



Virtual Audits for C&I Customer Engagement

Jeff Jerome, Baltimore Gas and Electric



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Baltimore Gas & Electric (BGE)

- The Nation's Oldest Utility
- Efficiency Programs Mandated Since 2008
- ~100,000 C&I Customers
- 10 C&I Programs
- Outreach Team of 7 Account Managers



Our Outreach Team Targeted Large Customers

- Big Businesses, Universities, Government, etc.
 - Dedicated Energy Engineers/Managers
 - Mandated Energy Goals
 - Multiyear Capital Plans
- Same Entities Also Targeted by
 - Contractors
 - Energy Service Companies (ESCOs)
- Our Account Managers Assisted With
 - Program Selection
 - Filling Out Applications



BGE SMARTENERGY
savers
PROGRAM

Want to lower
your business's
energy costs?

Let's talk!

Save with financial incentives
and energy efficiency upgrades.

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But 95% of Our Customers are Not Large Customers

- Renters, Individual Building Owners & Property Managers
 - Not Engineering Professionals
 - Little Knowledge About Their Building's Performance
- Service Providers/ESCOs Typically Avoid SMBs
 - Not Sure if the Building Needs Work
 - Too Much Work Generating Proposals
 - Not Much Profit if They Do Get The Job



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Retrocommissioning Seemed Like the Best Way to Start

- SMBs Need Benchmarking
 - To Get an Idea of Building Performance
 - Determine Savings Potential
- SMBs Need Specific Energy Savings Measures
 - RCx Audits Create a Comprehensive List of Measures
 - No Cost/Low Cost Measures Especially Attractive for SMBs
 - Few Have Capital Budgets
- But Retrocommissioning Can Be Complex...



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So We Began to Reinvent Retrocommissioning

- First We Changed the Name to Building Tune-Up!



Low Cost Tune-Ups Increase Mileage!



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Utilized Analytics for Customer Engagement

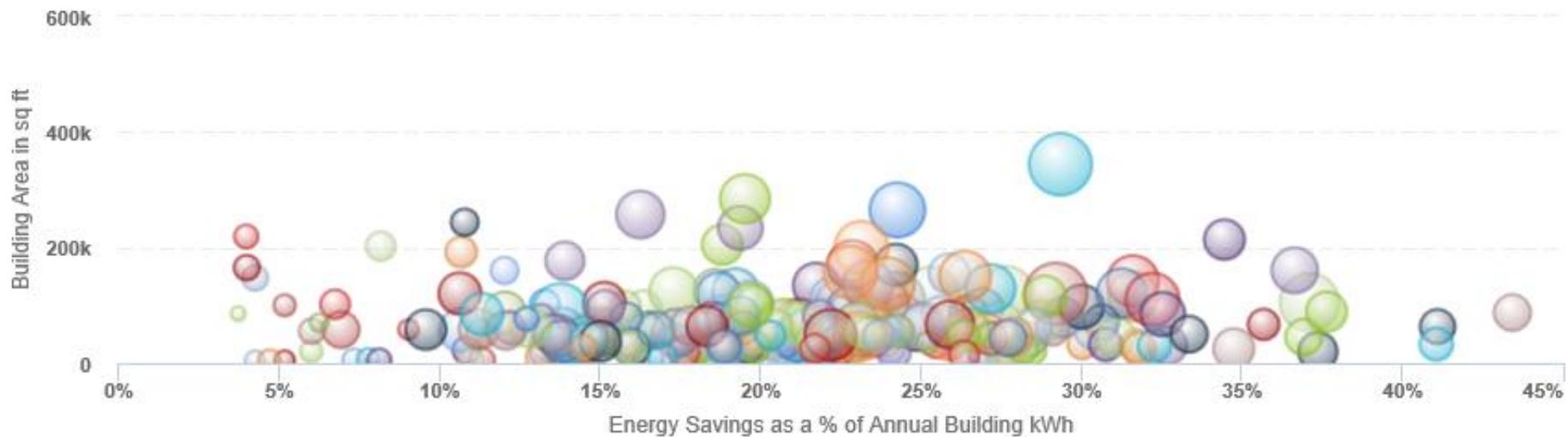
- Partnered with First Fuel
- Analyzed One Year of Smart Meter Data
- Ran Proprietary Analytics
- Identified Customers with the Highest Potential



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Energy Savings Potential



Note: Bubble Size represents Annual kWh Savings Potential for Consumption.

Then We Designed Virtual Audit Reports

- Something of Value – To Help Get Appointments
- Identify Savings Potential
- Identify Specific Measures/Savings
- Provide an Non-Biased Assessment
- Assist in Getting Stakeholder Buy-in

Customer Centric – Rather Than Engineering Centric



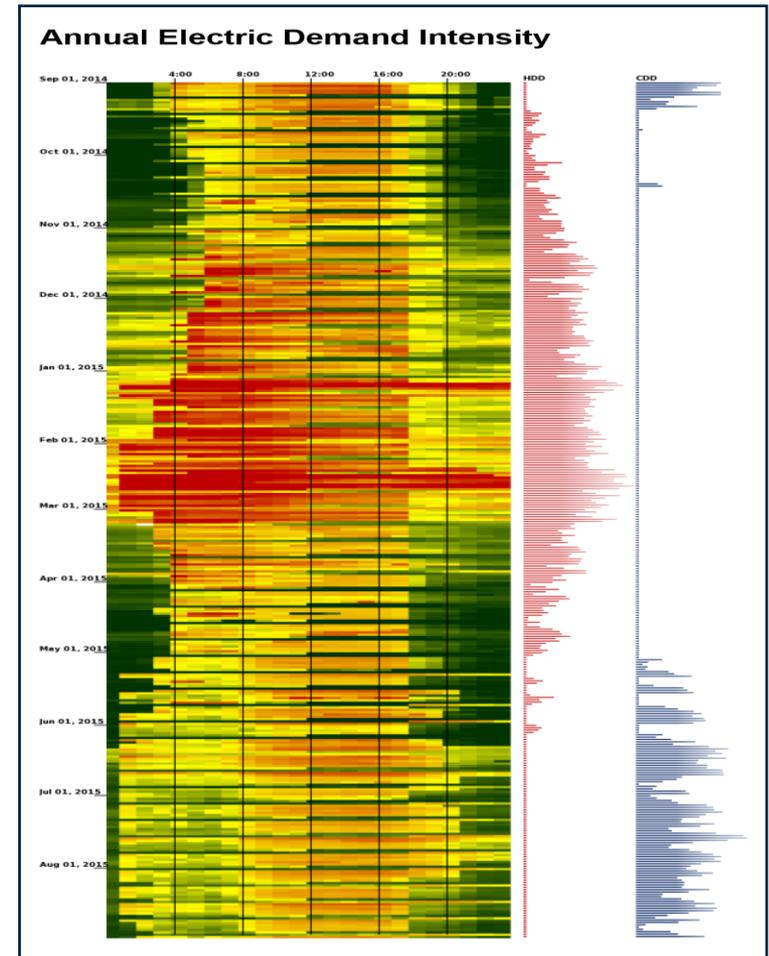
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Graphical Building Energy Use

- Heat Map Charts One Year of Use
- Red Areas Are A Concern
- Usage “After Hours” is Obvious
- Building Control is Clearly Visible

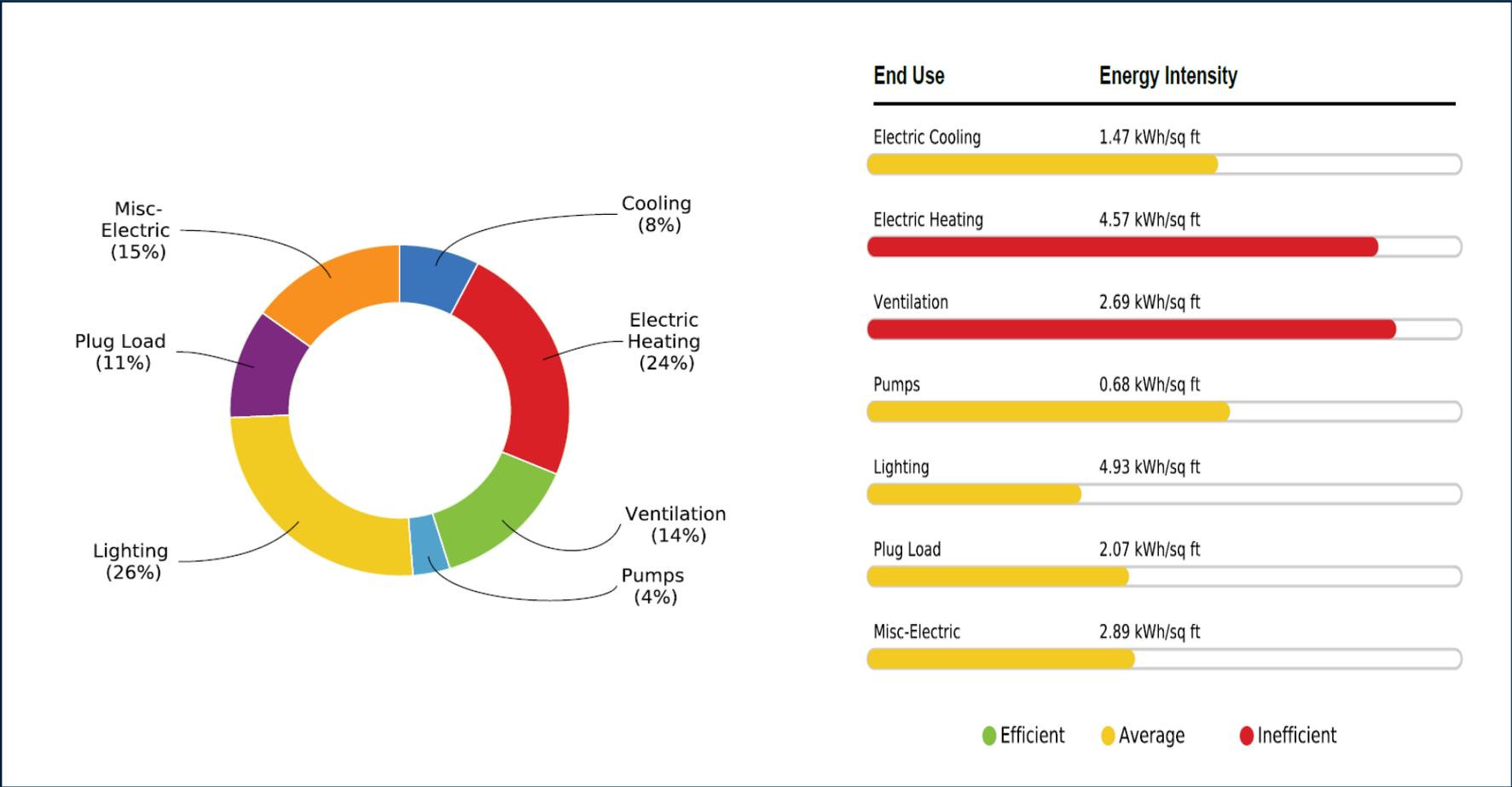
This Picture is Worth 1000 Words!



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Graphical Benchmarking



● Efficient ● Average ● Inefficient

Specific Energy Saving Suggestions

HOW CAN YOU SAVE ENERGY?

	TOTAL	PER SQ FT	PER SQ FT
PEAK DEMAND	827 kW	6.04 W	20.61 BTU/hr
MEAN DEMAND (OCCUPIED)	413 kW	3.01 W	10.28 BTU/hr
MEAN DEMAND (UNOCCUPIED)	218 kW	1.59 W	5.42 BTU/hr

OPERATIONAL SAVINGS	ELECTRICITY SAVINGS (kWh)	GAS SAVINGS (Therms)	COST SAVINGS*
HVAC Scheduling Control	309,265	N/A	\$34,019
Data Center Cooling	19,797	N/A	\$2,178
ANNUAL TOTAL SAVINGS	329,062 kWh		\$36,197



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Customers Loved It, But They Still Had Questions...

- Q: What is the Next Step?
 - A: Get an Audit From a Building Tune-Up Service Provider
- Q: Who do I call?
 - A: Choose One From the List on the BGE Website
- Q: How Much Will it Cost?
 - A: Don't Know – You Must Engage a Service Provider to Find Out



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Customers Still Weren't Pulling the Trigger

- The First Part of the Process was Working Great
- Customers Were Definitely Interested
- But They Weren't Engaging
- Unknown Contractors and Audit Costs Were Scary



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So We Improved the Contractor Connection

- Our Customers Needed
 - A Fixed Price for Peace of Mind
 - A Compelling Value
- Our BT Contractors Needed to Know
 - The Building's Energy Saving Potential
 - What Audit Areas Need Attention
 - If There Are Any Seasonal Issues



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Analytics Enabled BT Solves Both Problems!

- Analytics Reports helped contractors scope the job and provide hidden building insights – Reducing Workload
- Contractor Fixed \$1,400 Audit Cost for projects < 75k Sq. Ft.
 - BGE Pays 75% - Customer Pays Only \$350
- Contractor Fixed \$2,000 Audit Cost for Projects > 75k Sq. Ft.
 - BGE Pays 75% - Customer Pays Only \$500



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Contractors Loved It!

The analytics-enabled BT process promotes business and enriches our findings and have been very useful in two significant ways:

- Serving as a catalyst to kick start the BT process
- Giving insight into building dynamics or potential ECMs before visual inspection begins

- Robert Calloway
Global Facilities Solutions
Building Tune-Up Contractor



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The Win-Win-Win Value Proposition

- Better Process for Customers
 - Easier to Understand
 - Less Expensive
 - More Energy Savings
- Better Process for Contractors
 - Better Targeting
 - More Credibility Through Automated Virtual Audits
 - Less expensive
- More Energy Savings for BGE!

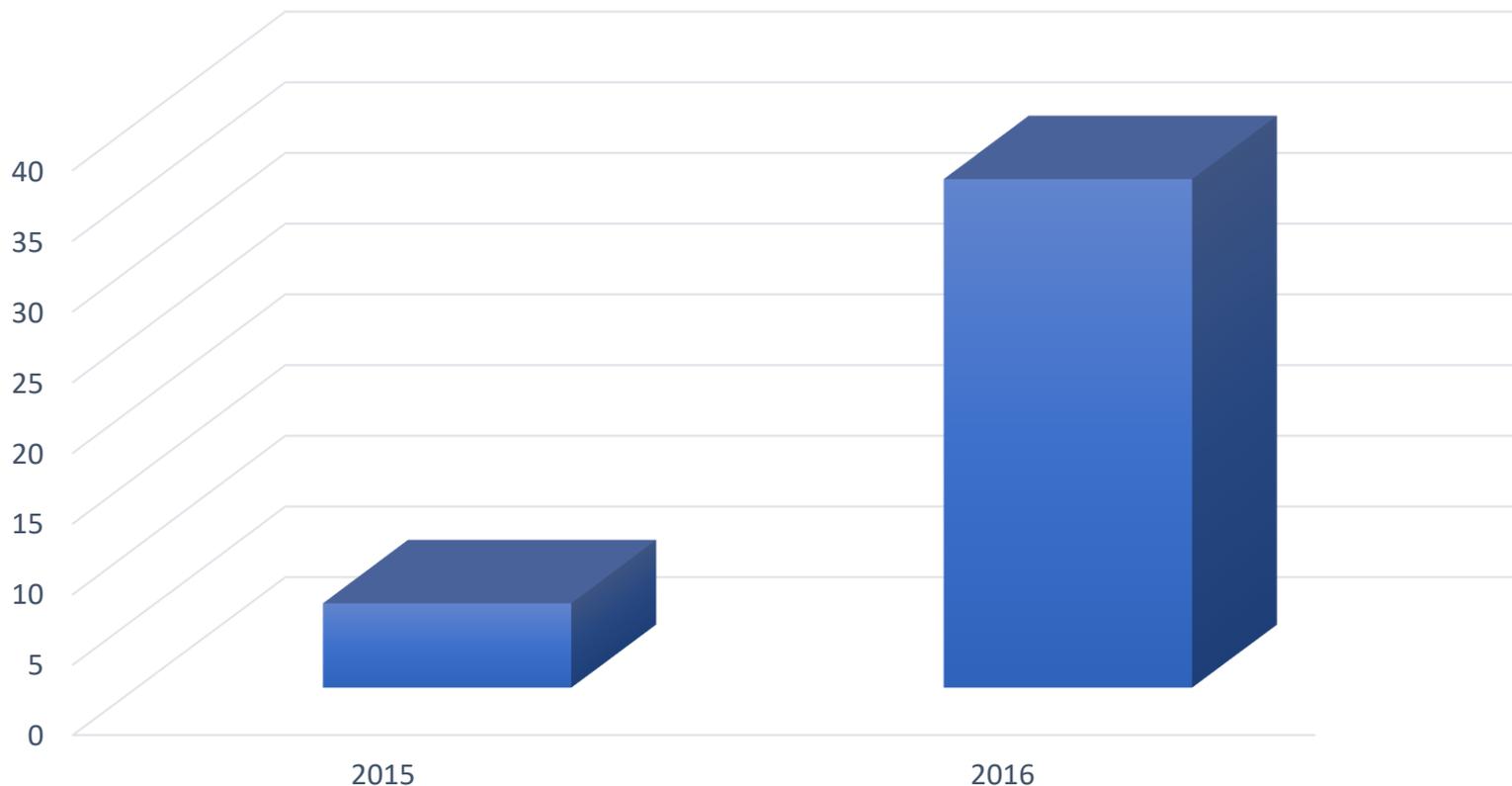


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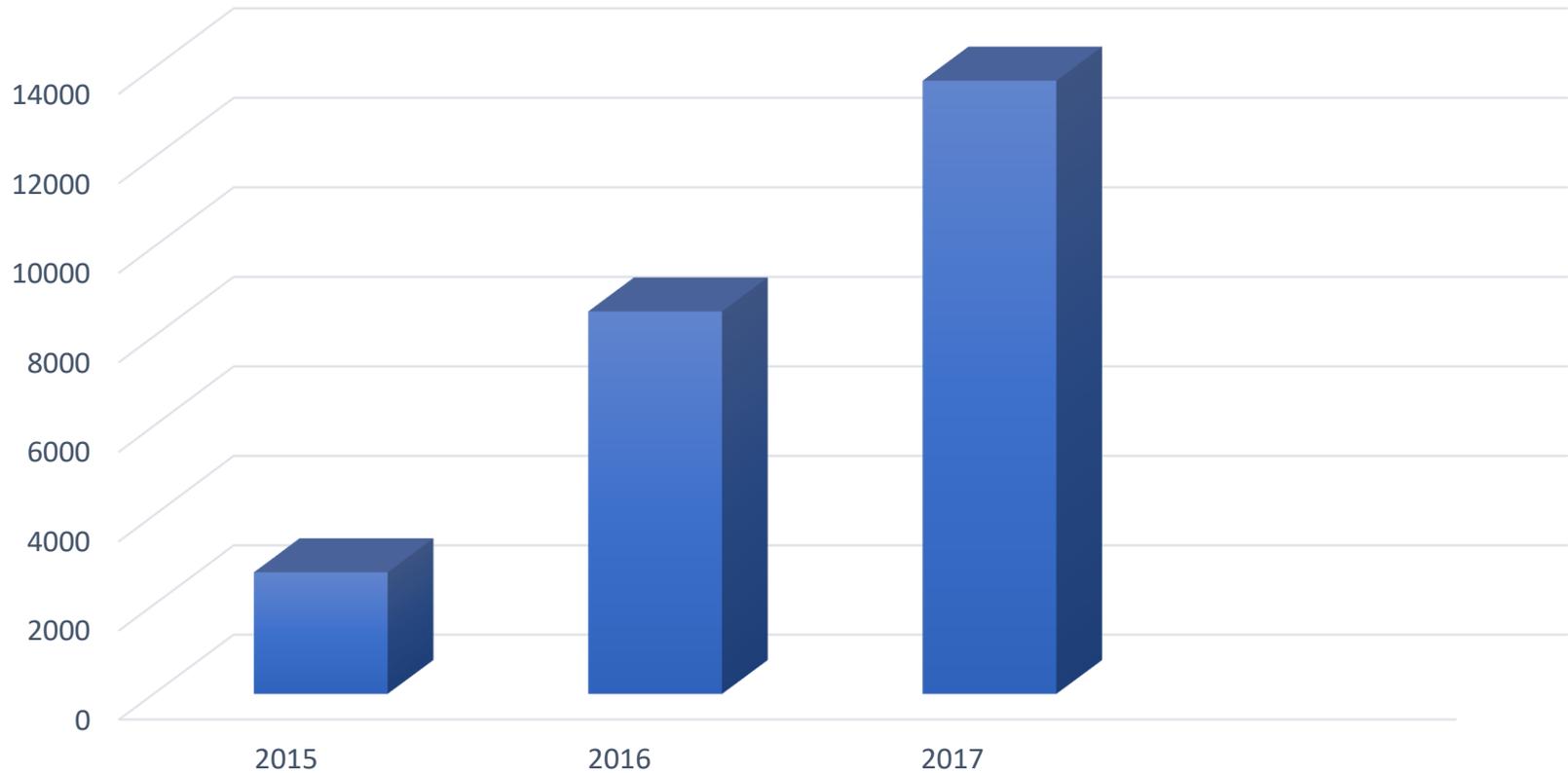
Pilot Program Results

Small Building Tune-Up Applications



Long Term Program Results

Building Tune-Up kWh Savings

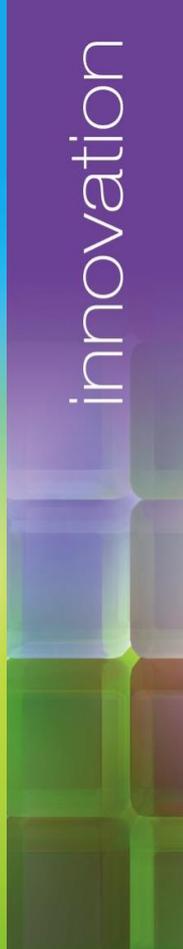




Questions?



efficiency



innovation



savings



environment



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Visit: BGESmartEnergy.com
Call: 410.290.1202

