerheads
3. Sink aerators
4. Leaks
5. Watering sidewalks
6. Watering plants





How much is fixing a leak worth? (assumes \$5.70/1000 gallons)

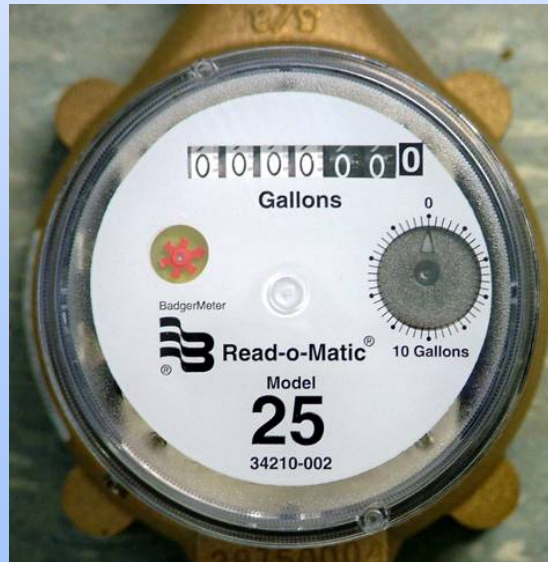
Daily

Yearly

	GPD	Water	Sewer	Total	Water	Sewer	Total
Slow drip	36	\$0.08	\$0.13	\$0.21	\$28.99	\$46.09	\$75.07
Steady drip	180	\$0.40	\$0.63	\$1.03	\$144.93	\$230.43	\$375.36
Toilets							
Seeping	30	\$0.07	\$0.11	\$0.17	\$24.15	\$38.91	\$62.56
Leaking	250	\$0.55	\$0.88	\$1.43	\$201.29	\$320.05	\$521.33
Running	6000	\$13	\$21	\$34	\$4,830	\$7,681	\$12,512

Finding Leaks

- Severe leaks can best be found by looking at your water meter between 2-4am
- Water running at that time is typically from leaks





Case Study

Pat Logan

*Southern Boulevard
Bronx, NY*





The Property

- **42 apartments, 38,419 SF multifamily property**
- **Six story non-elevator building built in 1925.**
- **Melrose section of the Bronx**
- **Contemplating a mod rehab loan.**
- **Owner pays for heat and hot water.**
- **Tenants are metered directly for electricity.**



The CPC Process

- **Step One:**
 - CPC collects 24 months of fuel records from the borrower or property manager
 - Borrower executes CPC's authorization forms
 - CPC accesses usage data directly
 - Water, electricity, and oil or gas

Step Two: Ballpark Benchmark

- Analyze all data
- Isolate a full calendar year
- Calculate annual total
- Calculate summer usage
 - This will allow you to separate out usage for hot water



Benchmarking

- **Total Annual Fuel Consumption: 46,852 Gallons**
- **Domestic Hot Water (DHW) Consumption: 20,338 Gallons**
- **(7,077 gal/127 Days) x 365**
- **Oil Usage for DHW is 43% of total.**

The average multifamily building in NYC uses 40% of its heating fuel for DHW

Date Delivered /Gallons

	1/3/2008	2048
	1/9/2008	1507
	1/16/2008	1504
	1/23/2008	1606
	1/30/2008	1701
	2/5/2008	1502
	2/14/2008	1810
	2/19/2008	1521
	2/22/2008	1501
	3/4/2008	1670
	3/8/2008	1470
	3/13/2008	1506
	3/18/2008	1674
	3/22/2008	1440
	3/28/2008	1404
	4/4/2008	1524
	4/9/2008	1395
	4/25/2008	1166
	5/1/2008	1071
	5/9/2008	1336
	5/20/2008	1400
127 days	6/3/2008	1391
	6/16/2008	783
	7/15/2008	1190
	9/4/2008	1369
	9/12/2008	1399
	9/29/2008	1353
	10/8/2008	983
	10/22/2008	1208
	11/10/2008	1206
	11/18/2008	1080
	11/28/2008	886
	12/8/2008	1101
	12/16/2008	1106
	12/22/2008	558
	1/5/2009	1533

46,852



Benchmarking

- Average Usage for Heat: .69 gallons/SF x
- BTU/sf/yr for Heat: 95,238
- Adjusting for temperature variation from region to region, Southern Blvd. uses 19.5 BTU/sf/HDD annually.

42 UNITS 38,419 sq/ft		
#2 OIL		
Annual Consumption	46,852.30	gallons
Oil Usage for DHW	20,338.26	gallons
Oil Usage for DHW	0.43	%
Oil Usage for Heating	26,514.04	gallons
Oil Usage for Heating	▶ 0.69	gal/SF/YR

Btu's/SF for heat	#2	138,000	Btu/gallon
	#4	145,000	Btu/gallon
	#6	155,000	Btu/gallon
	Gas	100,000	Btu/Therm
	Propane	91,000	Btu/gallon
	Electricity	3,412	Btu/kWh
Heating Degree Day:	NYC	4888	HDD
	Yonkers	5,497	HDD
	Albany	6,750	HDD
	Syracuse	6,834	HDD
	Buffalo	6,922	HDD
	Hamilton	9,350	HDD
		▶ 19.5	Btu/sf/HDD

The average multifamily building in NYC is 14 BTU/sf/HDD



Ballpark Conclusion

This building can save on energy costs.

- This building uses 39% more heating fuel per square foot than the average building
- This building uses 42% more hot water fuel than the average building and has numerous vacancies
- ***The average multifamily building in NYC uses 3x more energy per square foot than the average single family home in America***



Step Three: Physical Inspection

- Building walk through with Andy Padian from CPC, Mortgage Officer and Owner or Manager
- Energy Retrofit Recommendations discussed with the owner and prepared by CPC

Recommendations:

- Roof cavity insulation
- Low-e windows
- Updated heat computers
- Efficient boilers (or upgrades where boilers are not being replaced)
- Efficient common area and apartment lighting
- Energy Star appliances, low flow plumbing fixtures
- Tightening the building envelope





CPC Technical Assistance

- **Public Incentives:**

- In this case the Weatherization Assistance Program (WAP) makes sense.

- **Site meeting**

- Owner, Mortgage Officer and WAP Rep

- Owner has applied for assistance and WAP has begun to income qualify the building.



Other Incentives

- Con Edison or your local utility
 - Program should be up and running early 2010
 - Will provide rebates for prescriptive retrofits
- NYSERDA
 - Program should be up and running early 2010
 - Should be a program similar to NYSERDA's most recent programs
 - Incentives for reducing overall energy usage by a minimum of 20%

Summary of Benefits at Southern Blvd.

- Free initial energy assessment
- Coordination of audit and public incentives
- CPC financing for renovation and retrofit
- **Increased property cash flow**





Cash Flow Analysis

	<u>Mortgage Officer Projections</u>	<u>Anticipated Energy Cost After Retrofit</u>	<u>Total Savings After Retrofit</u>	<u>Percent Savings After Retrofit</u>
TOTAL GROSS INCOME	395,726			
VACANCY LOSS	19,786			
TOTAL EFFECTIVE GROSS INCOME	375,940			
TAXES	0			
WATER & SEWER	27,300	24,570	2,730	10%
INSURANCE	14,700			
PAYROLL	35,140			
ELEVATOR	0			
CLEANING & EXTERMINATING	9,625			
HEAT	70,000	59,500	10,500	15%
GAS & ELECTRIC	14,000	11,900	2,100	15%
MANAGEMENT	22,556			
PAINTING	9,625			
REPAIRS AND REPLACEMENT	21,000			
LANDSCAPING AND GARBAGE	0			
LEGAL & ACCOUNTING	6,620			
BUILDING RESERVE	10,380			
TOTAL	240,946			
PER ROOM	1,377			
PER UNIT	5,737			
Net Available	134,994			
Debt Service	117,222			
Cash Flow	17,771			
Additional Cash Flow	\$ 15,330			



*Contact your local field office for
more information*

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