

BGE Smart Energy Savers Program®

ULI Baltimore NEXT Event Presentation
January 27, 2021

Agenda

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Safety Message - Digital Distraction

- Cell Phone Dangers

- Walking
- Driving
- Working with Tools

- Excessive Screen Time Dangers

- Eyestrain
- Headaches
- Neck/Back Issues

- Take a Break – You Aren't Going to Miss Anything



BGE C&I Program Management

William Wolf
Manager

C&I Energy Efficiency Programs

Jim Libertini
Sr. Product Manager

Prescriptive, Custom
Combined Heat & Power

Jeff Jerome
Sr. Product Manager

Building Tune-up, Instant Discounts
Small Business

Jeff Greene
Program Manager

Inspection, Contractor Credentialing

EmPOWER Maryland

In 2008...

A portfolio of energy efficiency programs was established to support the EMPOWER Maryland initiative of reducing consumption in the state by 15% per capita by 2015.

In 2015...

The 15% reduction goal was achieved!

Since 2015...

Utilities continue to work towards achieving an annual savings of 2%.

The ratepayer-funded program is making it easier to upgrade to energy-efficient equipment, resulting in energy savings year after year.



2008

EmPOWER Maryland Act passed by the MD General Assembly



2015

Reduction goal achieved and Public Service Commission continues program



2017

Maryland legislature extended EmPOWER law through 2023



2018 – 2020

New goal structure – annual savings goal of 2% of gross energy sales. The COVID-19 pandemic began mid-March 2020



2021 – 2023

Program cycle budgets and portfolio approved. Additional enhancements under working group review

Together we've achieved our **goals!**



Supported over
1,900
contractors



Reduced Consumption by
5 Million MWh

Equivalent to:

2 Power
Plants

407,000
Homes for one year

Greenhouse
gases from
762,000
cars driven for one year*

Provided

\$6.5 Billion

in energy savings,
rebates and
bill credits



Helped **72,215**
Maryland businesses
be more competitive

* equivalency based on EPA web calculator

BGE Smart Energy Savers Program

Program Overview

BGE C&I Programs and Tools



Prescriptive

Pre-qualified “standard” equipment upgrades



Small Business Energy Solutions

Upgrades for customers with monthly demand of 60 kW or less



Custom

Complex equipment upgrades specific to your needs



Instant Discounts

Discounts on lighting and HVAC products with no application required



Building Tune-up

Optimization of existing equipment to extend life and increase efficiency



Building Operator Training

Receive incentives for select courses on optimizing energy efficiency



Combined Heat and Power

On-site power generation and heat recovery



Benchmark Your Building

Generate a benchmark score by using the building's energy use data

Prescriptive Program

Prescriptive Measures, Equipment and Services

Choose from a list of pre-qualified “standard” measures

- Appliances
- HVAC Systems
- Kitchen
- Lighting and Controls
- Variable Frequency Drives
- Multifamily Tenant Equipment
- New Construction
- Plug Load Equipment
- Refrigeration Equipment
- Consumer Electronics

Eligibility

- All commercial, industrial, government, institutional and nonprofit customers (rate schedules G, GS, GL, P and T) in BGE’s service territory are eligible to participate, regardless of your electricity or gas supplier.
- To determine your rate schedule, look under the “Electric Details” section of your BGE bill.



Towson University

Education

Savings at a Glance

Estimated Annual Energy Savings

8.2 million kWh/year

Estimated Annual Cost Savings

\$656,000/year

Incentives Paid

\$1.7 million



“With the financial incentives available through BGE’s Smart Energy Savers Program®, we paid less money for more energy-efficient equipment. It was a no-brainer. And it’s the right thing to do.”

– Steve Kolb | Energy Manager | Towson University

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An Exelon Company



Custom Program

Types of Projects

Custom applications may include the following types of projects:

- Technical Services
- Custom Lighting
- Energy Management Systems
- Compressed Air Systems
- Central Chiller Plants
- Process Equipment
- Whole Building Systems
- Non-HVAC VFDs

Eligibility

- All commercial, industrial, government, institutional and nonprofit electric service customers (rate schedules G, GS, GL, P and T) in BGE's service territory are eligible to receive incentives for custom projects, regardless of your electricity or gas supplier.



For new construction, please
reference the code baselines of
ASHRAE 90.1.2016 and IECC 2018

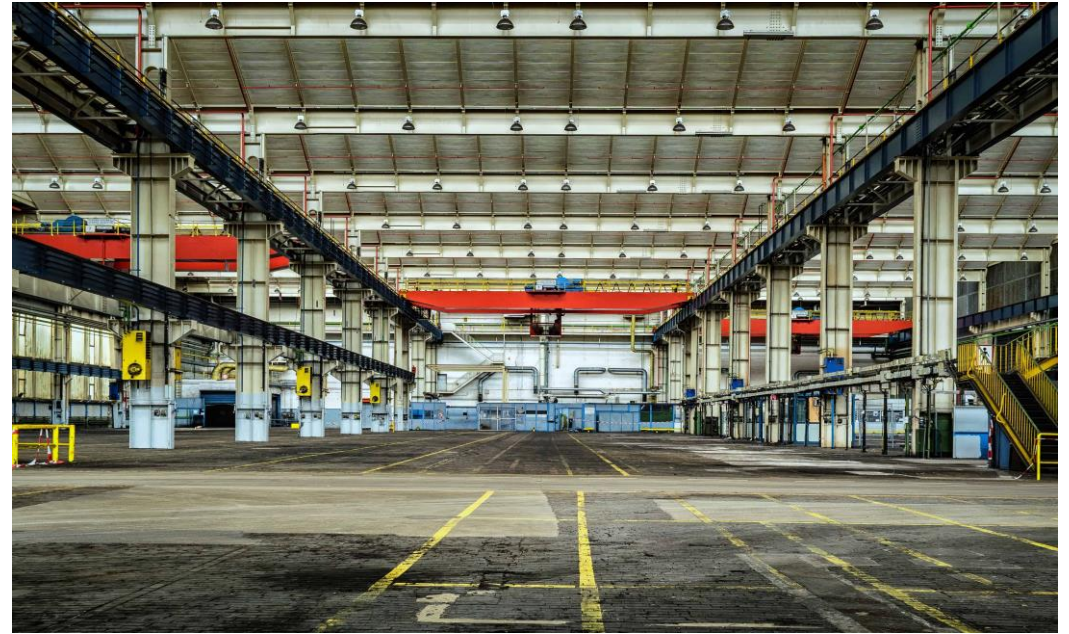
Custom Program Types

Simple Custom

- For modeling specific, individual equipment

Application Categories

- Retrofits – Enhancing the efficiency of your existing system for operation beyond the minimum requirements, with a baseline of existing equipment
- New Equipment and Replacements - Replacing major or critical equipment or purchasing new equipment for new construction projects, using Code as the baseline
- Up to \$.28/kWh
 - Retrofits - Up to 50% of the total cost
 - End-of-life Replacements & New Construction – Up to 75% of the incremental cost



For new construction, please
reference the code baselines of
ASHRAE 90.1.2016 and IECC 2018

Custom Program Types

Whole Building

- New construction or a major renovation that includes all new mechanical and lighting systems, and > 75,000 square feet of air-conditioned space.
- Achieve a projected minimum annual energy savings of at least 20% (on-site generation and alternative energy may not be counted toward the savings).
- Interior lighting power density in the final design that is at least 10% more efficient than ASHRAE 90.1-2016.
- Up to \$.28/kWh
 - Retrofits - Up to 50% of the total cost
 - End-of-life Replacements & New Construction – Up to 75% of the incremental cost



For new construction, please reference the code baselines of ASHRAE 90.1.2016 and IECC 2018

Custom Program Additional Opportunities

Other Incentives Available

- **Design Assistance** – Support with development or modifications to an energy model for Whole Building projects (up to \$5,000 of incentives)
- **New Construction Design-Based Lighting** – For new construction and major renovations
 - Provide high-quality lighting achieving appropriate levels of glare control, color rendering and lighting uniformity
 - Incentives provided for reducing the Lighting Power Density (LPD) in watts per square foot
 - Tier 1 >10% Below Base LPD: \$0.40 per watt
 - Tier 2 >20% Below Base LPD: \$0.80 per watt
- **Technical Support Services**
 - Umbrella program for energy studies and ECM evaluation during the design phase of the building, or during the evaluation of energy efficiency solutions
 - Up to \$20k with a customer cost share of 50%

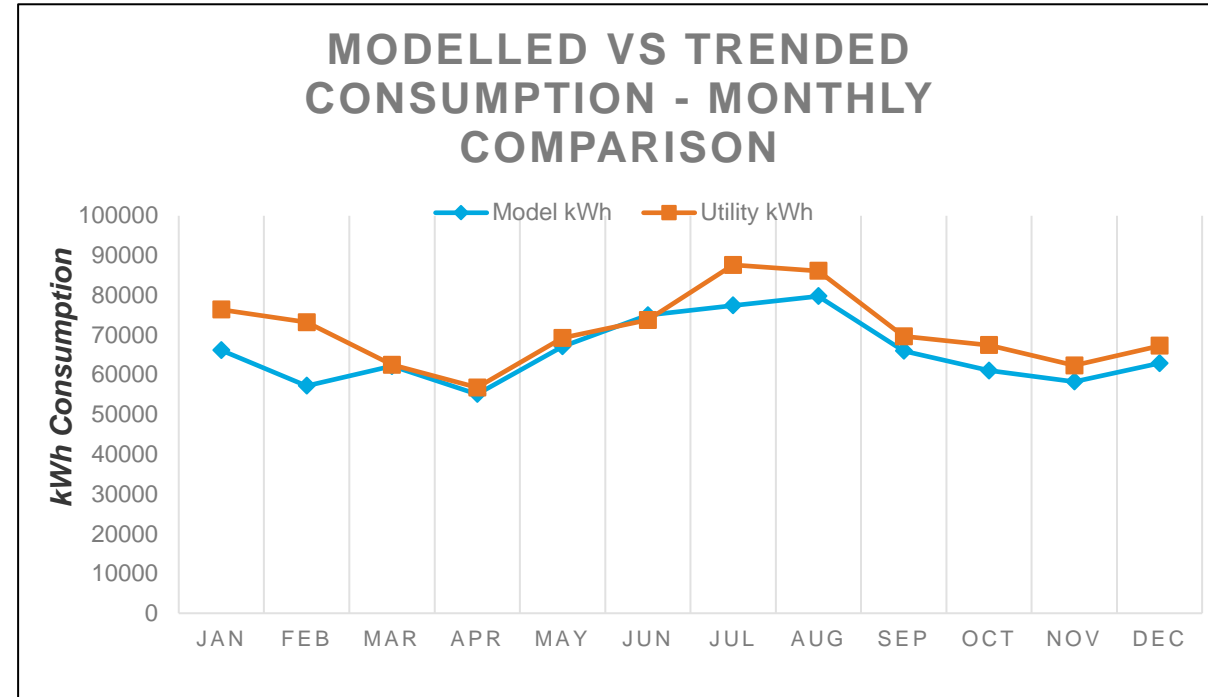


For new construction, please
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Whole Building Performance - Case Study

Baltimore County Public Schools - Arlington

- **Project Scope:** Renovation and addition of an existing four-story 83,000 square foot building. The existing building was completely demolished and then renovated, and an 18,000 square foot addition was constructed increasing the building to 101,000 square feet (to support a state-rated capacity of 475 students). The building was provided with an all-new HVAC system.
- **Project M&V:** A whole building comprehensive energy model was developed for this project using Trane Trace 700. The model demonstrated energy savings obtained from the installation of high-efficiency HVAC systems, LED lighting, and a new building envelope. Interval data from the BGE meter was collected for a 12-week period, the data was compared to the model outputs and any necessary recalibration and adjustments were made.
- **Incentive and Savings Summary**
 - Energy Savings Claimed: **435,426 kWh**
 - Demand Savings Claimed: **74.67 kW**
 - Incentive Obtained: **\$205,927**



Post M&V Modelled vs Utility Trended kWh Consumption



Columbia Association

Health

Savings at a Glance

Estimated Annual Energy Savings

416,000 kWh/year

Estimated Annual Cost Savings

\$25,000/year

Incentives Paid

\$60,000



“Through our research, we found that a CHP system would be a cost effective and impactful project. The payback was good. It was a no-brainer to move forward on it.”

– Jeremy Scharfenberg | Energy Manager | Columbia Association

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Building Tune-up Program

Benefits

BT applications may include the following types of benefits:

- Return equipment to its proper operational state
- Extend the service life of equipment
- Reduce maintenance and repair costs
- Improve outside air control and indoor air quality
- Improve occupant comfort and reduce complaints
- Optimize operation of chiller and other equipment
- Adjust and correct operating schedules for equipment
- Develop a comprehensive energy saving plan

Eligibility

- **Enhanced Unitary HVAC Maintenance**, for direct-expansion rooftop units and split systems
- **Small Building Tune-up Services**, for facilities with less than 75,000 sq. ft.
- **Large Building Tune-up Services**, for facilities with more than 75,000 sq. ft.
- **Monitoring-Based Building Tune-up**, for facilities with more than 125,000 sq. ft.



Building Operator Training

Pre-Qualified O&M Training Course Providers

AABC Commissioning Group (ACG)

Association of Energy Engineers (AEE)

Building Operator Certification (BOC) - National Sustainable Structures Center - (NSSC)

BOMI International

Energy Management Association (EMA)

International Association of Lighting Management Companies (NALMCO)

International Facilities Management Association (IFMA)

Leadership in Energy and Environmental Design (LEED)

National Association of Power Engineers

Eligibility

- Individuals who have two or more years of experience in building operations and support facilities within the BGE service territory can participate.
- Building engineers, stationary engineers, maintenance supervisors, maintenance workers, facility coordinators, HVAC technicians, electricians, operations supervisors and technicians, and others in the field of facility operations and maintenance are encouraged to apply.



MacKenzie Management

Property Management

Savings at a Glance

Estimated Annual Energy Savings

1,754,316 kWh/year

Estimated Annual Cost Savings

\$182,093/year

Incentives Paid

\$150,000



“The Building Tune-up Program was a very attractive option for our out-of-state client—for an independent third party to review the buildings for things that were not working as well as they could.”

– Kevin Kimmel | Senior Property Manager | MacKenzie Management

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Instant Discounts Program

Lighting Distributors

- Shepherd Electric Supply
- Geller
- CNR
- Rexel
- Derick Wholesale Lighting
- HD Supply
- Capital Electric
- Grainger
- Bay Lighting
- United Electric Supply
- Green Way Lighting

HVAC Distributors

- HD Supply
- Trane
- Johnstone Supply
- York

For more information on participating lighting and HVAC distributors, visit BGESmartEnergy.com/InstantDiscounts

Small Business Energy Solutions Program

SBES Program

- The Small Business Energy Solutions program provides an expedited, simple solution for small business customers interested in purchasing energy-efficient technologies that can produce verifiable savings.
- At no additional cost, you can receive a complimentary on-site analysis of your energy use and easy-to-follow recommendations on ways to save including cost, available incentives and payback period.
- You can take advantage of incentives that cover up to 70% of the cost of qualifying upgrades to lighting and refrigeration controls.

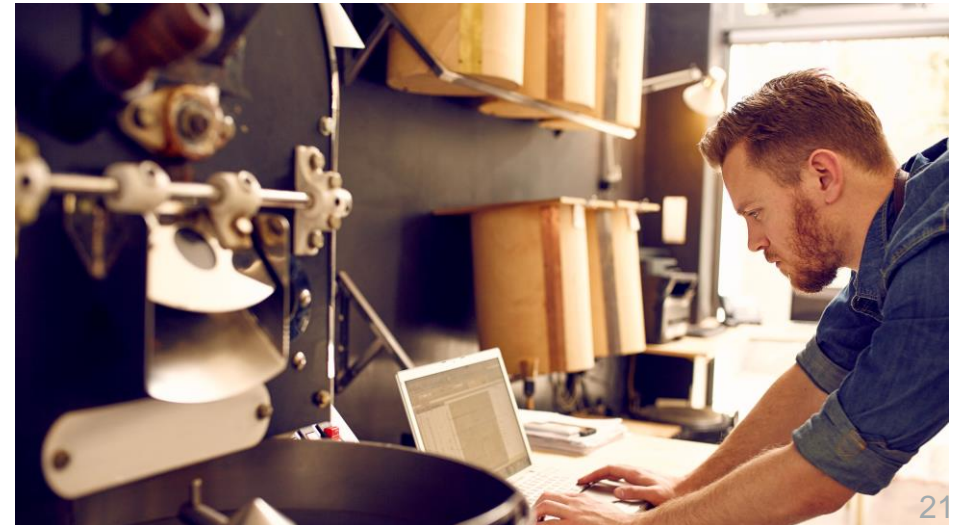
Eligibility

- Small business and small nonprofit customers in BGE's service territory on rate schedules G and GS are eligible to participate, regardless of your gas and electricity supplier.
- All non-residential customers who generally consume fewer than 60 kWh of monthly billing demand (rate schedule's G and GS) and targets all cost-effective energy efficiency retrofit opportunities.

Bonus: New Smart Thermostat

With a smart thermostat, your business can:

- Put the latest smart technology to work.
- Control your HVAC system from anywhere using your smartphone, tablet or computer.



Atlantic Valve & Supply

Industrial

Savings at a Glance

Estimated Annual Energy Savings

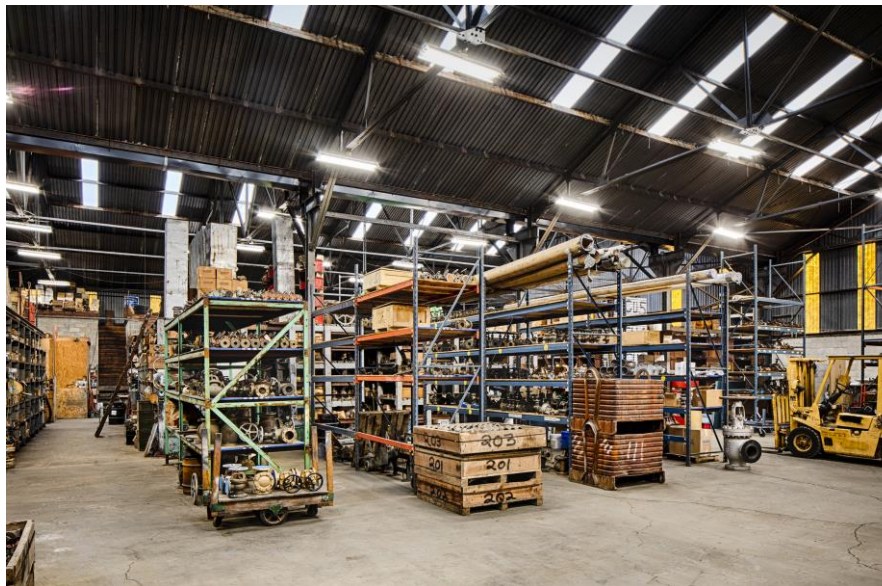
3,684 kWh/year

Estimated Annual Cost Savings

\$479/year

Incentives Paid

\$4,643



BGE SMARTENERGY
savers
PROGRAM



“With BGE's program, you can save money in one place and use it somewhere else. That's a good thing for any company to go for.”

– J. Upton | Office Manager | Atlantic Valve & Supply

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BGE

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EmPOWER
MARYLAND

Benchmark Your Building

Eligible Criteria

Eligible projects must meet the following criteria:

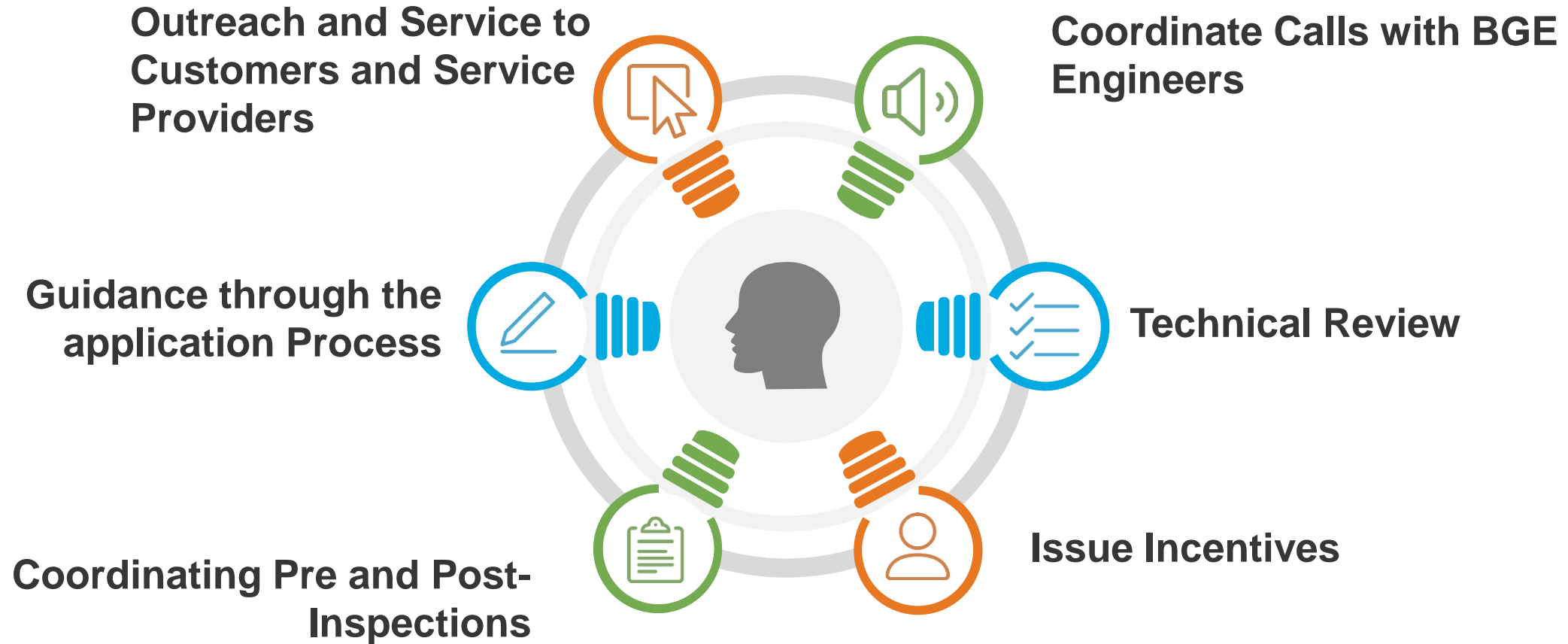
- If you're an existing ENERGY STAR Facilities user, you'll need to create a new account, because your data will not be transferred to the Benchmarking Tool. However, any existing data in the ENERGY STAR Portfolio Manager will not be affected.
- For buildings with five or more tenants, energy usage data will be aggregated automatically. However, for buildings with fewer than five tenants, you'll need to get authorization from each of your tenants, have them sign our consent form and keep the forms for your records.

Benchmarking Tool

- This tool makes it easier for building owners and property managers to retrieve energy consumption data for upload into the ENERGY STAR Portfolio Manager.
- It helps aggregate your building's usage data into a single virtual meter that can be used in Portfolio Manager to generate your benchmark score.



ICF – Our Implementation Contractor



ICF – C&I Account Management Team

Jonathan Becker

Sales Manager

Austin Brown

Industrial, Manufacturing, Federal
Government, Under Armour

Bill Linzey

Healthcare, State Government, State
Agencies, State Universities

Dan Reinholtz

Small and Medium-Sized
Businesses < 200kW

John Roberts

Property Management, Multifamily,
Grocers, Nonprofits

Steve Weaver

Johns Hopkins University, Private
K-12 Schools

Stanley Katangole (MDEA)

City and County Governments, Municipalities,
Public K-12 Schools, Community Colleges

Mark Kessler (MDEA)

Property Management, Multifamily,
Grocers, Nonprofits

Mary Darling

National Accounts



Next Steps

Call 410-290-1202 or visit our website
www.BGESmartEnergy.com