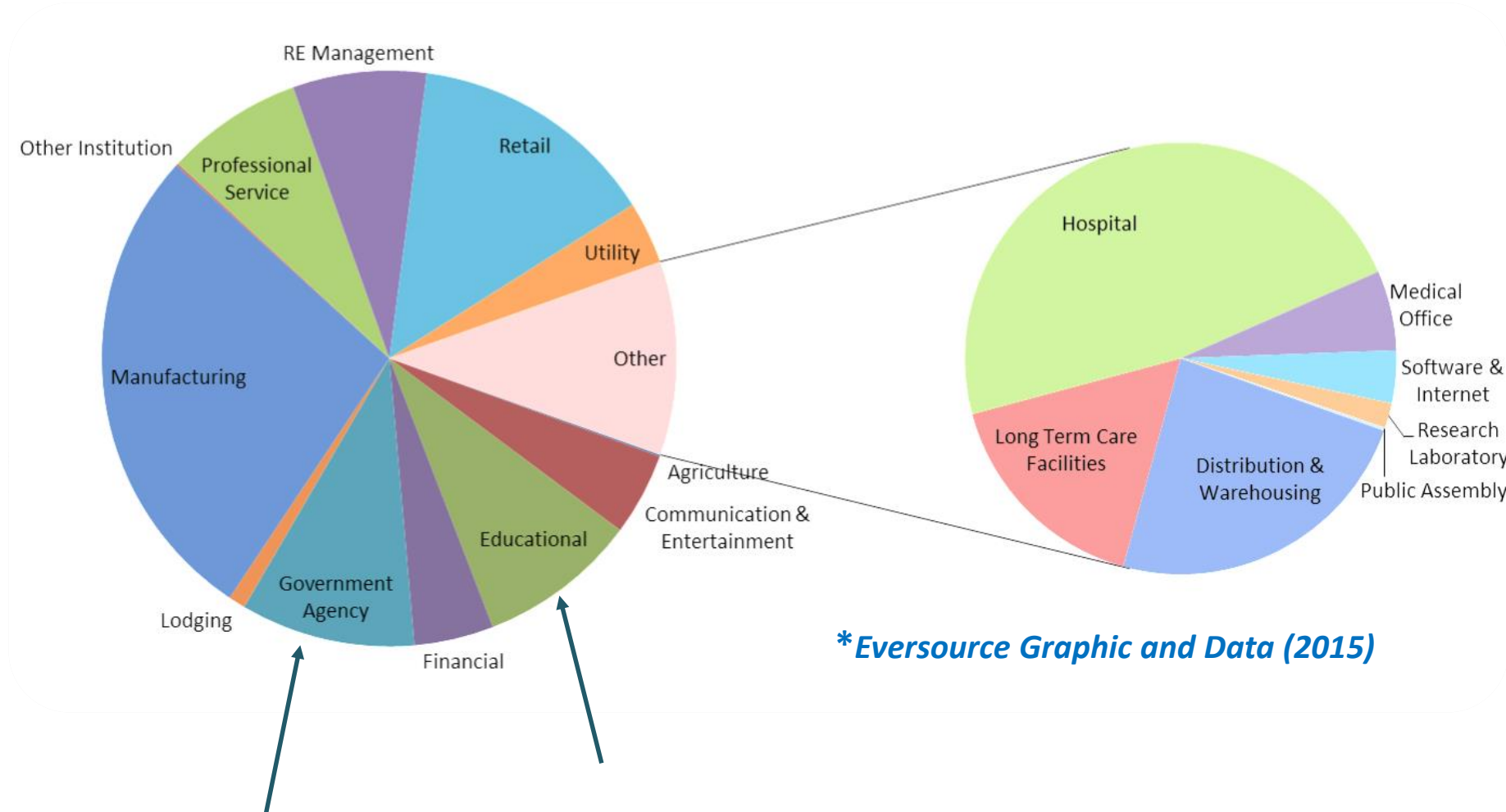


Status Report **Reducing Energy Use in State Facilities**

August 2016

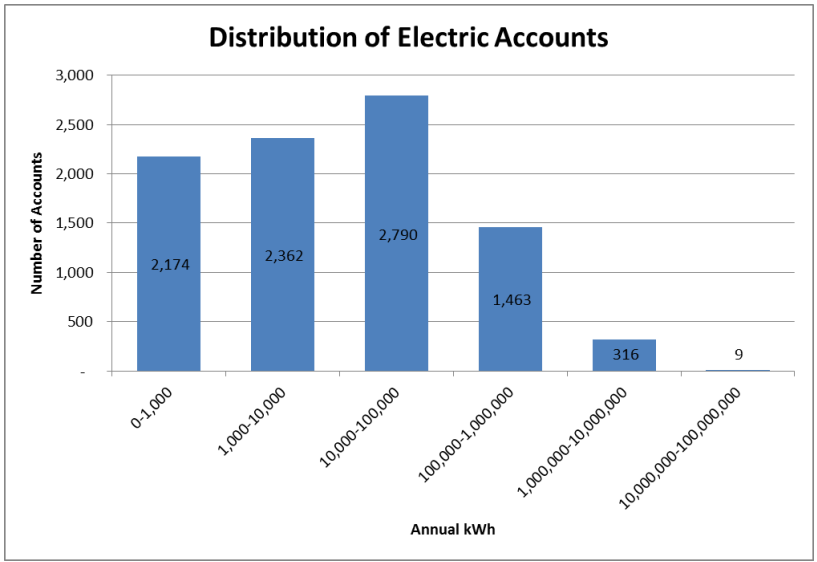
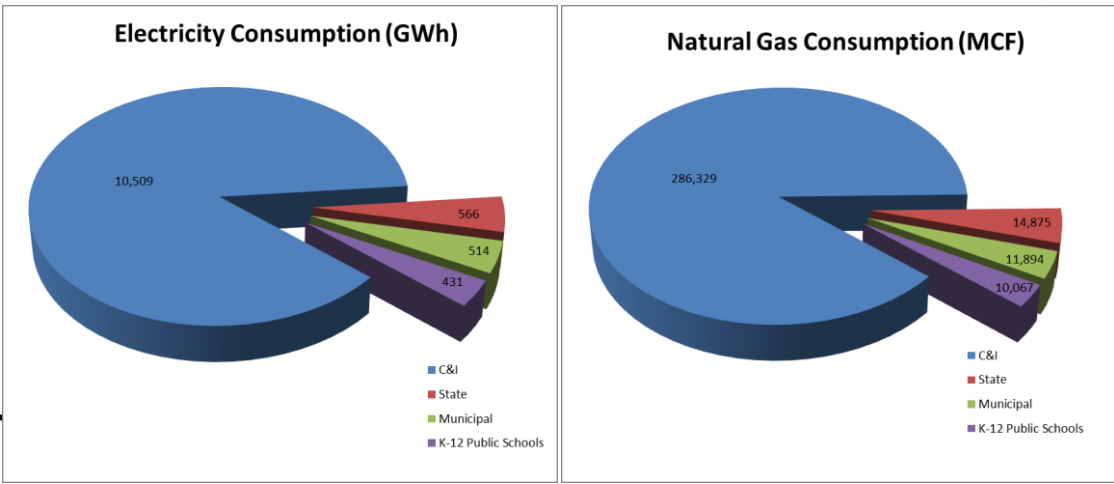
Government buildings have great potential to contribute energy savings in C&I sector



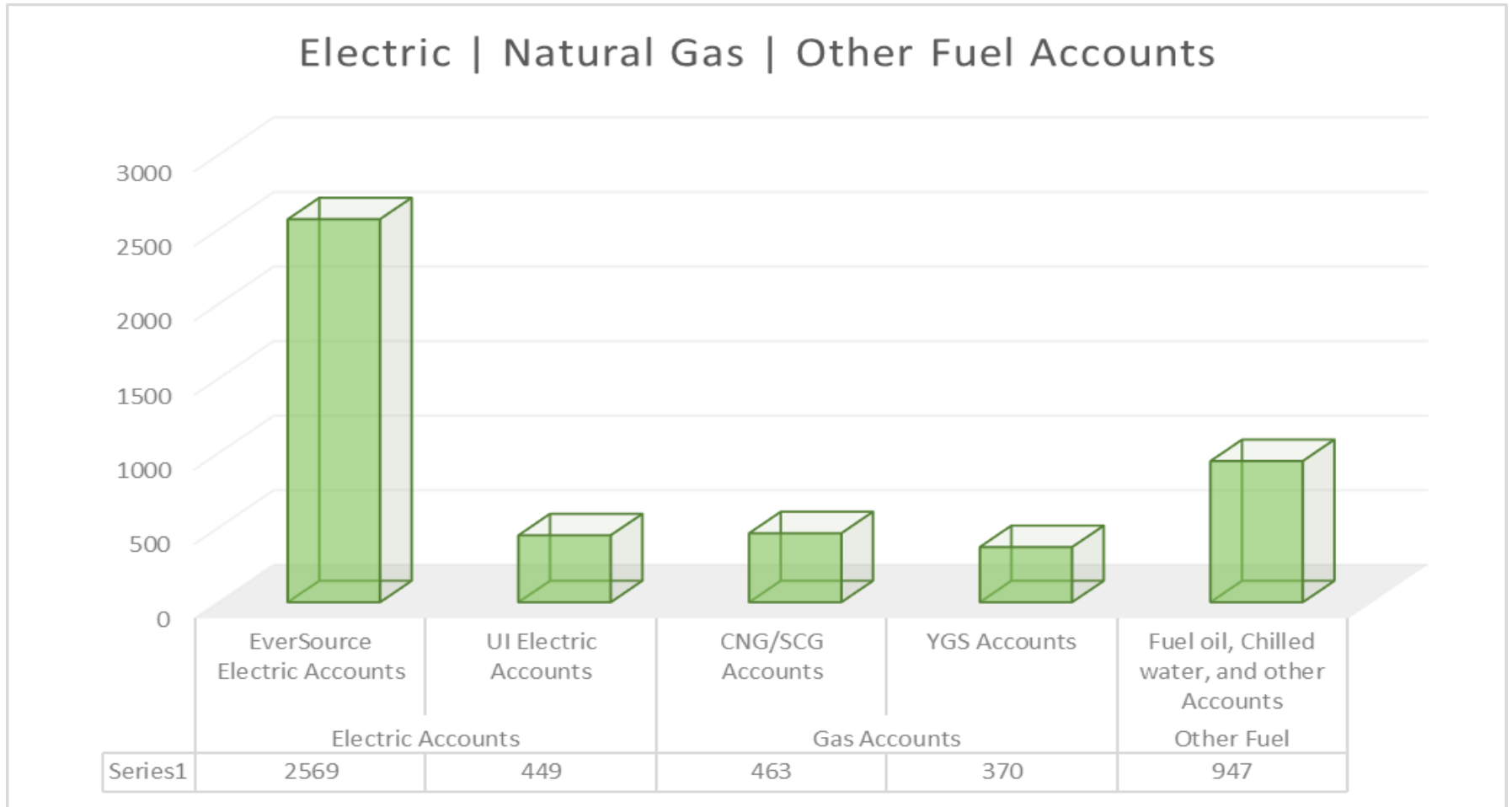
Government Sector Consumption is 11-13% of C&I Sector

- Govt Sector 12.6% of 2014 C&I electric usage, 11% of gas usage
- State, Municipal, and School usage are similar

*Muni data includes WWTPs



State Facilities Accounts and Consumption



Est. 611,370,886 Annual total kWh | 2,516,174 DTh Natural Gas

*Based on Best Estimates from DEEP data available as of 4/28/2016

67 million square feet of state structures

**State Owned
Structures
(3822)**

**33 agencies/districts
owning structures
(i.e., unique agency
code numbers)**

**64,220,186 total
square feet**

**State Leased
Buildings (185)**

**2,870,381 total
square feet**

State Facilities Energy Efficiency and Renewables Implementation Plan



State Facilities Benchmarked To Date:

- 27,231,417 square feet
- 274 state buildings/facilities

Benchmarking and Procurement

Compare energy use to prioritize;
Update procurement documents,
contract language, and processes

Inventory Facilities Universe

Data Collection and
Correlation

Screening

for potential
opportunities
and future
facility use;
feasibility
analyses for
renewable
generation
sources

Energy Assessments

Conduct
investment
grade energy
audits;
identify
appropriate
financing
mechanisms

*Efficiency Measures
and Renewable
energy generation
sources financed,
constructed and
installed, and remain
effective into the
future*

Small, Medium, and Large-Scale State Projects



Small: Since 2014, 84 projects planned or completed statewide are expected to result in annual energy cost avoidance of \$832,188.18



Medium: Since 2012, 69 projects funded with \$20 million
Typical payback period 6.7 years
Almost \$3 million annual energy cost avoidance



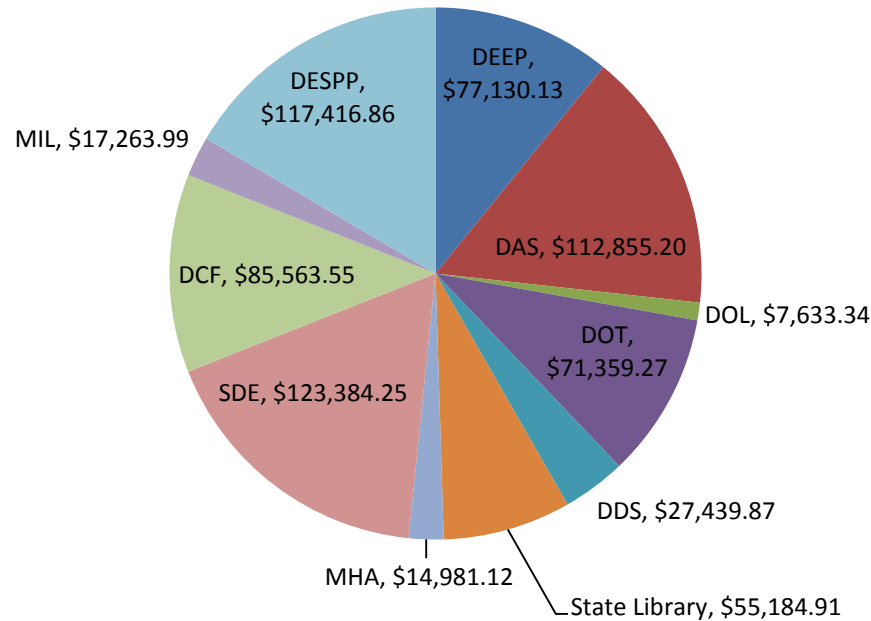
Large: Currently, 3 projects in development. Anticipated annual energy cost avoidance for initial 3 projects, once fully implemented, are \$6.0 million.

- CVH & DMV, financed with General Obligation Bonds = \$3.3 million
- DOC, financed with Green Bonds via the Connecticut Green Bank = \$2.7 million

*Based on Best Estimates from DEEP data available as of 4/28/2016

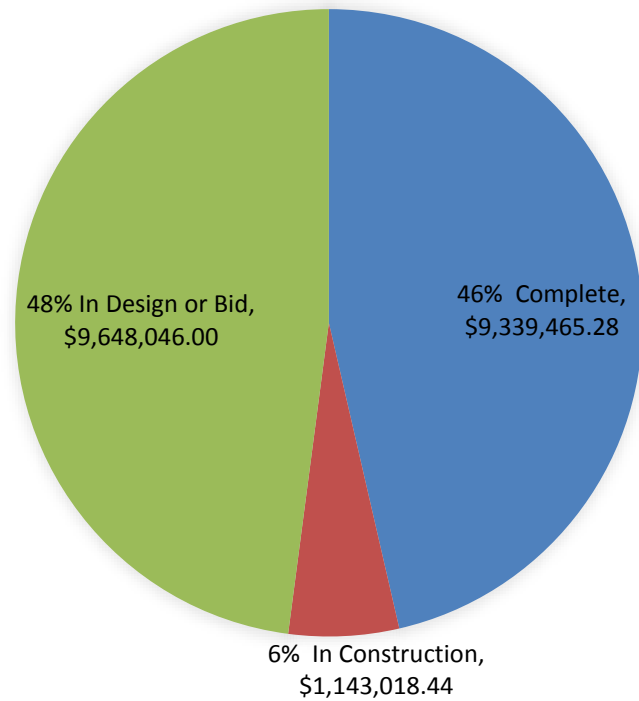
Small-scale projects through 2016

\$700,000 Estimated Annual Cost Savings from Projects 2014-2015



Medium-scale projects through 2016

LBE Bond - Dollars Invested 2012-Present



Challenge: Aging Infrastructure Means Great Savings Potential and Need for Financing

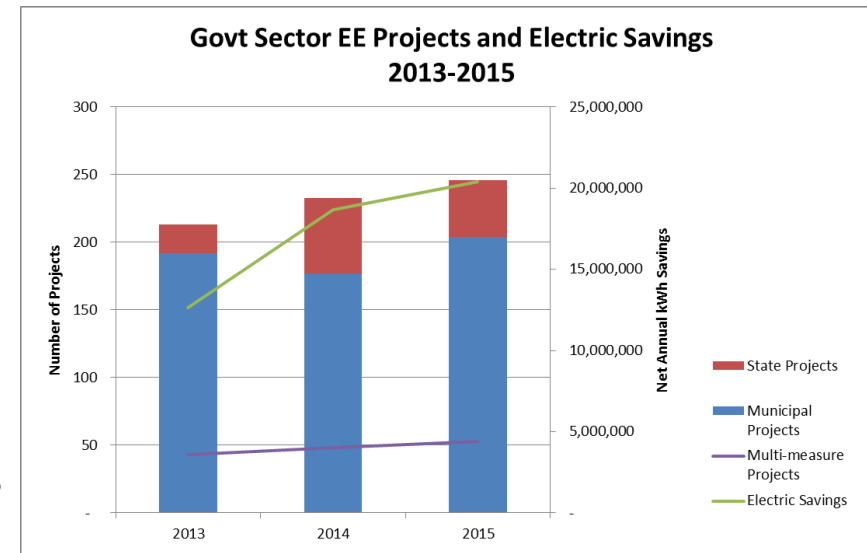


Examples:

- Mismatched, abandoned, or out of date equipment
- Deferred maintenance
- **Example of CVH key energy waste reduction challenge:** Steam distribution system - ongoing loss of ~11M gal/year heated and treated steam and condensate

Government Energy Efficiency Utility Incentives

- 692 EE projects between 2013-2015
 - 146 involved at least 2 EE measures
 - 2015 Government Sector Projects
 - » 11.2% of all C&I elect savings
 - » State annual electric savings
 - Median: 31 MWh
 - Max: 808 MWh
 - » Municipal annual electric savings
 - Median: 11 MWh
 - Max: 2,599 MWh
 - » Municipal K-12 annual electric savings
 - Median: 46 MWh
 - Max: 1,300 MWh

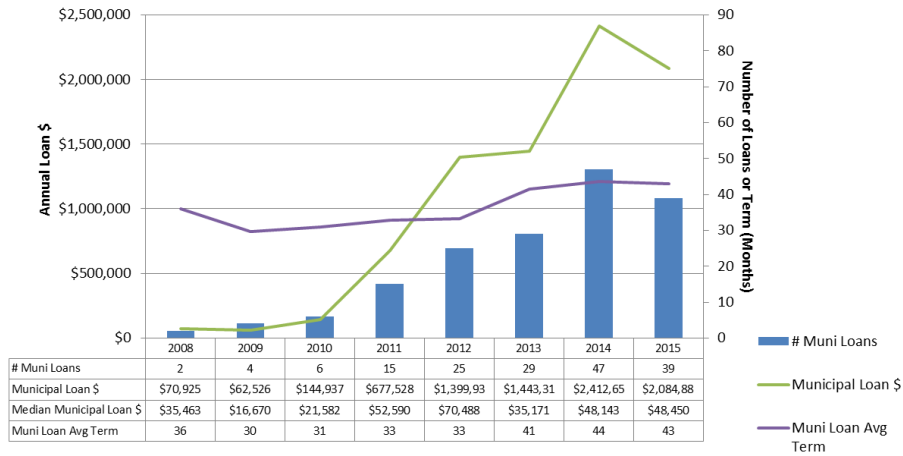


Government Sector Utility Savings

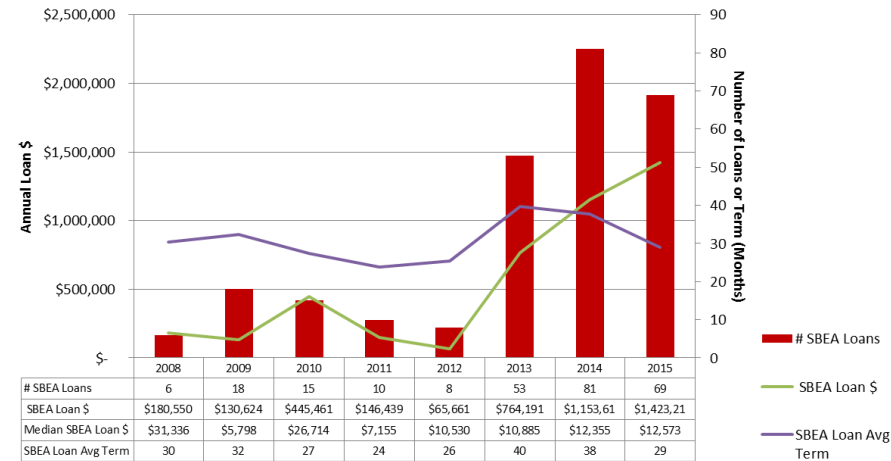
Sector	2014 Electric Usage (GWh)	2014 Natural Gas Usage (MCF)	2015 Electric Savings (%)	2015 Natural Gas Savings (%)
C&I Total	12,019	323,165	1.5%	0.46%
Govt Total	1,510	36,836	1.3%	0.41%
State	566	14,875	0.5%	0.10%
Municipal Bldgs	514	11,894	1.9%	0.87%
Municipal K-12	431	10,067	1.6%	0.34%

Public Sector Projects Financed to Date

**Public Sector Municipal Loans
2008-2015**



**Public Sector SBEA Loans
2008-2015**



*Tables do not include PURA Loans