mass save®
Savings through energy efficiency

PA Update on 2016-2018 Three-Year Plan

September 30, 2015

berkshire gas
A UIL HOLDINGS COMPANY

BLACKSTONE GAS COMPANY

Cape Light Compact

Columbia Gas of Massachusetts
A NiSource Company

EVERSOURCE

Liberty Utilities

nationalgrid
HERE WITH YOU. HERE FOR YOU.

Unitil

Electric & Gas Overview of Term Sheets

- Proposed savings at historic levels nationally
  - **2.93%** of forecasted electric sales statewide
  - **1.24%** of forecasted gas sales statewide
- Over $8 billion in projected benefits anticipated from proposed efforts
  - Commitment to peak demand reduction
- More with Less
  - Result of key drivers discussions, revising budgeting assumptions, application of most recent evaluation studies
  - Electric CTA down from **$0.518/kWh** in April to **$0.453/kWh**
  - Gas CTA down from **$8.33/therm** in April to **$7.81/therm**

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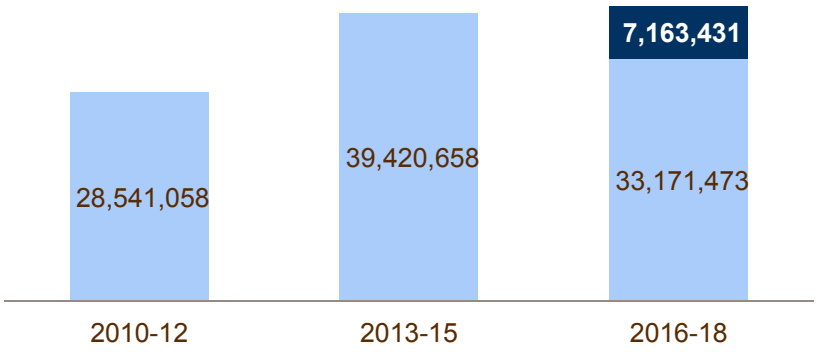
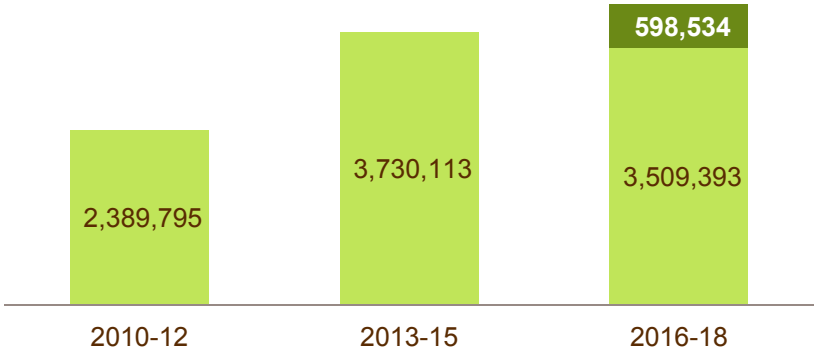
Overview of Term Sheet - Electric Goals Compared to April 30

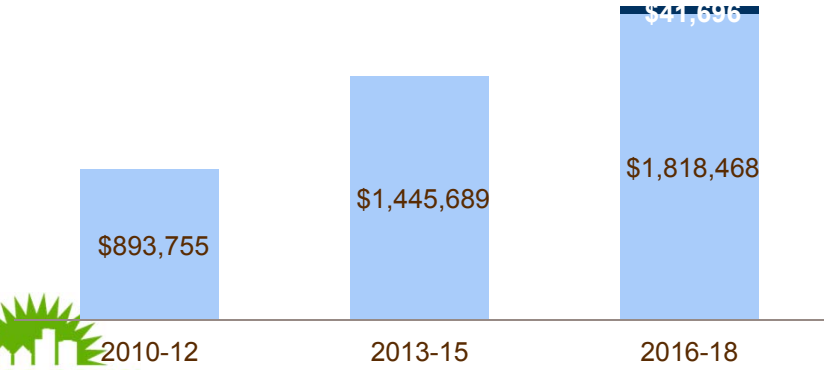
Lifetime Savings (MWh) - 21% Increase
2016-2018 Total: 40.3 Million MWh



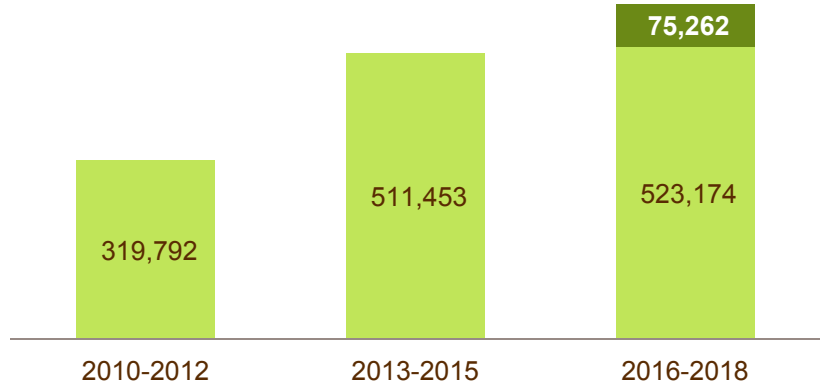
Annual Savings (MWh) - 17% Increase
2016-2018 Total: 4.1 Million MWh



Budget ($000) - 2% Increase
2016-2018 Total: $1.86 Billion



Summer Capacity (kW) - 14% Increase
2016-2018 Total: 598,436 kW



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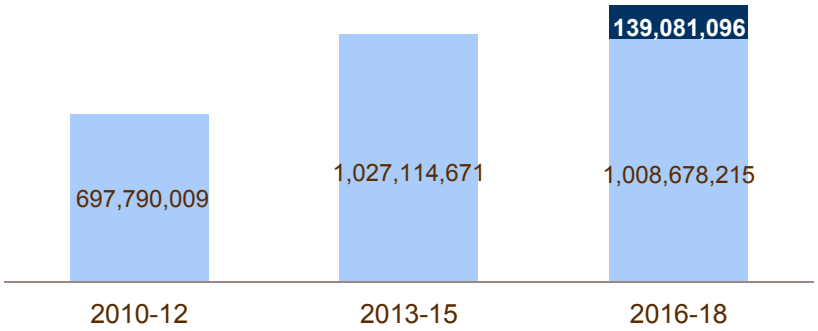
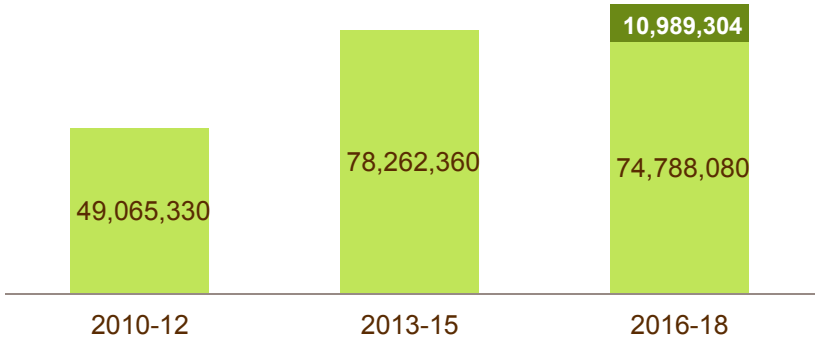
Overview of Term Sheet – Gas Goals Compared to April 30

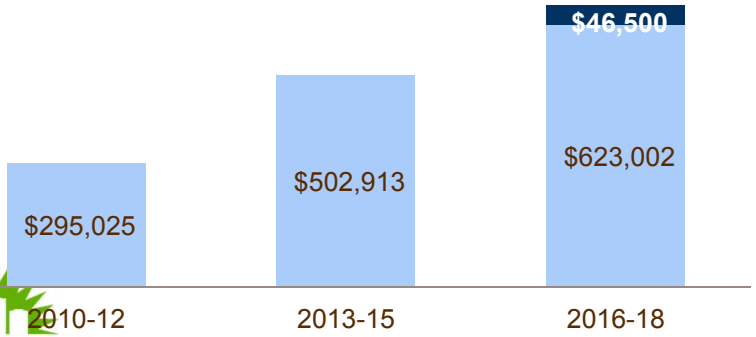
Lifetime Savings (Therms) - 14% Increase
2016-2018 Total: 1.14 Billion Therms



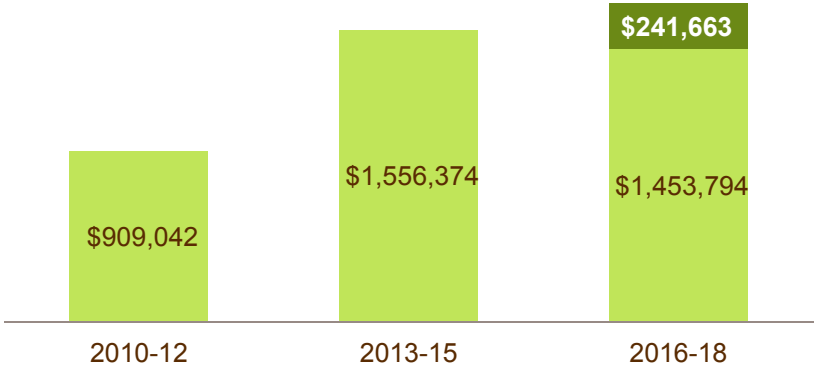
Annual Savings (Therms) - 15% Increase
2016-2018 Total: 85.8 Million Therms



Budget ($000) – 7.5% Increase
2016-2018 Total: $623 Million



Benefits ($000) - 17% Increase
2016-2018 Total: $1.7 Billion



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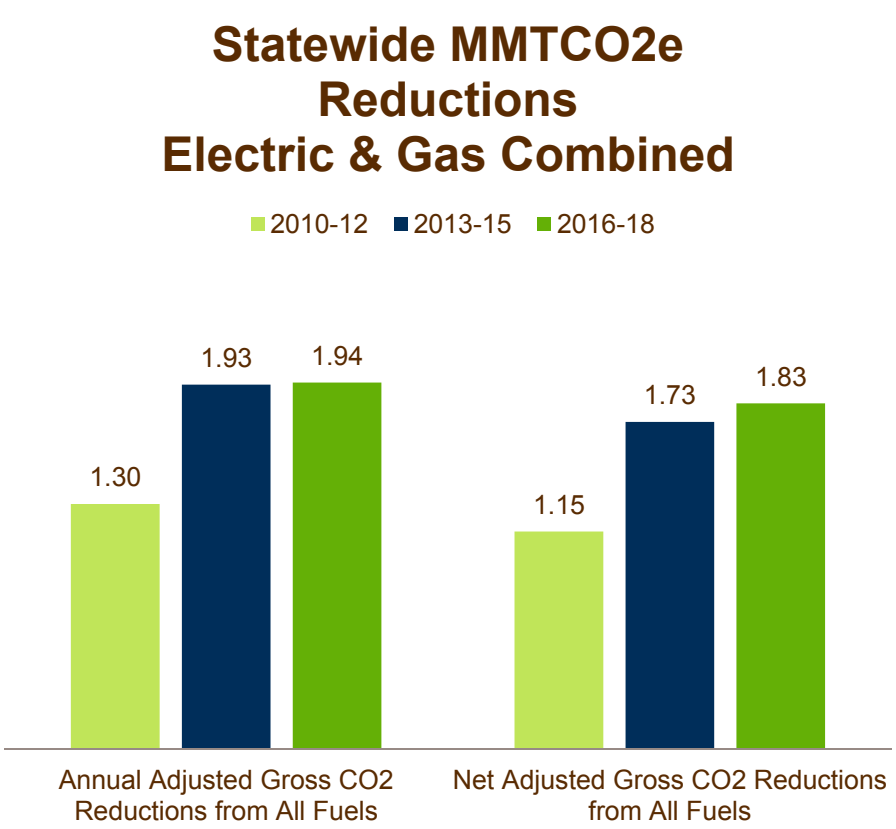
Greenhouse Gas Emissions Reductions



Despite challenges with codes, decreased benefits, evaluation results and negative interactive effects, PAs still creating highest level of GHG emissions reductions yet

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Additional Commitments

1. New Demand Reduction/Peak Reduction Efforts
   - Demand Savings Group to explore approaches to cost-effective new demand reduction/peak reduction electric and gas initiatives
   - PAs will provide a report to the Council setting forth the specific scope, tasks, and detailed timelines for this group by the end of Q1 2016
2. Continued Commitment to Innovation and Technology
   - Commercial and Residential efforts
3. Contractor Engagement
   - New residential contractor effort to be led by DOER

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Residential Innovations

Renter Visit

- New path with immediate savings for renters
- Tailored collateral
- Tracks renter participation
- Integration with on-line assessment tool
- Whole Building Incentive for Landlords
- Coming Q1 of 2016

Moderate Income

- 61%-80% SMI
- Continuity with Low-Income program
- Promotes weatherization conversions and savings
- Targets identified opportunities
- Coming by Q1 of 2016

New Construction

- Path to Zero for builders coming in 2016
- Recognition and marketing opportunity for builders
- Home automation testing
- Performance path for high rise multi-family new construction

Residential Enhancements

Multi-Family Redesign

- Project Point of Contact
- Residential and commercial tracking
- Whole building approach

Improved Customer Engagement

- Simplified customer experience
- Market segmentation and meaningful communication
- Continued expansion to reach multi-lingual populations

New Technology and Approaches

- Continued focus on LED technology (Retail and Direct Install)
- Capitalize on connected thermostats
- Expand early retirement options

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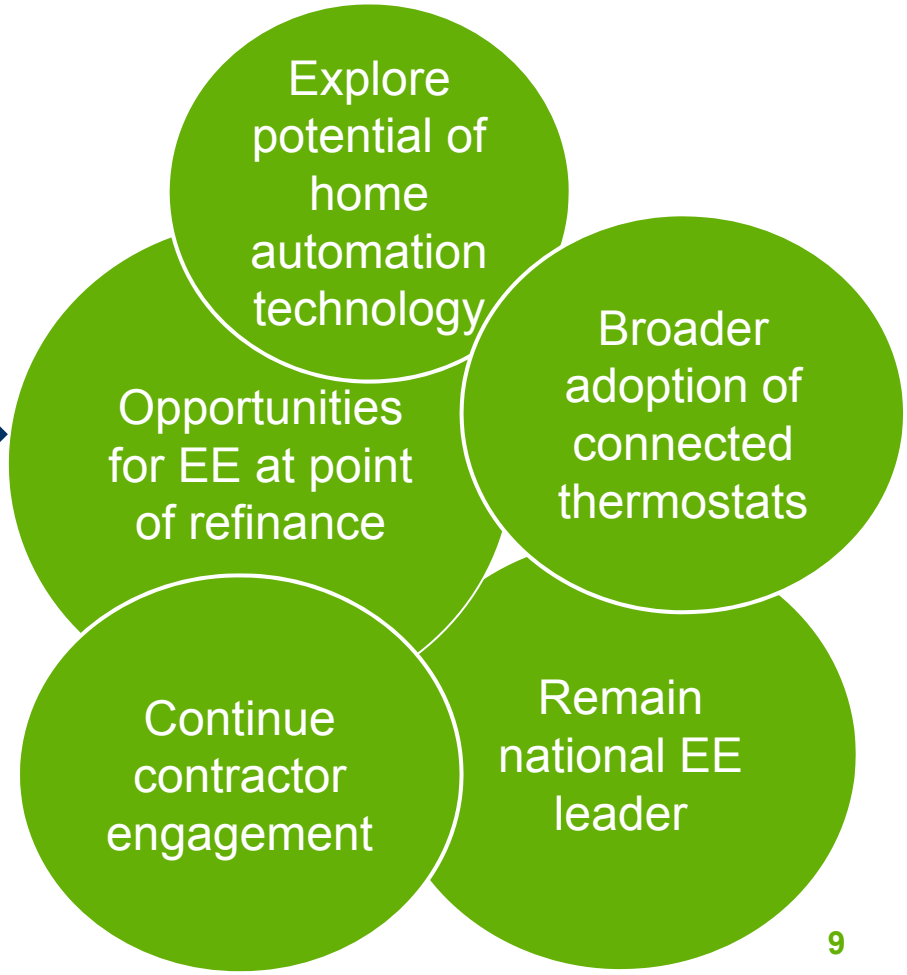
Residential Commitment to the Future - Seizing the Opportunities

2013-2015

- ✓ Early boiler, furnace & cooling
- ✓ Behavior program expansion
- ✓ On-line Assessment introduction
- ✓ Social Media dominance (more Facebook fans than ENERGY STAR®)
- ✓ Addition of new HEAT Loan measures
- ✓ Bulk Procurement of LEDs

2016-2018



C&I Innovations

On-line Incentive Applications

- Streamlined and intuitive participation pathway
- Menu-driven catalog of offerings
- Greatly enhanced customer experiences
- Q1 of 2016

Upstream Offerings

- Augment portfolio with new technologies
  - 2011 - Lighting
  - 2014 - HVAC
  - 2015 - Water Heaters
  - TBD - Food service, furnaces, pumps
- Key to broad participation
- Continuous expansion

Advanced Lighting

- Facilitate market transformation to LED and controls
- More customized / comprehensive solutions
- Tuning incentives to motivate customer adoption

C&I Enhancements

Emerging Technologies

- In-house R&D
- Cooperation and coordination with professional organizations and associations
- MTAC
- Custom path option for testing in market
- Updates to EEAC members using new approaches (e.g., webinars)

Zero Net Energy

- Participation in and contribution to ZNE Advisory Council
- Joint R&D
- Technical assistance and modeling support with incentives through Whole Building path of New Construction Program

Retro-Commissioning (RCx)

- Standardized tools for savings estimation
- Training and support for providers
- Process improvements for scope and budget control
- Careful candidate screening

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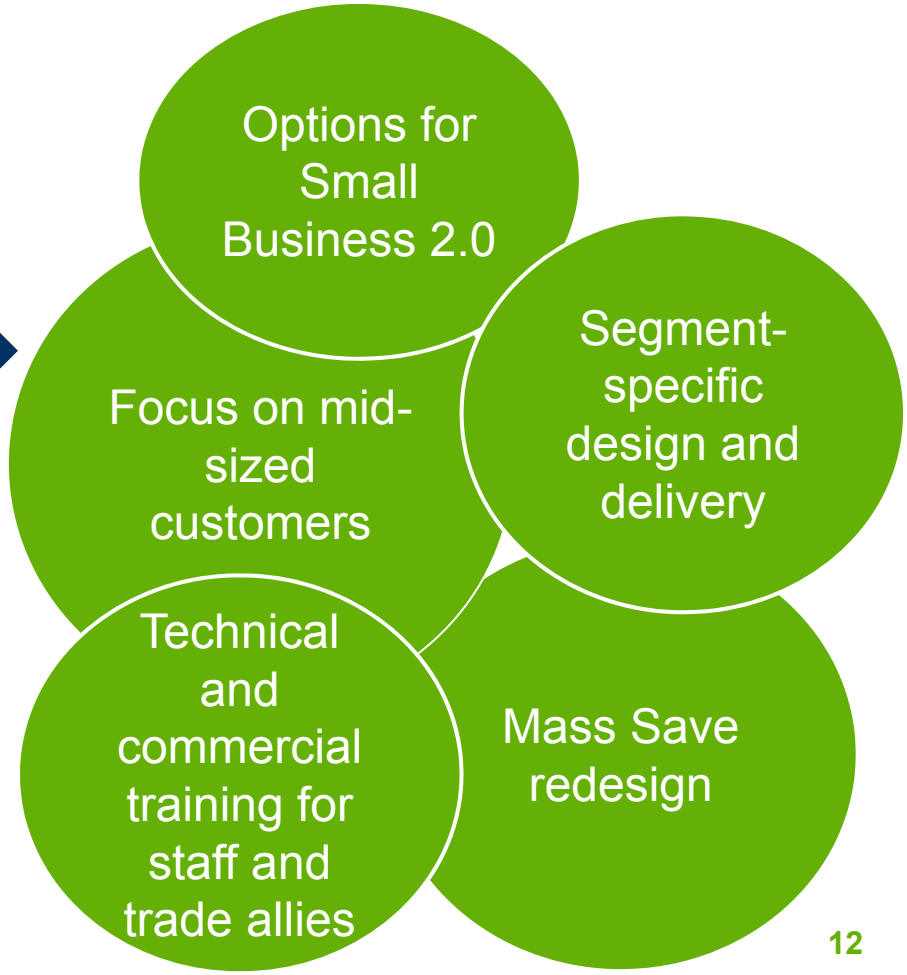
C&I Commitment to the Future

2013-2015

- ✓ Nation leading CHP offerings and impact
- ✓ Support for energy efficient municipal and state-owned buildings
- ✓ Code compliance training and support
- ✓ Facilitations of lighting market transformation
- ✓ Expanded customer awareness and utilization of Mass Save

2016-2018



Appendix

Overview of Term Sheets

	Units	2016	2016-2017	2016-2018
Forecasted Annual Retail Energy Sales	*MWh*	46,908,188	93,745,319	140,331,922
Average Annual Savings Over Three Years	*% of sales*		2.93%	
Cumulative Annual Savings Goals	*MWh*	1,405,258	2,781,941	4,107,928
Cumulative Lifetime Savings Goals	*MWh*	13,417,287	26,875,903	40,334,904
Cumulative Budget: Program Costs	*millions of $*	$ 606.4	$ 1,227.9	$ 1,860
Cost per Annual kWh Saved	*$/kWh*		$0.453	
Summer Demand Savings	*MW*	203	404	598
Winter Demand Savings	*MW*	222	440	649
Benefits	*millions of $*	$ 2,103.5	$ 4,208.4	$ 6,345.2
Cumulative Performance Incentive Pool at Design	*$*			$ 100,000,000
Performance Incentive Levels				
Threshold	*%*			75%
Design	*%*			100%
Exemplary - Cap	*%*			125%

	Units	2016	2016-2017	2016-2018
Forecasted Annual Retail Energy Sales	*Therms*	2,270,659,323	4,576,164,520	6,915,678,418
Average Annual Savings Over Three Years	*% of sales*		1.24%	
Cumulative Annual Savings Goals	*Therms*	28,093,107	56,590,545	85,777,384
Cumulative Lifetime Savings Goals	*Therms*	375,920,734	756,335,552	1,147,759,310
Cumulative Budget: Program Costs	*millions of $*	$ 218.0	$ 440.5	$ 669.5
Cost per Annual therm Saved	*$/Therm*		$7.805	
Benefits	*millions of $*	$ 561.9	$ 1,123.8	$ 1,695.5
Cumulative Performance Incentive Pool at Design	*$*			$ 18,000,000
Performance Incentive Levels				
Threshold	*%*			75%
Design	*%*			100%
Exemplary - Cap	*%*			125%

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Update on Mass Save Data (MSD)

- To access: www.MassSaveData.com
- Planning numbers will be available with filing
- New look to better align with MassSave.com
- Measure level data in progress
- New capability to aggregate multiple years
  - Example of new presentation for 2016-2018 shown below

2016,2017,2018 Gas Summary Report

2016,2017,2018 Plan Year Report	Participants	Total Expenditures	Annual MWh Savings	Lifetime MWh Savings	Summer Capacity (kW)	Annual Therm Savings	Lifetime Therm Savings	Total Benefits*
Gas								
Plan	**353,877**	**$ 143,781,088**	**5,251**	**93,029**	**3,980**	**19,647,529**	**266,167,754**	**$ 375,522,925**
⊞ Residential	343,272	$ 83,121,703	4,870	85,498	3,685	8,176,102	95,786,459	$ 170,337,946
⊞ Low-Income	7,870	$ 28,747,544	371	7,345	295	1,044,453	21,617,454	$ 52,590,957
⊞ Commercial & Industrial	2,735	$ 31,911,841	10	185	-	10,426,974	148,763,841	$ 152,594,022

Geographic Data on MSD

- Will be available at statewide, county, town and zip-code level (Boston only for C&I)
- Data will include gas and electric incentives, usage and savings
- 2013 C&I data in final stages
- Currently working with Residential evaluation vendor to get Residential data uploaded now that RCPS is complete
  - Need to determine if zip code level data is possible using aggregation guidelines
- Two views available: (1) map view and (2) list view

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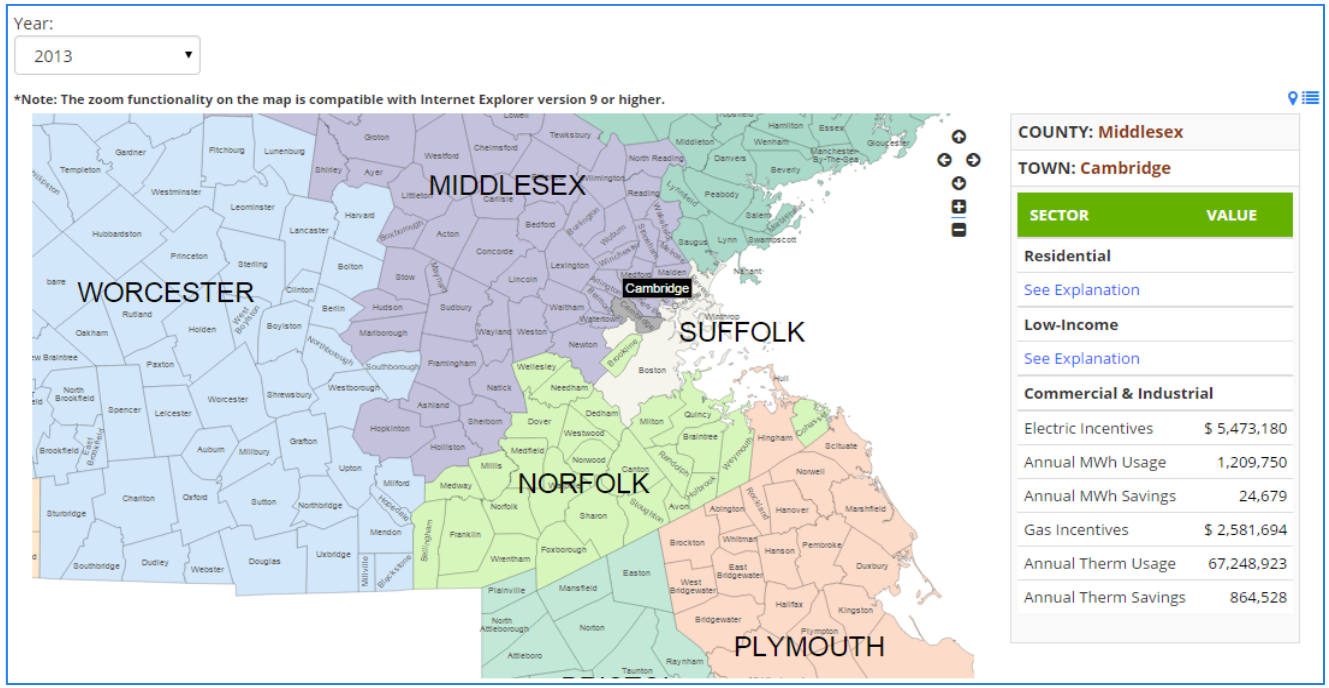
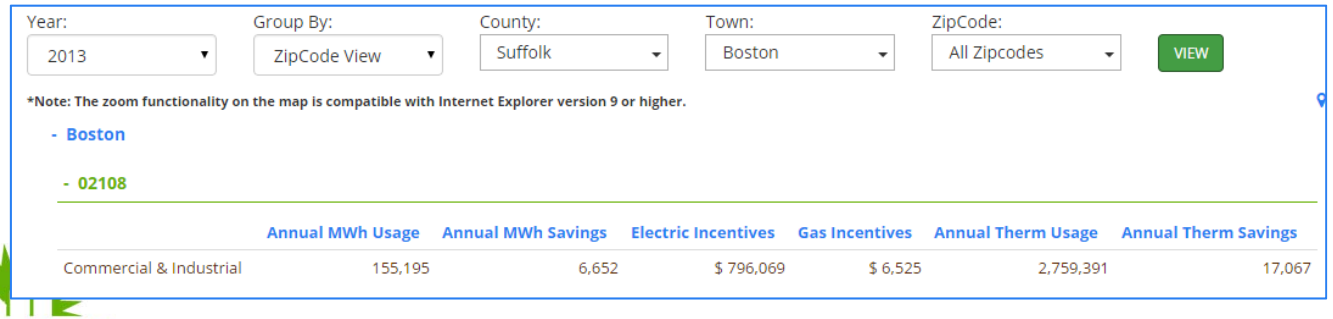
Presentation of Geographic Data



View 1:
Map View



View 2:
List View

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