

CAMBRIDGE HOUSING AUTHORITY

Moving To Work Conference Energy and Alternate Subsidy Calculations

Washington DC
June 2, 2010



Consumption Summary

Where we are now -

2010 ACTUAL ENERGY CONSUMPTION AGAINST FROZEN BASE:

	Frozen Base		Usage Variance	Variance %	Cost Variance
	1999	2010 Actual Use			
Electricity - kWh	12,021,486	9,434,601	2,586,885	22%	\$388,033
Gas - therms	1,099,557	1,356,166	(256,609)	-23%	(\$369,517)
Water - ccf	182,973	149,104	33,869	19%	\$331,916

Where we are going -

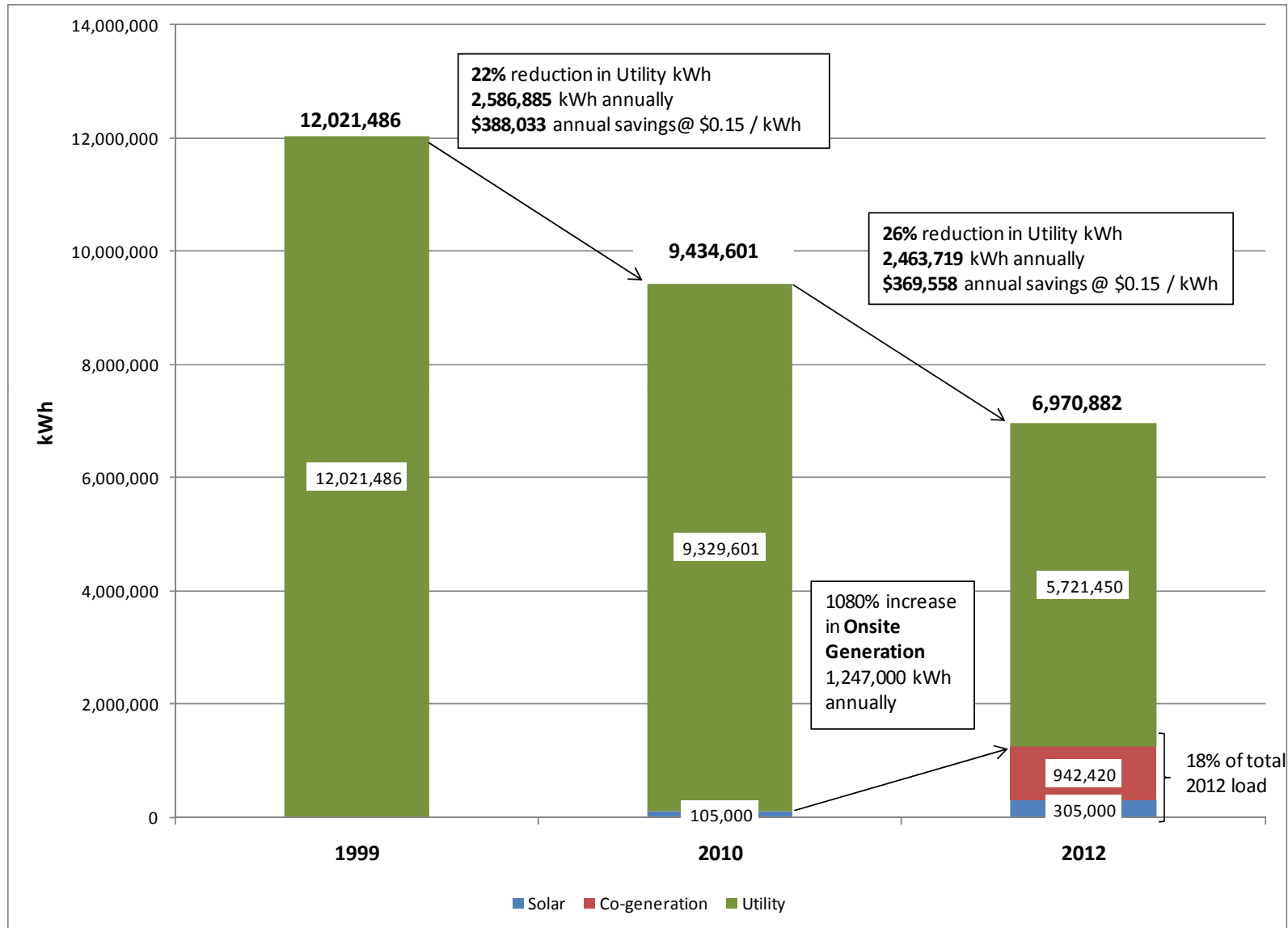
Total Cost Savings: \$350,432

2012 FORECASTED ENERGY CONSUMPTION AGAINST FROZEN BASE:

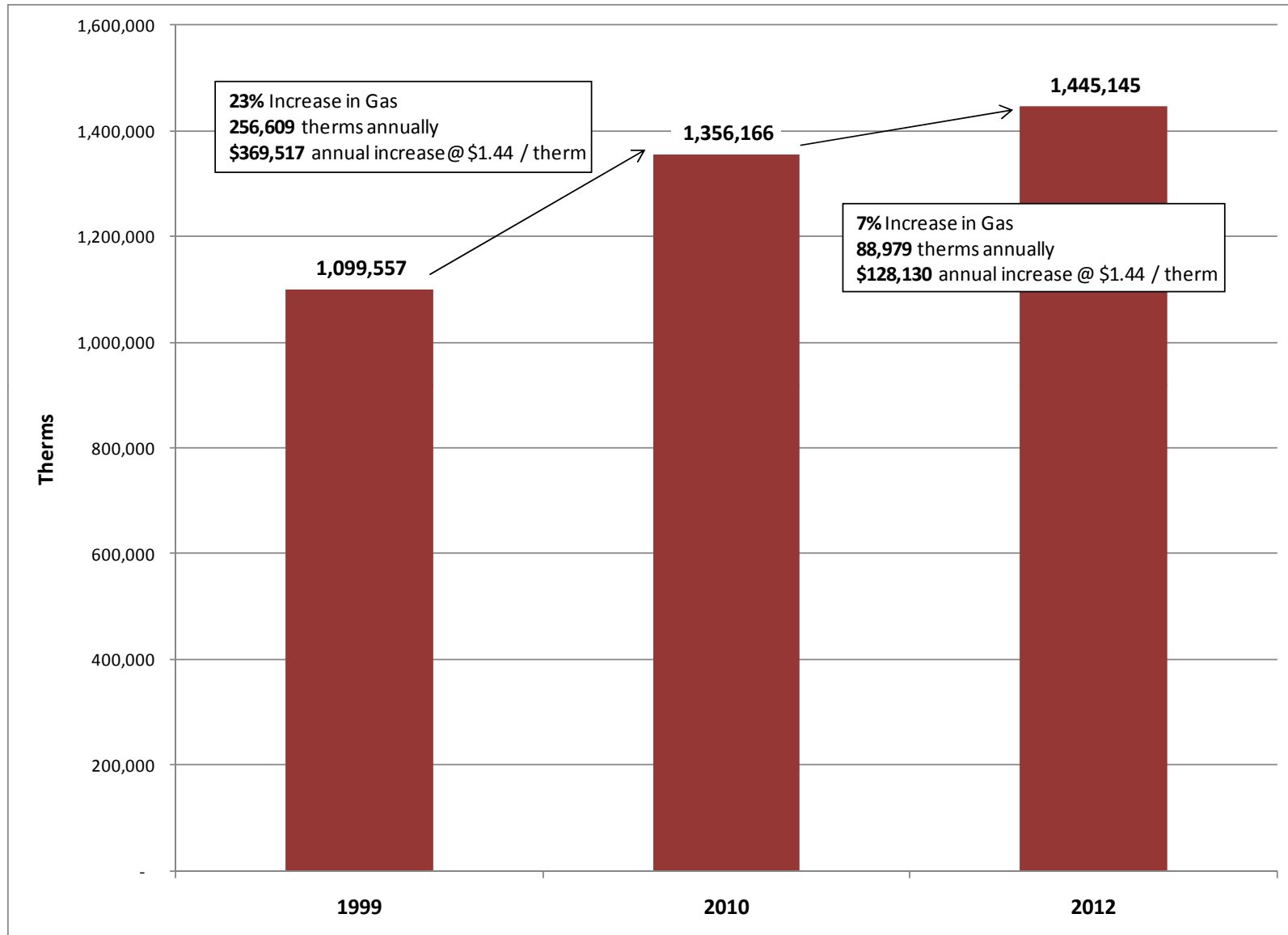
	Frozen Base	2012 Forecasted	Usage Variance	Variance %	Cost Variance
	1999	Use			
Electricity - kWh	12,021,486	6,970,882	5,050,604	42%	\$757,591
Gas - therms	1,099,557	1,445,145	(345,588)	-31%	(\$497,647)
Water - ccf	182,973	141,649	41,324	23%	\$404,977

Total Cost Savings: \$664,921

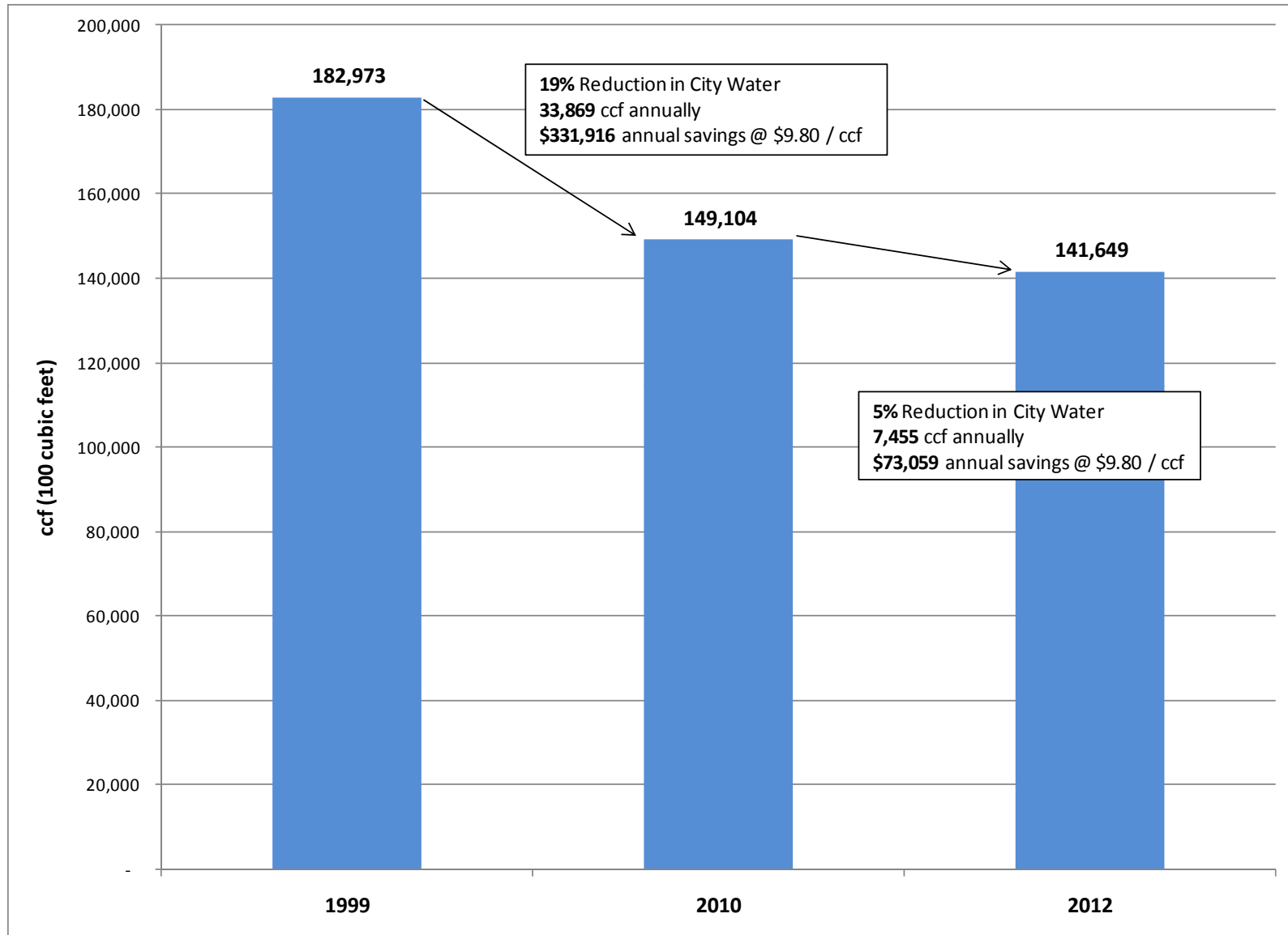
Electricity Management



Gas Management

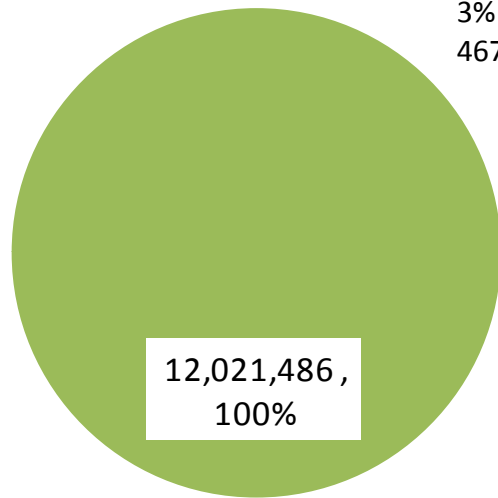


Water Management



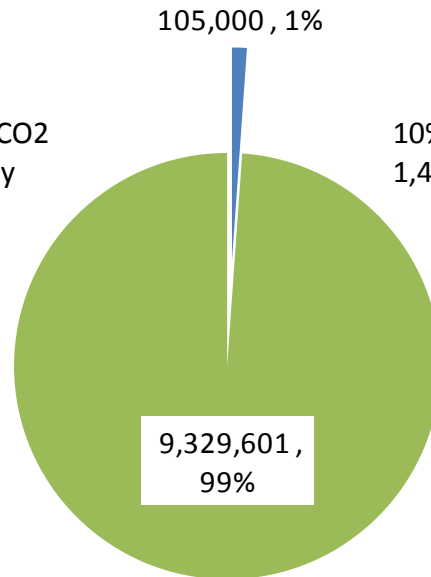
Effect of Fuel Conversion – Electric to Gas & Onsite Gen.

1999 Frozen Base



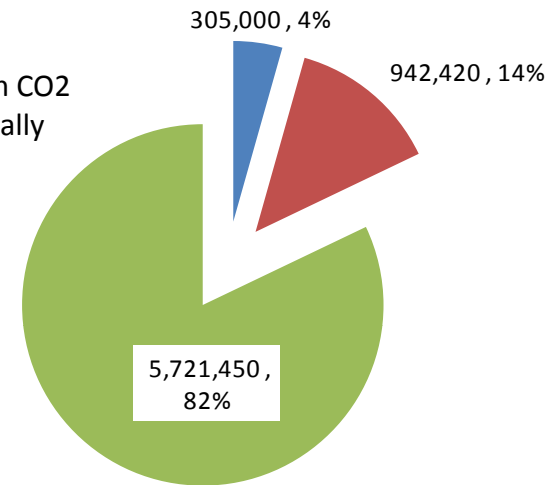
3% reduction in CO2
467 tons annually

2010 Actual



10% reduction in CO2
1,435 tons annually

2012 Forecast



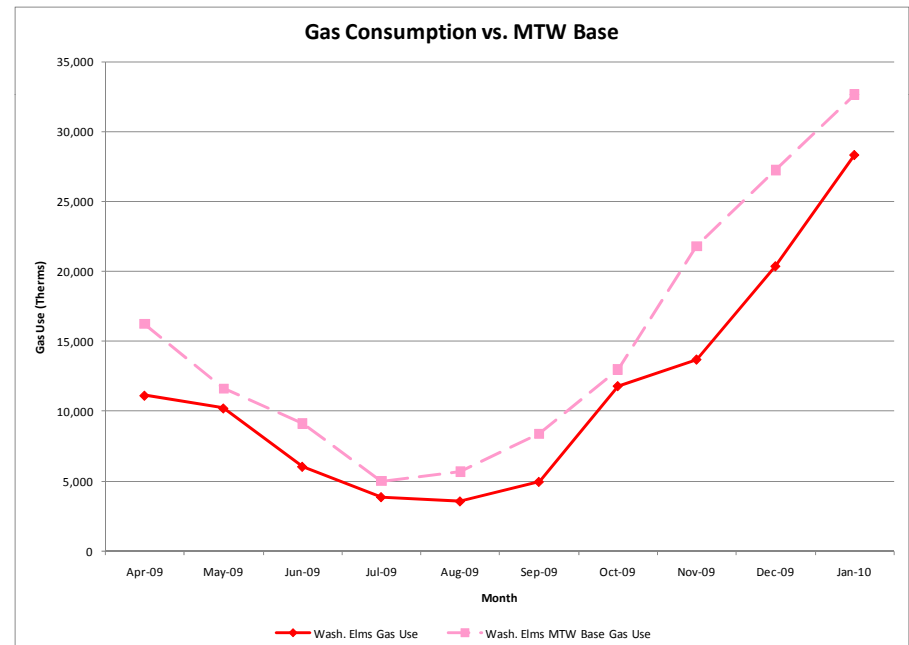
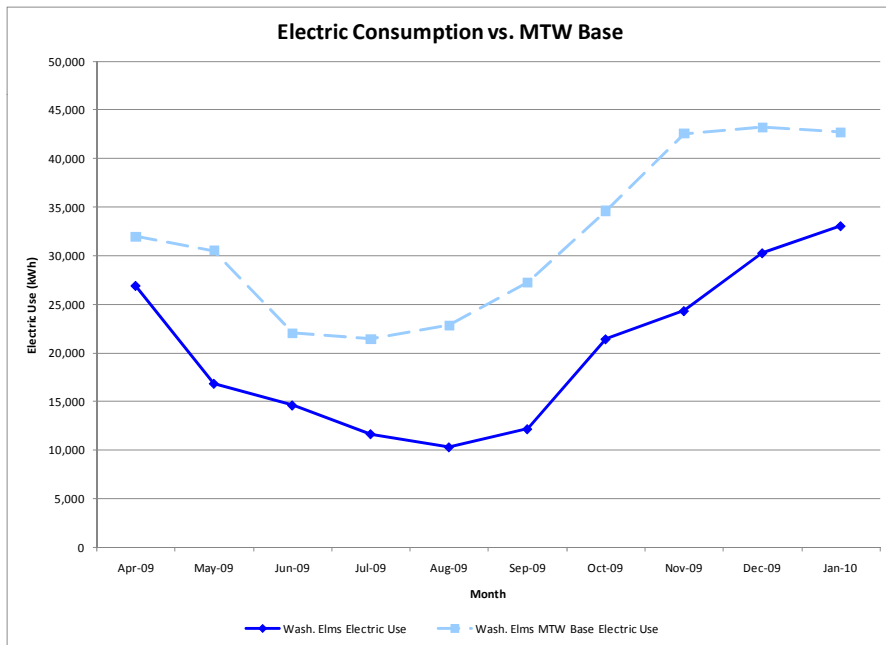
■ Solar Gen ■ Co-Gen ■ Utility

By 2012:

- > 57% reduction in total electricity consumption
- > 18% of electricity generated onsite
- > Four million lbs of Greenhouse Emissions eliminated annually

The Importance of Utility Reporting

- Effective management of frozen utility base requires constant vigilance (timely energy reporting)
- Energy reports are generated monthly and monitored both centrally and at sites.
- Progress of reduction against frozen base is tracked in aggregate and for each site.



FY 2010 reports for the Washington Elms Apartments

Consequence of Frozen Base

The Frozen Utility Base does not allow for energy complacency:

- ▶ The Energy Information Administration estimates that electric plug load increases by 1-2% annually, despite advances in energy efficiency technologies. Absent rigorous attention, this increased load can rapidly eclipse energy savings.
- ▶ Maintaining energy efficiency upgrades requires ongoing monitoring, preventive maintenance and repeated engagement. Aerators and CFLs can disappear, zone valves can be opened, pumps can fail, and equipment obsolesces.

The Frozen Base provides impetus to actively pursue efficiency upgrades and creative partnerships:

- ▶ Agencies may pursue private finance to leverage energy savings to fund capital improvements, and more efficiently engage in either third party or self directed Energy Performance Contracts.
- ▶ Funds are available as necessary to leverage private foundation or utility sponsored rebate programs.
- ▶ MTW authorities have the budget autonomy to direct energy related cost savings to best meet the overall needs of the Agency.