

Energy Efficiency & City of Boston



Agenda

- **NSTAR's Energy Efficiency Charter**
- **Budgets**
- **Program Overview**
- **City of Boston Activity**

Charter

GCA – Procure all cost-effective energy efficiency that is at a lower cost than supply

What is the impact?

- **Ramp-up of all efforts by over 200%**
- **Expansion of industry related jobs**
- **Deep penetration into customer sites**
- **Full engagement and participation from all sectors**

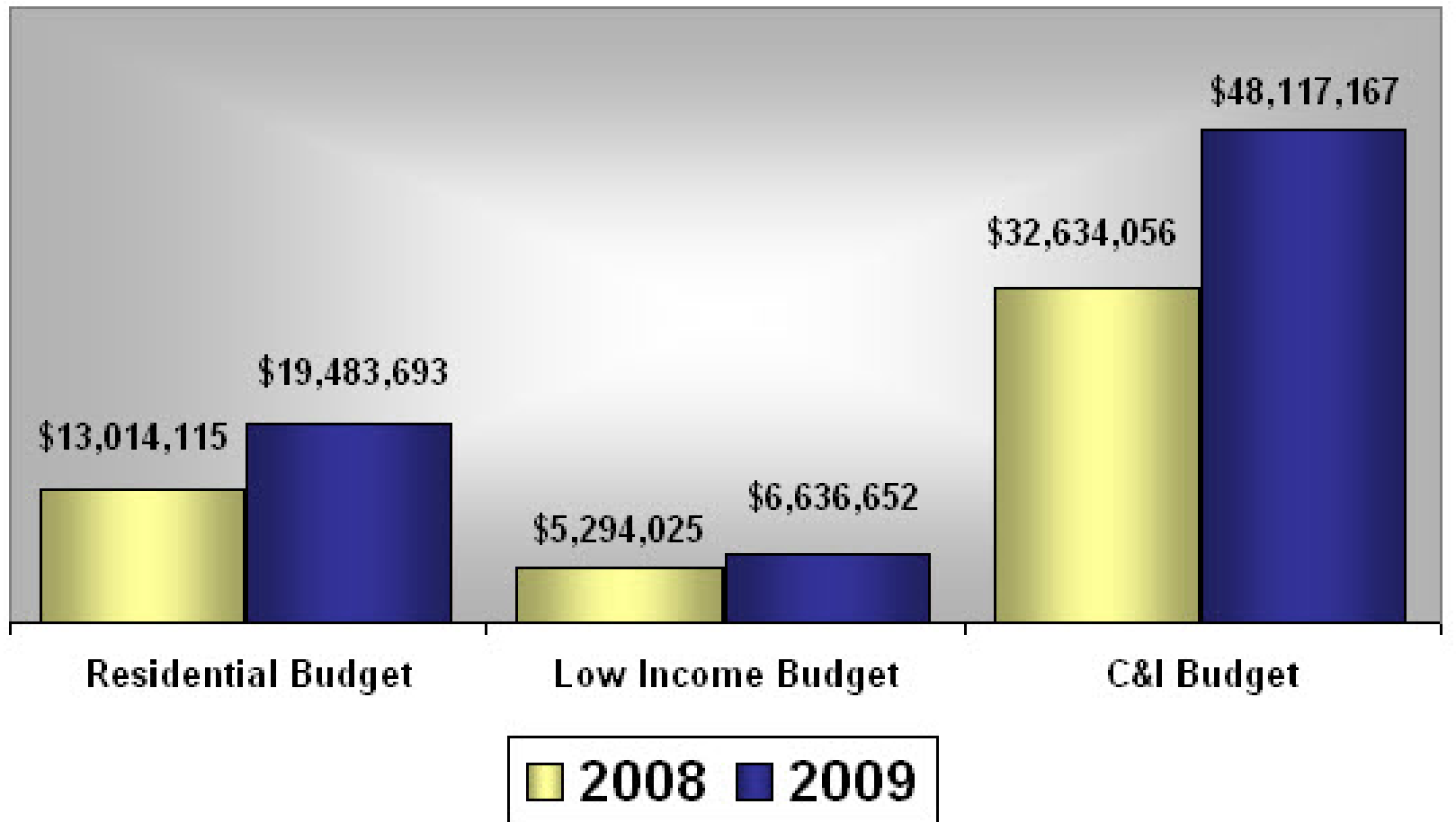
What is our product?

Efficiency is...

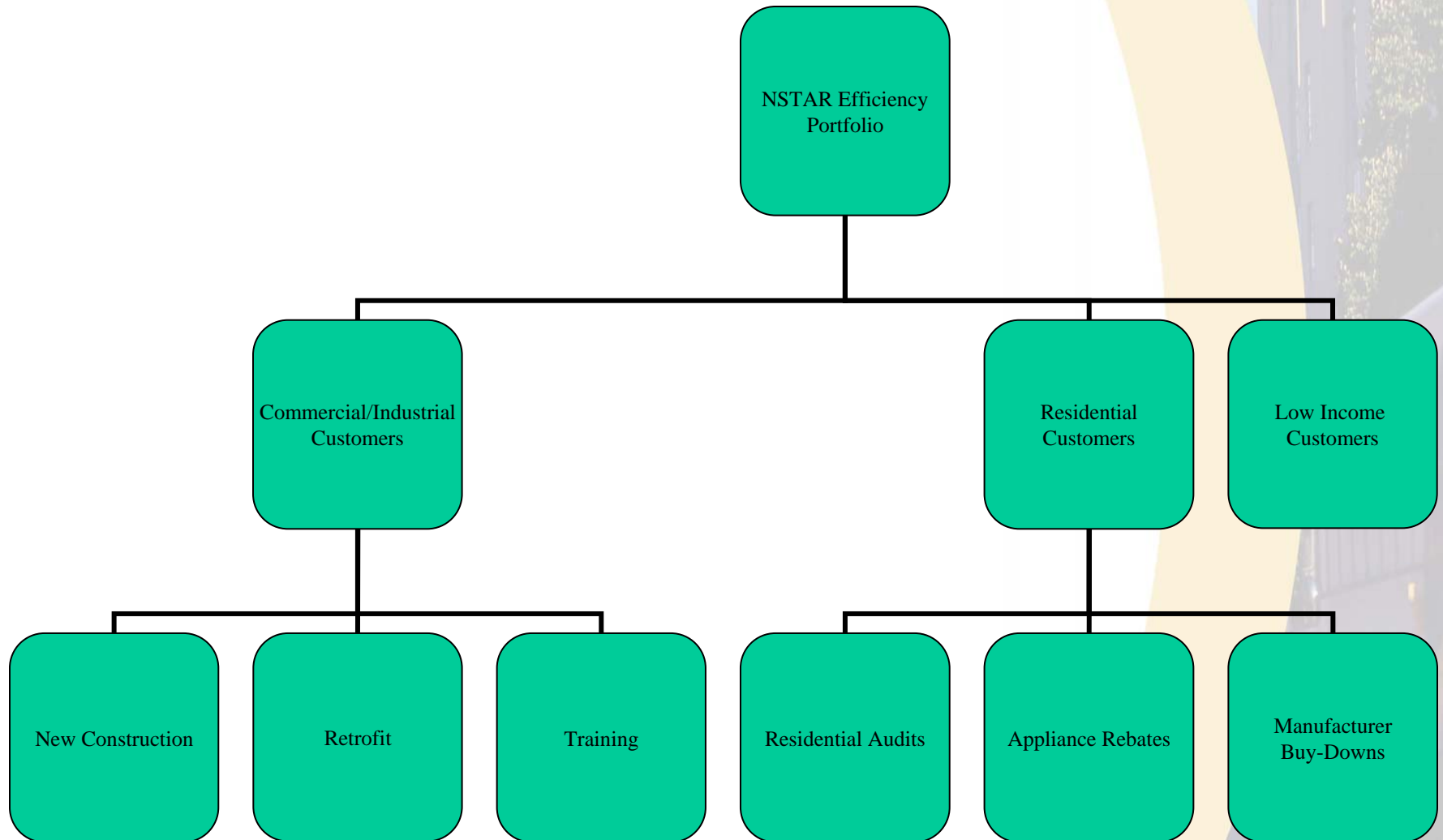
- **Reduction in energy use while maintaining or enhancing operation**
- **Using state of the shelf technologies**
- **Above and beyond normal practices**
- **A product which we procure primarily through incentives**
- **Bid into FCM, competing with generators**
- **Verified through 3rd party evaluators**

Its real and tangible with same financial implications as financing a power plant

Budgets



Program Structure



Commercial/Industrial

New Construction & Retrofit Core Programs

- **Incentive based programs for all C/I customers**
- **Prescriptive Incentives**
 - Common measures with predictable savings
 - i.e. Lighting, motors, drives, HVAC equipment
- **Custom Incentives**
 - Will consider new or specific measures
 - Must be cost-effective and have verifiable savings
 - i.e. industrial process, free-cooling

Encompasses all C/I customers and all applicable opportunities

Commercial/Industrial

New Construction Specialized Tracks

- **Advanced Buildings** – Prescriptive, packaged incentive for new buildings < 100,000 ft²
- **Comprehensive Design** – Higher incentive for whole building approach
- **Comprehensive Chiller** – Higher incentive for reducing chiller load and right-sizing chiller
- **Performance Lighting** – Prescriptive incentive for advanced lighting design
- **Green Technology Warehouse** – Pre-bid pricing on products from Munro Distribution

Retrofit Specialized Tracks

- **Compressed Air** – System evaluation including leak detection
- **Small Business Direct Install** – Turnkey implementation for customers <300kw
- **Municipal Direct Install** – Turnkey implementation for state and local government agencies
- **Performance Lighting** – Prescriptive incentive for advanced lighting design

Designed to target market and encourage deeper savings



Commercial/Industrial

Specialized Tracks on Drawing Table

- **Advanced Energy Office** – National program targeting leased office space
- **Labs** – Target marketing to lab spaces...fume hoods, controls
- **Data Centers** – Working with national organizations to identify IT measures
- **Main Streets** – Lighting program targeting micro small business

Specialized tracks provide increased focus, however all technologies are promoted under Core Programs

Commercial/Industrial

Technical Assistance & Training

- **Benchmarking** - Audit providing recommendations and comparison to similar building types
- **Technical Assistance** – Analysis of custom efficiency measures
- **Labs21** – Training on best practices for lab efficiency
- **Building Operator Certification** – Training on best practices for efficient building operation
- **Business Energy Advisor** – Web-based information tool

Residential



Rebate Programs

Mass Save Audit & Weatherization Program

- Available to all customers (oil, propane, natural gas, electric).
- Up to \$2,000 in incentives for weatherization improvements (e.g., insulation and air sealing).
- Additional rebates for high efficiency heating systems, ENERGY STAR refrigerators, etc.

Low Interest Heat Loan Program

- Available for weatherization improvements (e.g., insulation, windows, heating upgrades).
- 0% financing; Up to \$15,000; Up to 7 years.

ENERGY STAR Lighting & Appliances

- Promotes energy efficient lighting and appliance products through incentives and rebates.

COOL Smart with ENERGY STAR

- Rebates for qualified central air conditioners or air source heat pumps.

Multi-Family Assessment Program

- Targets multi-family dwellings and provides incentives and rebates for lighting upgrades, insulation, air sealing and other energy saving measures.



Low Income Residential

Low Income Program

- Free home energy analysis and installation of conservation measures (e.g., attic & wall insulation and air sealing)
- Emergency heating system upgrades or repairs

Energy Bucks

- Helps qualifying Massachusetts residents manage their energy costs.
- A group of the state's utility companies have joined forces with The Massachusetts Association for Community Action (MASSCAP) and Low-Income Energy Affordability Network (LEAN) to promote the programs to qualifying households.

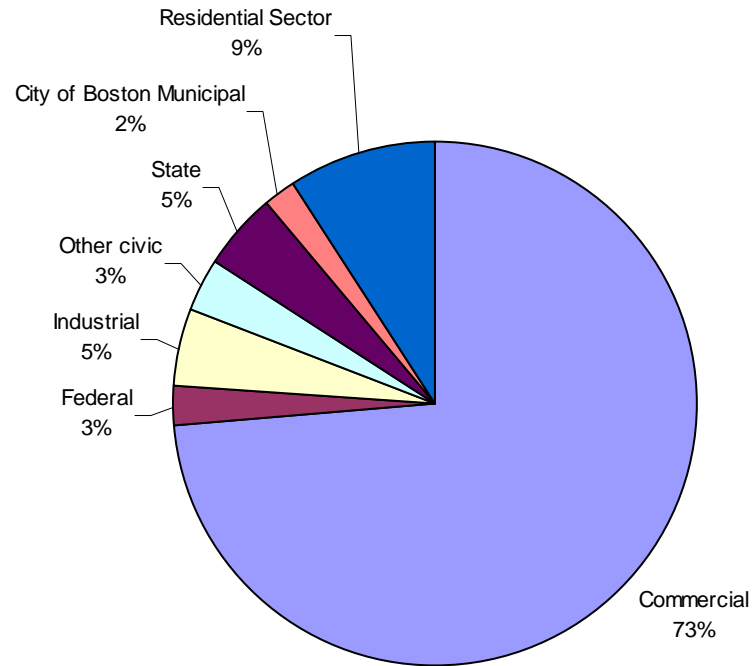
Fuel Assistance – Subsidies to reduce the price you pay for energy services

Utility Discount Rates – Discounted rates that lower what you are charged for the energy you use

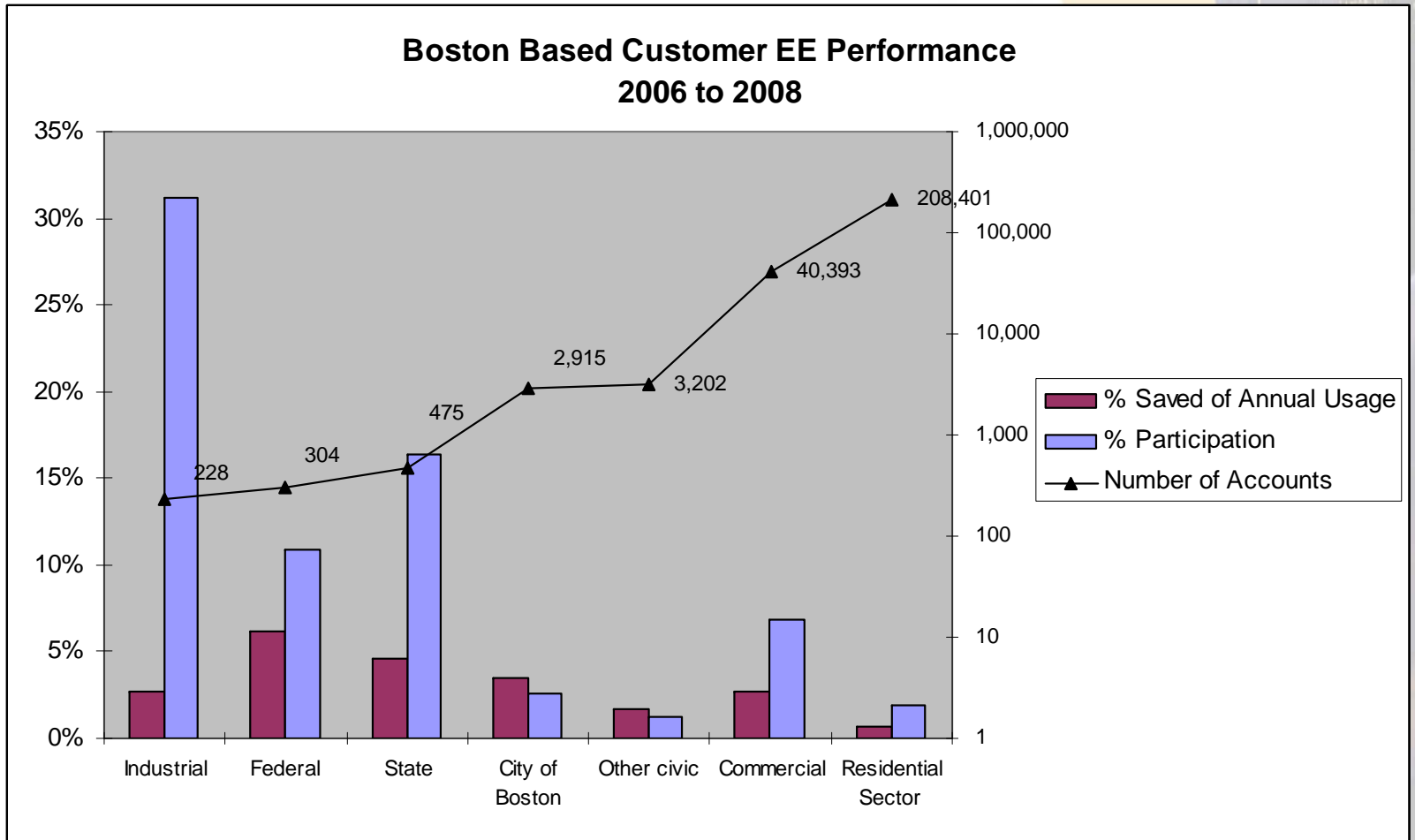
Energy Efficiency Services – Weatherization services that make your house more energy efficient, thereby reducing your total energy needs

City Wide Energy Use Breakdown

Breakdown of Annual Electrical Useage by Sector



City of Boston Activity 2006-2008



Large City Accounts

Acct	Name	Annual Use	Project Yr	kWh saved	\$ Incentive
2643214	CITY HLL SQ	14,530,560	2003	1,803	270
2643826	COPLEY SQUARE	13,081,872			
2642966	SFK HSE OF CORR	11,234,016	2005/07	99,239	11,410
2642992	HEADQUARTERS	6,134,432			
2644133	SFK HSE OF CORR	4,986,304	2005	626,322	89,097
4000223	COB Madison Park School	4,690,080			
4000223	COB Umana Tech Harbor School	4,690,080			
2643102	BOSTON WATER & SEWER COMM	3,829,184			
2644010	COB-PWD/BLDG	2,387,520			
2643207	SCH DEPT HEADQTRS	1,957,856	2004	320	90
2643135	JOSIAH QUINCY	1,883,888	2002/2006	33,089	8,876
2609026	BOSTON RNSSNC CHRTR SCHL	1,882,320			
2644157	BOSTON LATIN	1,498,368			
2643379	BOSTN LATIN ACDMY	1,370,064			
2644209	JACKSON MANN	1,354,696			
2643579	JERIMAH BURKE	1,329,484	2007	41,200	10,679
2643239	HYDE PARK HIGH	1,287,312			
2736933	BRUNSWICK	1,253,040	2003	28,192	9,156
2643746	WEST ROXBURY	1,228,224			
2662709	EDIC BOSTON PARKING GAR	1,174,800			
2736944	ORCHARD GARDENS	1,170,480	2003	167,017	19,130
2670739	COUNCIL TOWERS	1,143,120			
2704043	SFK CNTY SHERIFF	1,106,176			
	CITY HALL		2008	1,753,296	210,396

- Usage > 1,000,000 kWh annually



In Conclusion

- Big challenges/opportunities
- Need engagement from all parties
- Lead by example