

EFFICIENCY SMART™ • ANNUAL REPORT

ENERGIZING THE FUTURE



2012

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EFFICIENCY SMART ANNUAL REPORT

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PARTICIPATING COMMUNITIES



EFFICIENT. ENERGIZED. EMPOWERED.

The future of energy is here. The ideas we've set in motion over the past two years continue to gain strength.

Through innovative programs, advanced technical support, and robust financial incentives, Efficiency Smart is helping municipalities, businesses, and individuals reduce energy and save money now and for years to come.

Although the past two years have yielded substantial savings for our customers, we have only just begun. Whether identifying new ways to improve our existing programs or discovering additional opportunities in our communities, we are continually working to move forward.

Our results so far have been significant. Today's momentum is undeniable. We invite you to be positively energized.





EFFICIENCY SMART

Kristyn Wilder, MBA, CDS, CSSBB, PMP
Executive Director

Traditionally, sustainability has been approached as a scientific principle rather than as a custom solution developed to meet the collective needs of a community. At Efficiency Smart, our goal is to understand where our customers are in terms of energy efficiency, in order to meet their needs and help them build a sustainable future.

Together, we have made substantial progress toward our shared goals, and are well-positioned to exceed our three-year performance targets. Efficiency Smart is helping its partners create lasting value for their communities, and looks forward to the ample opportunities that still lie ahead.

In 2012, our 2011 results were validated through an independent evaluation, measurement, and verification (EM&V) company. Efficiency Smart attained a 97 percent rate of realization for its energy savings claims, which is among the highest energy-savings realization rates in the industry! In addition to this accomplishment, I'm pleased to report that Efficiency Smart achieved more than 140 percent of its performance target in 2012.

Although we are proud of our successes thus far, we understand that we can still make a much larger impact. To ensure continued energy savings for our partners and their customers, we maintain a large pipeline of potential energy efficiency opportunities, which has been sustained at approximately 50,000 megawatt-hours (MWh) and 400 projects since mid-2012. This illustrates that although our subscribing member utilities are saving an impressive amount of energy, there is a continual robust opportunity for them to save even more.

We look forward to working with all subscribing member utilities in 2013 and beyond to convert these opportunities into projects and energy savings. Several companies have completed multiple energy efficiency projects so far, and are excited about the potential benefits to their business that are offered by continued involvement with Efficiency Smart. Some of the most rewarding feedback we receive is from customers who plan to do additional projects with us because our services have helped them create or retain jobs, expand their business, or become a more viable company.

To date, three of our key success factors have been our customer-focused initiatives; our flexibility in meeting the needs of our partners and their customers; and our commitment to community, workforce, and economic development. Efficiency Smart continues to score high in all of these areas in customer satisfaction surveys, and remains focused on continued improvement. We understand that energy efficiency isn't a "one size fits all" approach, and we often provide customized services to help our stakeholders meet their goals.

Of course, all the progress we've made so far would not have been possible without the passion, energy, and dedication of the Efficiency Smart team. The team's willingness to go above and beyond has been essential to Efficiency Smart's success.

We look forward to a continued partnership with our current participants and invite any community contemplating energy efficiency services to seriously consider the ample benefits Efficiency Smart can offer. On behalf of the entire Efficiency Smart team, I thank our participants for their collaboration, American Municipal Power, Inc. (AMP) and the Vermont Energy Investment Corporation (VEIC) for their commitment to Efficiency Smart, and everyone else who has contributed to our successes for their assistance. Your support and positive energy is the power that keeps us moving forward.

With much gratitude,

Kristyn Wilder, MBA, CDS, CSSBB, PMP
Executive Director
Efficiency Smart

AMERICAN MUNICIPAL POWER

Marc Gerken, PE, President/CEO
Jon Bisher, Chairman, PhD, Board of Trustees



Energy efficiency is more than just a concept at AMP. We consider Efficiency Smart a power plant—the “magic bullet” that can be incorporated into power supply planning without the regionalized challenges affecting the various generation technologies and without any concerns as to future regulatory uncertainty.

In many respects, Efficiency Smart is the largest member service project ever undertaken by the organization. Working with our partner VEIC, we designed a results-based energy efficiency offering viable for utilities in multiple states, with non-contiguous service territories. At a time when many entities were questioning their ability to implement a comprehensive program of this nature, the unique business model of public power allowed AMP members to embrace energy efficiency and has made the model successful.

The year 2012 was the second year of operation for Efficiency Smart. At year’s end, Efficiency Smart had reached nearly 75 percent of its three-year goal in terms of MWh savings. More than 212,400 measures had been installed by residential and business customers, representing annualized customer savings of more than \$5 million. The 49 AMP member utilities participating in Efficiency Smart have realized firsthand benefits, and we continue to market Efficiency Smart to other members. Additionally, in 2011 we signed a contract with a firm to independently verify Efficiency Smart’s results, another unique feature of the AMP program. The completed audit of 2011 data resulted in an energy savings claim realization rate of approximately 97 percent, which is one of the highest realization rates for energy efficiency programs across the country.

Although we have achieved considerable success with Efficiency Smart, even deeper savings can be achieved. A great many of the projects implemented during the first two years with commercial and industrial customers focused on lighting. Additional savings can be realized with a focus on heating and cooling systems, and process systems such as compressed air. There also remains the opportunity for deeper penetration with residential customers. As technology continues to evolve, more opportunities will become available.

AMP, the board of trustees, and the members we represent are understandably proud of the success of Efficiency Smart. We strongly believe it serves as a model for similar entities across the country and we look forward to continued success.

On behalf of the members,

A handwritten signature in black ink that reads "Marc S. Gerken".

Marc Gerken, PE
President/CEO
American Municipal Power

A handwritten signature in black ink that reads "Jon Bisher".

Jon Bisher, PhD
Chairman, Board of Trustees
American Municipal Power
City Manager
City of Napoleon, Ohio



MENDON, OHIO



COLUMBUS, OHIO



OBERLIN, OHIO

Working together to **POWER THE FUTURE**

Efficiency Smart was established by American Municipal Power, Inc. (AMP) for the benefit of its member communities, and is administered under contract with the Vermont Energy Investment Corporation (VEIC). The venture officially launched in January 2011 to provide a broad range of energy efficiency services for subscribing AMP member utilities through a three-year performance-based contract.

In 2012, Efficiency Smart provided services to 49 AMP member utilities. The initial three-year service period, valued at approximately \$27 million, is designed to save participants approximately 81,000 MWh of energy by the end of 2013. In addition to this cumulative goal, each participating municipal electric system has its own specific energy savings targets. Efficiency Smart tracks and reports actual savings to all participating communities, and all claimed savings are later verified by an independent third-party evaluator. If three-year targets are not met, full participants will be refunded for any guaranteed savings not delivered.

Building on the success of 2011, we are well ahead of target to meet our three-year goal. By the close of 2012, Efficiency Smart had already achieved nearly 75 percent of its three-year savings target, and more than doubled the 17,748 MWh¹ energy savings claimed during 2011.

Efficiency Smart currently serves 49 municipal electric systems in Ohio, Pennsylvania, and Michigan, and several additional communities are considering participation. We offer these communities a solid path toward securing their energy future, making energy efficiency an uncomplicated and rewarding experience that garners real results.

Efficiency Smart helps business and residential customers of participating utilities reduce their energy consumption by providing the information, resources, and incentives to do so. These customers are offered rebates, discounts, and technical assistance to adopt cost-effective energy efficiency solutions that provide reliable and verifiable energy savings. In addition to lowering customers' energy bills through efficiency, we provide technical resources to participating utilities, stimulate local economies, and offer cost-effective and low-risk options for utilities to diversify their power supply portfolio.

Our 2012 residential services included discounts on energy-efficient lighting, rebates for purchasing energy-efficient appliances and equipment, and free removal of and financial incentives for recycling secondary refrigerators and freezers. We also provided community-based energy efficiency initiatives and services, many of which are focused on serving lower- to moderate-income customers.

Efficiency Smart's business programs offer small to mid-sized companies standard rebates for more than 90 energy-efficient products and provide technical assistance, account management services, and customized financial incentives for large commercial and industrial businesses. Companies' options vary depending on their annual energy usage.

"I really enjoy talking to customers in the diverse portfolio of businesses we support. I witness their energy efficiency projects being implemented with lasting, tangible results. Making a positive impact at the business level has a ripple effect into the lives of the people that operate them. That's a daily reward."

– **JUSTIN KALE**
ENERGY CONSULTANT AT EFFICIENCY SMART

"Information is power, and it's never more apparent than when I am on the phone with a customer. I love providing them with the information they need to make intelligent choices regarding energy efficiency."

– **ANGIE MASON**
CUSTOMER SUPPORT SPECIALIST AT EFFICIENCY SMART

¹Adjusted 2011 energy savings after review by Integral Analytics, a third-party evaluation, measurement, and verification company.

“Dover’s experience with Efficiency Smart has been very positive. Offering our large customers energy assessments with attainable goals that result in measurable savings on their electric bills has been a home run. Those customers who have followed through with Efficiency Smart’s recommendations have seen immediate savings with relatively short payback periods. We look forward to our continued involvement with Efficiency Smart, not just for the City’s benefit, but also as a tool for increasing our customers’ bottom line.”

MAYOR RICHARD P. HOMRIGHAUSEN
City of Dover (Dover, Ohio)



In 2011, Efficiency Smart concentrated on developing the network and infrastructure to achieve energy savings. During our second year of operation, we built on this strong foundation, making significant progress toward our three-year goal as well as individual savings targets by community.

We finished 2012 with 59,523 combined MWh of savings-to-date for our subscribing municipal electric systems, putting us at nearly 75 percent of our three-year goal by the end of year two. For 2012, Efficiency Smart realized 41,776 MWh in savings, exceeding the year’s performance target of 29,475 MWh by more than 40 percent. Additionally, 19 of our participants had reached 70 percent of their three-year community savings target, and 17 of them had exceeded 100 percent by the end of 2012.

To ensure we maintain this robust level of savings, we continue to focus on increasing awareness, understanding, and adoption of energy efficiency. During 2012, our customer support team had nearly 2,000 customer interactions, providing these individuals with general energy efficiency guidance and answering questions on everything from service offerings to product performance. Staff also met regularly with businesses to assist with their energy efficiency goals and provide technical advice. Additionally, marketing and outreach efforts continued to build, and several enhancements are planned in these areas during 2013.

As a result of this comprehensive approach, 9,800 residential and 365 commercial and industrial energy users in Efficiency Smart’s 49 municipal electric systems installed energy efficiency measures in their home or business in 2012. These improvements translated to 41,776 MWh of energy savings, which is roughly equivalent to the electricity used by more than 4,400 homes in a year.

As the number of individuals and businesses utilizing our services continues to grow, so does the demand for additional specialties on our team. To meet these increasingly diverse needs, in 2012 we began strengthening existing capabilities as well as concentrating on new areas, including:

- Increased market research and analysis to ensure that our technical services remain ahead of the curve and relevant to our customer base.
- Expanded services to help identify opportunities at small to midsized businesses that are not large enough for dedicated account management.
- Strategic contractor and vendor outreach efforts to build sustainable relationships throughout the supply chain.
- Enhanced retail account management to establish and support more retail options for end-use customers.
- Targeted community and small business outreach activities, with a particular emphasis on economically disadvantaged populations and those communities that require additional support to meet their goals.
- Identification and development of prime areas for partnerships as well as key sectors with significant potential for energy savings, such as the grocery, education, and healthcare industries.

“Serving the emergency response and rescue service needs for a community of approximately 50,000 citizens and over 2,000 businesses requires Cuyahoga Falls Fire Department staff to focus on many critical calls 24/7. It was greatly appreciated that when our oldest of five fire stations was in need of a new HVAC system, our team of energy experts at Efficiency Smart performed for us what they do best—they designed and implemented a project that meets our needs and that will support efficient operations at Fire Station 1. By developing the RFP, acquiring and reviewing the bids, and overseeing the project installation, the Efficiency Smart team allowed my department to continue doing what we do best without distraction or concern about the quality of the project.”

CHIEF PAUL MOLEDOR

Cuyahoga Falls Fire Department (Cuyahoga Falls, Ohio)

Additionally, we continue to respond to subscribing member utilities’ feedback on how best to meet their needs. As a result, our external reporting underwent some changes in 2012. We now provide more detail regarding potential projects in our opportunity pipeline through an enhanced report that shows zip codes and summaries of both ongoing projects and potential opportunities as well as information on terminated projects and opportunities.

Other reporting modifications included:

- Adding lifetime MWh savings and lifetime customer savings in dollars to the monthly report to further illustrate the full benefit that end-use customers receive.
- Incorporating cumulative expenditures by subscribing member utility into the monthly report, eliminating the need for a quarterly report.
- Creating custom reports on an as-needed basis to fulfill the specific needs of subscribing member utilities.

In support of reducing emissions and decreasing costs, Efficiency Smart introduced a fleet of gasoline/electric hybrid vehicles in 2012. Because our staff regularly visits our 49 participating communities, there was a clear opportunity to achieve substantial fuel savings through the use of higher-efficiency vehicles.

In addition to increasing employee efficiency by saving time previously occupied with rental car hassles and extra refueling, we’ve also spent a lot less money at the pump. Our vehicle fleet traveled more than 100,000 miles in 2012. Compared to typical fuel consumption, this translates to approximately 13 fill-ups per month, or roughly 1,800 gallons of gasoline saved!

2012 KEY ACCOMPLISHMENTS

- Achieved 41,776 MWh of savings for our participating municipal electric systems, bringing total combined savings to 59,523 MWh, and nearly 75 percent of our three-year goal.
- Enabled 10,200 end-use customers to install 165,000 efficiency measures.
- Gave away more than 44,000 energy-efficient light bulbs; the majority of these free products were provided to economically disadvantaged and senior populations.
- Introduced four new residential rebate opportunities: ceiling fans, dehumidifiers, heat pump water heaters, and furnace fans with electronically commutated motors.
- Added 18 new rebates to the Business Energy Rebates program as well as numerous tailored incentives evaluated on a case-by-case basis for the Custom program.
- Launched the Vendor & Contractor Outreach program, further enhancing our relationship across the supply chain and qualifying 23 of these contractors and vendors as Vendor Partner Allies.
- Grew the Community and Small Business Outreach program—piloted in 2011—into a multifaceted approach that maximizes community involvement and interaction.
- Developed a partnership with the Ohio Energy Project to reach school-age children and their families.
- Switched to a new appliance recycling provider with better local coverage and a higher level of responsiveness.
- Received a 2011 savings realization score of approximately 97 percent—one of the highest rates in the industry—through 2012 independent evaluation, measurement, and verification results.





BEYOND TRADITIONAL BENEFITS...

more savings, value, and benefits for our customers

Municipal electric systems continue to recognize the short- and long-term benefits of energy efficiency, the potential it provides for their local economy, and the value it adds to their power supply portfolio. Efficiency Smart is a collaborative partner and trusted resource for subscribing member utilities, playing a pivotal role in the achievement of their energy efficiency goals.

Energy efficiency is an excellent value, representing the lowest-cost long-term power supply resource available. It also offers the least risk,

alleviating uncertainty associated with market variability, financial exposure from potential carbon regulations, and fluctuating costs connected to future power plant construction. Additionally, energy efficiency measures can potentially save utilities money by postponing the need for system upgrades, fuel costs, and system growth while reducing power bills for end users—possibly even when energy prices go up.

Energy efficiency services are a fundamental economic development retention tool that many companies have come to expect.

Efficiency Smart adds a broad range of economic advantages to the benefits traditionally associated with energy efficiency. During 2011, we began stimulating participating communities' economies by reaching out to local retailers, suppliers, organizations, and service providers. In 2012, we worked to grow these partnerships, further enhancing our commitment to local economies.

For example, in 2011 we kicked off a residential point-of-sale lighting campaign and then piloted a program to help small hardware stores in subscribing communities compete with larger chains. In 2012, we continued our efforts and also began hosting incandescent light bulb

trade-in events at many of these stores. Introducing a formal program to foster relationships with contractors and vendors, donating resources to help launch an area STEM (science, technology, engineering, and mathematics) –based teaching organization, and utilizing groups such as booster clubs to implement our community-centered activities are just a few of the other ways we stimulated local economies.

These efforts also aid in local job creation. Energy efficiency has been proven to facilitate job creation and retention, whether directly through our organization's growth as our services expand, or indirectly through companies' growth to meet increased demand when we've generated additional work for them. According to the American Council for an Energy-Efficient Economy, energy efficiency programs support approximately 21 jobs for every \$1 million in related expenditures.¹ Thus, Efficiency Smart helped create or retain an estimated 126 jobs during 2012. Additionally, saving money through lower electric bills frees up funds for businesses and individuals to reinvest in the economy, which may ultimately induce a second round of spending and job creation.

Another measure of Efficiency Smart's economic value is its benefit-to-cost ratio. Each of Efficiency Smart's subscribing municipal electric systems invests a fixed rate that is applied to annual kilowatt-hour (kWh) sales for each year enrolled in the program. The services provided then help the utility avoid future electrical and demand charges and in some cases offer fossil fuel or water savings. The present value of lifetime economic benefits from the resulting savings is their Total Resource Benefit (TRB), and the benefit-to-cost ratio is TRB divided by program costs. In 2012, Efficiency Smart's benefit-to-cost ratio was more than three to one. This is a much greater value than the two-to-one benefit-to-cost ratio originally projected for Efficiency Smart.

Aggregate benefits and costs for **EFFICIENCY SMART'S SERVICES IN 2012**

- Total Resource Benefit = \$27,908,027
- Total program costs paid by participants = \$9,055,678
- Benefit-to-cost ratio = 3.08

Efficiency Smart helps participating municipal electric systems compete with surrounding utilities, providing comprehensive energy efficiency services that rival those of investor-owned utilities. We also offer several unique and less common features, including:

- Tailored services to fit the needs and resources of the municipal electric system and its customers
- Savings guaranteed at the municipal level
- Independent, third-party measurement, verification, and evaluation of savings claims
- Turnkey services supported by an experienced staff with extensive technical expertise
- Operating costs spread across several communities
- A consultative approach that goes beyond simply offering rebates
- Customized incentives and services for large commercial and industrial utility customers
- Community-based and customer-focused tactics
- Cost-effective solutions, with an emphasis on making energy efficiency affordable to all customer classes



Efficiency Smart is dedicated to supporting local businesses in participating communities. After completing an efficient lighting project at Thayer Chevrolet in Bowling Green, we returned to the Thayer Family of Dealerships to purchase a fuel-efficient vehicle from Thayer Ford.

“Efficiency Smart has helped our economic development efforts by allowing us to assist businesses that we might not otherwise have been able to aid. In turn, these rebates have helped many of them improve their bottom line and become stronger, more viable entities in the community. Efficiency Smart has also assisted several nonprofits within our community, which is great as there are very few programs that allow us to work with these operations. By providing these organizations discounts and more efficient use of their energy dollars, Efficiency Smart is able to help them reallocate their tight resources.”



SUSAN CLARK

**EXECUTIVE DIRECTOR, BOWLING GREEN
COMMUNITY DEVELOPMENT FOUNDATION**

(BOWLING GREEN, OHIO)

The foundation, Bowling Green's economic development arm, is a public/private partnership organized exclusively to promote the general economic welfare of the community.

“Participation in Efficiency Smart has been good for our community, and particularly for our businesses. We made a concerted effort to meet with our largest energy users early on to show them the benefits of Efficiency Smart. We shared how energy efficiency would put money back in their business and provide long-term savings. Wadsworth was able to surpass its three-year goal in a year and a half due to all of our businesses that have participated.”



HARRY STARK

**ASSISTANT UTILITY DIRECTOR AND
ECONOMIC DEVELOPMENT DIRECTOR,
CITY OF WADSWORTH**

(WADSWORTH, OHIO)

Stark was recently honored as “Business Advocate of the Year” by the Wadsworth Chamber of Commerce for the work he does with Efficiency Smart and his role with establishing energy efficiency as a primary business retention tool.



Custom PROGRAM

Efficiency Smart's Custom program provides tailored services to businesses that use more than 500,000 kWh of electricity annually, helping them meet their specific business needs and long-term energy efficiency goals.

Companies that qualify for the Custom program are assigned a dedicated account manager and receive the engineering and technical expertise of our energy consultants. These staff members share their professional knowledge and proactively identify cost-effective and measurable ways for businesses to save electricity and improve their bottom line.

Our team guides customers through their entire project, providing credible and objective answers to their questions and challenges. Additionally, all savings are independently verified to ensure accuracy, and our savings realization rates are among the highest in the industry.

Efficiency Smart's Custom program supports a multitude of energy efficiency projects, from common measures to complex systems. Eligible projects include retrofits and replacements, new equipment, new construction, design and plan review, equipment optimization, and more.

During 2012, 118 companies installed 3,244 measures through our Custom program. These projects translated to more than 35,107 MWh of aggregate claimed savings for Efficiency Smart's 49 participating municipal electric systems. When the Custom and Business Energy Rebates programs are combined, commercial and industrial customers saved a total of 36,734 MWh of energy in 2012, exceeding our 2012 target of 20,937 MWh by more than 50 percent. Both the commercial and industrial segments fared well, saving 18,253 and 18,480 MWh of energy, respectively.

“Efficiency Smart has been very helpful in providing us with expert guidance so that we make the right choices. We replaced conventional fluorescent lighting with LEDs and it turns out that they’re a wonderful source of light. You’d be crazy not to take advantage of Efficiency Smart’s knowledge. And they’ll give you some money, too, if you do it right.”



ROBERT MACALI
PRESIDENT, MACALI'S GIANT EAGLE (NILES, OHIO)

“Bowling Green State University has completed more than 20 projects with Efficiency Smart so far. We continue to work with their team to identify additional opportunities for energy efficiency. They have been easy to work with and non-intrusive throughout the entire process. We’re excited to be a part of a program that reduces costs for the university and the City of Bowling Green.”

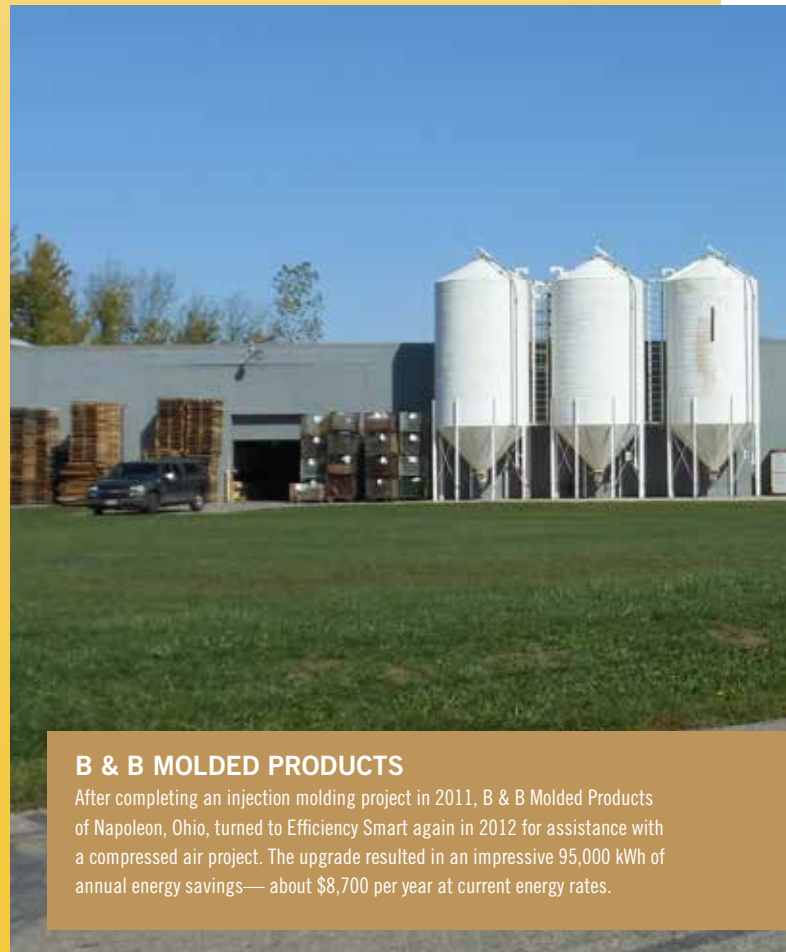


ANDY GRANT
DIRECTOR OF BUSINESS OPERATIONS,
BOWLING GREEN STATE UNIVERSITY
(BOWLING GREEN, OHIO)

“The City of Hubbard worked with Efficiency Smart to make energy-efficient upgrades to the aeration system at the wastewater treatment plant. As a result, we expect to realize a 75 percent reduction in electric usage on the biggest energy user at our wastewater treatment facility. We are very happy with the results and encourage other municipalities with plants at or near the end of their design life to consider making energy-efficient upgrades.”



MAYOR JOHN DARKO
CITY OF HUBBARD (HUBBARD, OHIO)



B & B MOLDED PRODUCTS

After completing an injection molding project in 2011, B & B Molded Products of Napoleon, Ohio, turned to Efficiency Smart again in 2012 for assistance with a compressed air project. The upgrade resulted in an impressive 95,000 kWh of annual energy savings—about \$8,700 per year at current energy rates.



GRAFTON STREET LIGHTING

Efficiency Smart often works with participating communities to make energy efficiency upgrades throughout the community and to its municipal buildings. In 2012, the Village of Grafton completed HVAC and lighting upgrades resulting in annual energy and money savings of approximately 27,167 kWh and \$2,590 per year. Efficient lighting can even be incorporated into traditional fixtures as shown above. Other communities continue to explore similar projects as energy-saving opportunities.

OBERLIN COLLEGE

OBERLIN, OHIO

Efficient Lighting Project



COMPANY BACKGROUND:

Oberlin is a highly selective, four-year, independent, coeducational institution that uniquely combines an outstanding school of music with a leading undergraduate college of arts and sciences. Founded in 1833, it holds a distinguished place among American colleges and universities. The Oberlin community is known for its exemplary academic and musical pedagogy and its commitment to social justice, sustainability, and creative entrepreneurship.

PROJECT GOALS:

Reduce energy costs while creating a standard for lighting across the 440-acre campus.

SOLUTION:

Retrofit standard T8 fixtures to reduced-wattage, high-performance T8 (HPT8) fixtures, replace standard incandescent light bulbs with CFLs, and install LED streetlight fixtures in parking lots.

PROJECT SUMMARY:

In 2012, Oberlin College completed efficient lighting projects in 44 buildings to reduce energy consumption across campus, while standardizing fixtures and lighting levels. Efficiency Smart worked with the college's service provider and certified lighting expert, Sommer Electric Corporation, to verify that all proposed products were high-performance equivalents and met Design Lights Consortium (DLC) and Consortium for Energy Efficiency (CEE) performance guidelines.

The project included:

- Retrofitting 17,500 light fixtures across 44 campus buildings, primarily consisting of a re-lamp and re-ballast of standard T8 fixtures to HPT8s
- Replacing 500 incandescent light bulbs with CFLs
- Evaluated LM79 and LM80 testing results to verify saving levels for LED lights
- Installing 30 LED streetlight fixtures across five parking lots

As a result of the lighting project, Oberlin College was able to reduce energy use while saving on electric costs, supporting the college's goal of sustainability. Additionally, the LED lights installed are Dark Sky compliant, reducing light pollution across campus and providing an added benefit for the college's observatory.

PROJECT FACTS AT A GLANCE¹

Annual kWh Savings:
1,773,000 (combined)

Annual Cost Savings:
\$177,300 (combined)

Lifetime Cost Savings:
\$1,477,000 (combined)

Rate of Return on Investment:
39% (average)

Payback:
3.03 years (average)

Annual CO₂ Reduction²:
2,756,000 pounds

PROJECT PARTNERS

Keith Watkins, Director of Facilities Operations, Oberlin College

Robert Lamma, Director of Sustainability and Energy Management, Oberlin College

Tom Piccorelli, Assistant VP for Facilities, Oberlin College

Bob Krause, CEO, Sommer Electric Corporation

Steve Dupee, Utility Director, City of Oberlin

Doug McMillan, Energy Services & Sustainability Initiatives Manager, City of Oberlin



¹ Calculations have been rounded in each success story.

² Annual CO₂ reduction calculations are based on the Environmental Protection Agency's eGrid GHG annual output emission rates: www.epa.gov/cleanenergy/energy-resources/egrid/index.html. This methodology is used throughout this report.

EPHRATA COMMUNITY HOSPITAL

EPHRATA, PENNSYLVANIA

Efficient Heating, Ventilation, and Air Conditioning (HVAC) and Chiller Project

COMPANY BACKGROUND:

Ephrata Community Hospital is a nonprofit health services organization providing preventive services, primary care, diagnostic services, acute care, and rehabilitation services to the residents of Northern Lancaster County, Pennsylvania, and surrounding communities. Independently developed more than 65 years ago to serve local needs, Ephrata Community Hospital has the primary purpose of ensuring community access to health care that is high in quality, compassionate, and cost-effective.

PROJECT GOALS:

Increase HVAC system capacity, while minimizing energy consumption.

SOLUTION:

Retrofit the existing chiller with an energy-saving variable frequency drive (VFD); install a larger, energy-efficient chiller and heat exchange; and install VFDs on the boiler feed pumps and on the new air handler supply and return fans.

PROJECT SUMMARY:

With a 28,000-square-foot expansion for a new emergency department in the works, Ephrata Community Hospital focused on energy efficiency to increase the capacity of its HVAC system, while minimizing energy consumption. Efficiency Smart worked with the project engineer from Barton Associates, Inc., to review the designs and offer suggestions to the hospital to provide the most efficient results and sequence of operations.

The hospital retrofitted the existing chiller with a VFD and installed a larger, energy-efficient chiller and heat exchanger. The heat exchanger uses outside air in the winter to cool in place of the chillers, saving energy. Additionally, VFDs were installed on the boiler pumps and on the new air handler supply and return fans. As a result, Ephrata Community Hospital achieved its goal of increasing the capacity of the HVAC system in an energy-efficient manner.



PROJECT FACTS AT A GLANCE

Annual kWh Savings:

619,000

Annual Cost Savings:

\$69,200

Lifetime Cost Savings:

\$1,383,200

Rate of Return on Investment:

42%

Payback:

2.16 years

Annual CO₂ Reduction:

961,200 pounds



PROJECT PARTNERS

Tim Nolt, Facilities Manager,
Ephrata Community Hospital

Jonathan B. Slagel, Project Engineer,
Barton Associates, Inc.

Tom Natarian, Director of Operations,
Borough of Ephrata

Gail Bare, Director of Administration
and Finance, Borough of Ephrata

SEKISUI VOLTEK

COLDWATER, MICHIGAN

Efficient Lighting Project



COMPANY BACKGROUND:

Sekisui Voltek is a leader in the development of high-performance flexible polyolefin substrates. The plastics company is part of the Sekisui Chemical Group, a worldwide network dedicated to problem solving, continuous improvement, and customer satisfaction. With manufacturing facilities in Massachusetts and Michigan, and sales offices throughout the United States, the company has been the leading manufacturer of cross-linked polyolefin foam in North America for more than 40 years.

PROJECT GOALS:

Reduce energy consumption by increasing lighting efficiency and eliminate safety concerns from existing metal arc lamps.

SOLUTION:

Replace metal halide fixtures and outdated T12 fluorescent lighting fixtures with efficient T8 fixtures; install occupancy sensors and skylights with daylight harvesting features.

PROJECT SUMMARY:

In line with its focus on energy efficiency, Sekisui Voltek began collaborating with Efficiency Smart and the Coldwater Board of Public Utilities for energy-saving technical advice during a lighting replacement project at its Coldwater facility. Sekisui Voltek also worked with Kendall Electric for lighting selection and Kaiser Electric to complete the installation.

During the project, all metal halide lighting and inefficient T12 fluorescent lighting in the production and warehouse areas were replaced with T8 fixtures. Occupancy sensors were added to low-traffic areas, and unused exhaust fans were replaced with skylights equipped with photocells to harvest daylight for additional energy savings. As a result of the upgrades, Sekisui Voltek was able to reduce its energy consumption and increase the efficiency of its lighting. The new lighting fixtures also eliminated safety concerns over the metal arc lighting fixtures.

PROJECT FACTS AT A GLANCE

Annual kWh Savings:

1,022,000

Annual Cost Savings:

\$79,500

Lifetime Cost Savings:

\$1,113,000

Rate of Return on Investment:

41%

Payback:

2.50 Years

Annual CO₂ Reduction:

1,929,900 pounds

PROJECT PARTNERS

Donald Ostrander, Maintenance
Department Manager, Sekisui Voltek

Rob Felts, Account Manager,
Kendall Electric

Jim White Jr., Owner, Kaiser Electric

Paul Beckhusen, Director,
Coldwater Board of Public Utilities

Bob Granger, Energy Efficiency Manager,
Coldwater Board of Public Utilities



CLEVELAND METROPARKS ZOO

CLEVELAND, OHIO

Multiple Energy Efficiency Technologies

COMPANY BACKGROUND:

The Cleveland Metroparks Zoo is a beautifully landscaped facility with nearly 3,000 animals from around the world. Located in Cleveland's Old Brooklyn neighborhood, just minutes from downtown, the zoo offers visitors from near and far an opportunity to connect with exotic wildlife and learn about conservation.

PROJECT GOALS:

Increase energy conservation by installing efficient components and upgrading current technology at multiple locations throughout the zoo.

SOLUTION:

Upgrade existing lighting to more energy-efficient options; replace pool pumps, air compressors, hot water booster pumps, and air conditioning rooftop unit (RTU) with more energy-efficient equipment.

PROJECT SUMMARY:

The Resource Management Committee at the Cleveland Metroparks Zoo worked with Efficiency Smart to identify opportunities for additional savings. A selected number of buildings were toured each month, as the group looked for ways to improve recycling efforts, cut waste, and improve operations in a sustainable way.

The project included:

- Upgrading existing high pressure sodium (HPS) lights to compact fluorescent and HPT8 lighting
- Replacing pool pumps with smaller, more efficient models
- Replacing air compressor with an energy-efficient model
- Replacing hot water booster pumps with energy-efficient models
- Replacing the existing RTU air conditioner with an energy-efficient unit equipped with a dual enthalpy economizer

The upgrades made the zoo more energy efficient, which is consistent with the organization's commitment to conservation and sustainability. One of Efficiency Smart's energy consultants has since been invited to join the zoo's resource management committee, thanks to the extensive energy efficiency knowledge he brings to the zoo's projects.



“Efficiency Smart’s ability to provide cost-saving numbers is a tremendous help when presenting energy projects to the Board of Directors.”

—Gordon Cerney, Lead HVAC Engineer, Cleveland Metroparks Zoo

PROJECT FACTS AT A GLANCE

Annual kWh Savings:
185,000 (combined)

Annual Cost Savings:
\$15,800 (combined)

Lifetime Cost Savings:
\$146,400 (combined)

Rate of Return on Investment:
60% (average)

Payback:
1.84 years (average)

Annual CO₂ Reduction:
345,600 pounds (combined)



PROJECT PARTNERS

Gordon Cerney, Lead HVAC Engineer, Cleveland Metroparks Zoo

Ivan Henderson, Commissioner, Cleveland Public Power

Barbara Phillips, Project Coordinator, Cleveland Public Power

Joy Perry, Deputy Commissioner, Cleveland Public Power

Bill Williams, Commercial Accounts Manager, Cleveland Public Power

SPRENGER HEALTH CARE

WELLINGTON, OHIO, AND AMHERST, OHIO

Efficient Lighting Project



COMPANY BACKGROUND:

Sprenger Health Care Systems is a network of skilled nursing, assisted living, and independent living facilities in northeast Ohio and northern Indiana. Founded in Amherst, Ohio, in 1959, the company has grown from a 26-bed nursing home to 11 campuses serving more than 1,600 residents and families and employs more than 1,700 people. Sprenger Health Care has a passion for caring for the elderly and a longtime commitment to quality.

PROJECT GOALS:

Improve the lighting for residents and staff at the company's Amherst and Wellington facilities while reducing operating costs at these locations.

SOLUTION:

Replace outdated lamps and ballasts with more energy-efficient technologies, install occupancy sensors, and install LED exit signs.

PROJECT SUMMARY:

Sprenger Health Care completed lighting projects at two of its campuses in 2012: Amherst Manor in Amherst, Ohio, and Elms Retirement Village in Wellington, Ohio. An Efficiency Smart energy consultant worked with specialists from Buerger Energy to provide guidance in the selection of lighting fixtures on the basis of wattage and lighting output. Efficiency Smart also conducted an independent analysis of the project to ensure that Sprenger Health Care received the best value possible for its project.

Buerger Energy conducted the initial lighting audit and provided project management. Earthwell Energy Services, which specializes in efficiency improvement projects, was hired by Sprenger Health Care to upgrade all lighting fixtures at both locations. The project included replacing outdated incandescent lights with CFLs, installing HPT8 lamps and ballast, installing LED exit signs, and incorporating occupancy sensors into low-traffic areas. More than 3,000 lighting fixtures and sensors were installed between the two facilities.

As a result of the upgrades, each facility realized improved lighting quality and reduced energy consumption and operating costs. Additionally, the new lighting reduced the maintenance tasks required, which has improved the overall appearance of the facilities.

PROJECT FACTS AT A GLANCE

Annual kWh Savings:
173,800 (combined)

Annual Cost Savings:
\$15,200 (combined)

Lifetime Cost Savings:
\$99,800 (combined)

Rate of Return on Investment:
31% (average)

Payback:
3.05 years (average)

Annual CO₂ Reduction:
302,000 pounds (combined)

PROJECT PARTNERS

Mark Sprenger, Executive Vice President,
Sprenger Health Care

Bill Buerger, CEO, Buerger Energy

Shanna O'Grady, Energy Analyst,
Buerger Energy

Dennis Moore, CEO, Earthwell Energy
Services

David Taylor, Mayor, City of Amherst

Steve Pyles, Village Administrator,
Village of Wellington





BRADNER, OHIO



YELLOW SPRINGS, OHIO



ORRVILLE, OHIO



WAYNESFIELD, OHIO



BUSINESS ENERGY REBATES *Program*

“We had plans to install a new refrigeration system with efficient compressors, fans, and LED lighting components during a remodeling project. The City put us in contact with Efficiency Smart, which took care of everything once the unit was installed, from coordinating with our contractor to gathering product information to ensure the highest rebate. The whole process went very smoothly.”

DAN REEVES

MANAGER, WADSWORTH HOMETOWN MARKET
(WADSWORTH, OHIO)

“After learning about Efficiency Smart through a City of Napoleon utility insert, we have completed two HVAC projects with Efficiency Smart’s assistance. The staff made sound recommendations and have helped us explore more potential improvements. Efficiency Smart has been a great resource, and the rebates it offers are an added bonus.”

NEIL GIFFEY

LOSS CONTROL INSPECTOR & FACILITY
MAINTENANCE COORDINATOR, GERMAN MUTUAL INSURANCE
(NAPOLEON, OHIO)

Businesses with annual electric usage of between 20,000 and 500,000 kWh of energy qualify for Efficiency Smart's Business Energy Rebates (BER) program. This program is a quick and easy way for small to mid-sized businesses to receive funding for common energy efficiency projects. Annual usage is evaluated across all business locations. Chain stores, multi-facility businesses, and municipal entities usually exceed this level and may be considered Custom program customers.

More than 90 standardized rebates were available in 2012 for BER customers implementing common energy efficiency measures. Rebate amounts vary by technology and are based on a fixed value per unit for the specific item installed. Qualifying projects include:

- Heating, ventilation, and air conditioning (HVAC)
- Lighting and lighting controls
- Motors and variable frequency drives
- Compressed air
- Refrigeration
- Food service equipment

During 2012, 51 projects were completed through the BER program. Although the number of measures rebated through the program remained steady compared to the previous year's number, there was a significant uptick in the amount of energy saved. BER customers reduced their electric usage by a total of 1,621 MWh and an average of 31.78 MWh per project in 2012, which represented a 425 percent overall increase and a 434 percent per-project increase over the 2011 numbers. Total incentives paid also more than doubled, with BER customers receiving \$89,963 in rebates during 2012.



PRINTER'S DEVIL

Efficiency Smart worked with Printer's Devil at its two facility locations in Hudson, Ohio, to provide rebates for efficient lighting upgrades. This project resulted in annual energy savings of 24,211 kWh.



RANCE INDUSTRIES

Rance Industries in Columbiana, Ohio, utilized Efficiency Smart's BER program to upgrade metal halide fixtures to four-lamp and six-lamp T5s while also adding new T8 lighting. The project resulted in 41,295 kWh of annual electric savings.

TAYLOR'S STATIONERS

COLDWATER, MICHIGAN

Efficient Lighting Project



PROJECT FACTS AT A GLANCE

Annual kWh Savings:
6,000

Annual Cost Savings:
\$900

Lifetime Cost Savings:
\$12,800

Rate of Return on Investment:
41%

Payback:
2.40 years

Annual CO₂ Reduction:
11,800 pounds

PROJECT PARTNERS

Howard Taylor, Owner, Taylor's Stationers
Chad Heuer, Owner, Patriot Electric, Inc.
Paul Beckhusen, Director, Coldwater Board of Public Utilities
Bob Granger, Energy Efficiency Manager, Coldwater Board of Public Utilities

COMPANY BACKGROUND:

Located in historic downtown Coldwater, Taylor's Stationers has been a popular shopping destination for the community since 1972. The retailer is a Hallmark Gold Crown Store that has been recognized as a top-200 store in the nation. In addition to offering the latest Hallmark products, it features more than 6,000 square feet of space with a broad selection of gift and book options.

PROJECT GOALS:

Brighten retail spaces while reducing energy usage and costs.

SOLUTION:

Retrofit old, inefficient T12 fluorescent fixtures with new HPT8 bulbs and ballasts, resulting in brighter lighting and less energy usage.

PROJECT SUMMARY:

Recognizing that its existing lighting was outdated, Taylor's Stationers decided to take advantage of lighting rebates available through Efficiency Smart's Business Energy Rebates program. The company partnered with Patriot Electric, Inc., on its lighting project, initially retrofitting 50 of its T12 fluorescent fixtures in the retail store with new, energy-efficient, HPT8 bulbs and ballasts. After experiencing the increased quality of lighting, the company has decided to undertake a second lighting project to update the remaining light fixtures at the facility.

As a result of its upgraded lighting, Taylor's Stationers was able to reduce its energy consumption and overall operating costs. Additionally, the increased lighting quality accentuated the products on the sales floor and improved the overall ambiance of the store.

"I was very pleased with the good service and follow-up from everyone at Efficiency Smart. Due to the success of the 2012 lighting project, we're planning to upgrade our bookstore lighting in 2013."

—Howard Taylor, Owner, Taylor's Stationers



TRANSCO RAILWAY PRODUCTS

NEWTON FALLS, OHIO

Compressed Air Project

COMPANY BACKGROUND:

Transco Railway Products Inc. (TRPI) is a privately held corporation established in 1936. Its 117,000-square-foot metal fabrication facility in Newton Falls, Ohio, manufactures and supplies railway parts, offering customers competitive pricing, superior quality, and dependable delivery times.

PROJECT GOALS:

Reduce energy consumption and operating costs while improving equipment air sources.

SOLUTION:

Replace oversized, inefficient air compressor with a new, smaller, energy-efficient model.

PROJECT SUMMARY:

TRPI finalized its first project through Efficiency Smart's Business Energy Rebates program in 2011, after completing a facility-wide lighting project. After realizing energy savings and improving its lighting, TRPI again utilized the rebate program for a compressed air project in 2012.

The 2012 project consisted of replacing an older, oversized air compressor with an energy-efficient model equipped with a variable speed drive (VSD). As a result, the company was able to reduce energy costs and receive money back through the Efficiency Smart rebate, while providing a reliable, clean source of air for equipment within the facility.



PROJECT FACTS AT A GLANCE

Annual kWh Savings:
54,400

Annual Cost Savings:
\$6,000

Lifetime Cost Savings:
\$59,900

Rate of Return on Investment:
106%

Payback:
1.05 years

Annual CO₂ Reduction:
108,300 pounds

PROJECT PARTNERS

Ken Brzozowski, Vice President,
Fabrication Division, TRPI

George Sampson, Sales Engineer,
Air Technologies

Tracy Reimbold, Finance Director,
City of Newton Falls



FIRST PRESBYTERIAN CHURCH OF HUBBARD

HUBBARD, OHIO

Efficient Lighting Project



PROJECT FACTS AT A GLANCE

Annual kWh Savings:
20,300

Annual Cost Savings:
\$2,800

Lifetime Cost Savings:
\$42,200

Rate of Return on Investment:
95%

Payback:
1.30 years

Annual CO₂ Reduction:
38,500 pounds

ORGANIZATION BACKGROUND:

The First Presbyterian Church of Hubbard has a rich history dating back to 1804. In the course of its 200-plus years in Hubbard, Ohio, services have been held in four separate facilities; the congregation eventually moved into its current sanctuary in 1959. Although the facility has changed over the years, the church remains what it has always been: a safe and friendly place for both the congregation and guests to worship.

PROJECT GOALS:

Upgrade fixtures and lighting to reduce operating costs and increase overall lighting output.

SOLUTION:

Replace both T12 fixtures and fixtures that use 300-watt incandescent bulbs with T8 fixtures.

PROJECT SUMMARY:

After analyzing existing lighting technology at its more than 50-year-old church, the First Presbyterian Church of Hubbard realized that significant energy savings could result from updating its lighting fixtures to energy-efficient alternatives. The project included replacing 53 T12 fixtures and 24 fixtures that used outdated 300-watt incandescent lights throughout the 14,000-square-foot facility with new T8 fixtures.

Efficiency Smart encouraged the use of energy-efficient products for all of the church's new lighting by accommodating incentives for its replacement fixtures as well as its supplementary lighting. Efficiency Smart also helped the church identify additional products that qualified for rebates.

Efficiency Smart's rebates provided the First Presbyterian Church an opportunity to upgrade all the lighting in its facility, which maximized energy savings and reduced expenses. Not only did the project provide cost savings, but the congregation and guests of the church now enjoy better lighting quality.

PROJECT PARTNERS

Ronald Wright, Moderator of Property Committee, First Presbyterian Church of Hubbard

Scott Deasey, Co-moderator of Property and Electrician, First Presbyterian Church of Hubbard

Gary Daff, Electrician, First Presbyterian Church of Hubbard

Bill Meyers, Sales Representative, Carine and Company

Edward Palestro Jr., Electric Foreman, City of Hubbard

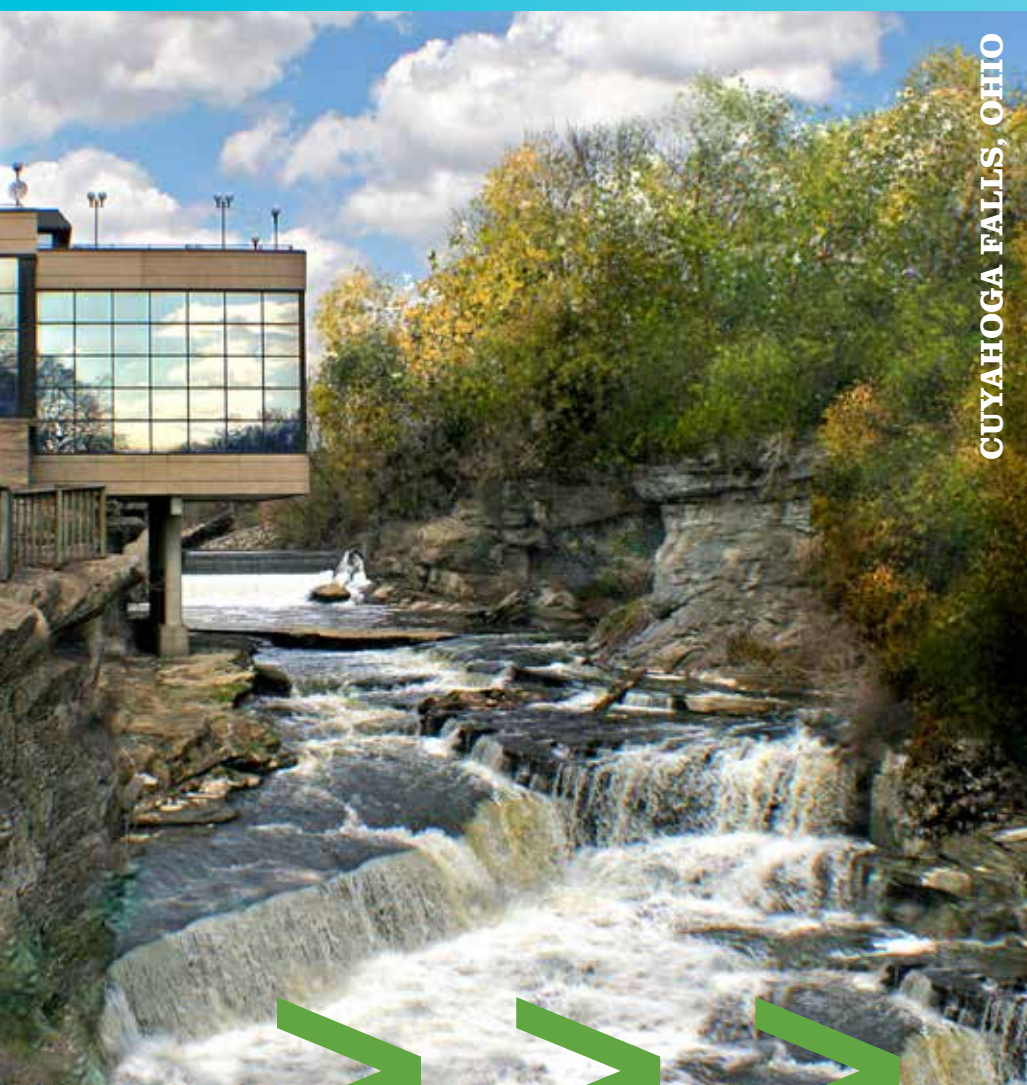




OAK HARBOR, OHIO



NAPOLEON, OHIO



CUYAHOGA FALLS, OHIO



WADSWORTH, OHIO





Vendor & Contractor OUTREACH

Program

“Dickman Supply began working with Efficiency Smart shortly after its services launched in 2011, and was part of the inaugural group of supply chain professionals to become a Vendor Partner Ally in 2012. Over the course of our partnership, we have collaborated with Efficiency Smart to help end customers receive thousands of dollars in incentive payments. We look forward to our continuing partnership with the Efficiency Smart team and the energy- and money-saving opportunities it offers our customers.”

“It’s a no-brainer to work with Efficiency Smart. We became a Vendor Partner Ally because Efficiency Smart makes it very easy for us to get rebates for our customers and helps us find opportunities we may not see. Efficiency Smart has provided us with invaluable expertise and incentives, kept us informed, and made our customers very happy.”

TIM BICKEL

LIGHTING SPECIALIST, DICKMAN INDUSTRIAL
AND ELECTRICAL SUPPLIES

Dickman Industrial and Electrical Supplies has several locations in Ohio and has completed projects with Efficiency Smart in Jackson Center, Lakeview, Minster, St. Marys, and Versailles

RICK PYLES

SALES ENGINEER, APO PUMPS AND
COMPRESSORS, INC.

APO Pumps and Compressors, Inc. has several locations in Ohio, and has completed projects with Efficiency Smart in both Galion and Newton Falls

Efficiency Smart's Vendor & Contractor Outreach program encourages energy efficiency projects in participating communities through the development of sustainable partnerships across the supply chain. As part of this program, we qualify select contractors and vendors as a Vendor Partner Ally (VPA).

The VPA initiative is designed to leverage the skills and expertise of contractors and vendors that have performed quality work with Efficiency Smart and that have committed to increasing energy efficiency in the communities the organization serves. In order to be approved for the program, potential allies must meet the following requirements:

- Successful completion of at least one project with an Efficiency Smart customer
- Satisfactory survey rating by Efficiency Smart customer
- Attendance at a contractor and vendor outreach seminar
- Satisfactory rating by Efficiency Smart on the quality, completeness, and timeliness of project submission information
- Willingness to provide services to electric customers of subscribing utilities
- Acceptable Better Business Bureau rating, where applicable

Those contractors and vendors that are accepted into the program receive several benefits, such as being listed on our website and other promotional opportunities; training related to our offerings and processes; and regular communications regarding program enhancements, technical updates, and program data. The knowledge our allies have gained through working with Efficiency Smart offers them more credibility with potential Efficiency Smart customers and, in turn, brings additional projects to these companies and more energy savings to participating communities.

From the spring 2012 launch of the VPA initiative through the end of the year, 23 manufacturers, suppliers, designers, and installers of energy-efficient technologies were qualified through the initiative. This group completed 59 projects and helped customers save 8,393 MWh of energy during 2012. Participating communities where projects occurred were Bowling Green, Cleveland, Columbus, Cuyahoga Falls, Dover, Galion, Haskins, Hudson, Jackson, Jackson Center, Lakeview, Lodi, Minster, New Bremen, Newton Falls, Orrville, St. Marys, Tipp City, Versailles, and Wadsworth.

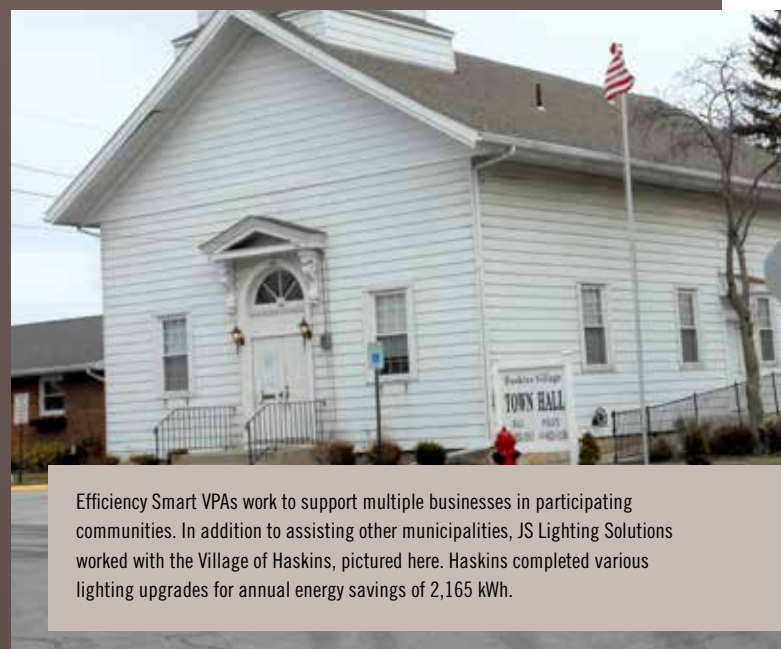
Many of these VPAs are located in or near participating communities, and most of them provide services within a three-hour radius. This provides ample opportunities for customers of subscribing utilities to utilize knowledgeable, experienced, and often local trade allies to help them complete energy efficiency projects.



Every VPA has attended a training seminar as part of their qualification process. In 2012, we offered a webinar as well as three in-person seminars located within our participating communities. Seminar locations included Pemberville, Ohio (pictured here), Minster, Ohio, and Wadsworth, Ohio.



In 2012, Efficiency Smart partnered with VPA Dickman Supply for a refrigeration upgrade at Wagner's IGA in Minster, Ohio, that resulted in 68,000 kWh of annual energy savings. In line with our commitment to support local businesses, we also purchased lunch from Wagner's IGA when hosting a VPA seminar in Minster.



Efficiency Smart VPAs work to support multiple businesses in participating communities. In addition to assisting other municipalities, JS Lighting Solutions worked with the Village of Haskins, pictured here. Haskins completed various lighting upgrades for annual energy savings of 2,165 kWh.

WOLFF BROS. SUPPLY, INC.

ORRVILLE, OHIO, AND LODI, OHIO (locations of featured projects)

Efficient Lighting Projects



COMPANY BACKGROUND:

Wolff Bros. Supply, Inc. is a wholesale distributor of electrical, plumbing, and HVAC supplies. The company has 11 locations throughout northern and central Ohio that serve the commercial, industrial, institutional, and residential markets. Wolff Bros. offers both engineering and design services for the industries it supplies, specializing in energy-saving and alternative energy solutions, such as photovoltaic sources (solar panels that convert sunlight into energy).

PROJECT GOALS:

Reduce power consumption and costs while improving overall lighting at both Quality Castings and Advance Bronze.

SOLUTION:

Upgrade existing lighting technology to brighter, more energy-efficient products.

PROJECT SUMMARY:

Wolff Bros. coordinated with Efficiency Smart to complete lighting projects for Quality Castings in Orrville and Advance Bronze in Lodi during 2012. The projects included:

- Replacing existing T12 fixtures with T8 fixtures
- Replacing metal halide fixtures with high-bay T8 fixtures
- Upgrading nine existing T12 troffers to energy-efficient T8 lamps and ballasts
- Installing occupancy sensors in low-traffic areas

As a result of the projects, both Quality Castings and Advance Bronze experienced several benefits, including reduced power consumption, increased illumination levels, greater safety, and reduced operation and maintenance costs.

In addition to the projects Wolff Bros. completed at Quality Castings and Advance Bronze, the company fulfilled a lighting project with Wayne College in Orrville during 2012. Wolff Bros. looks forward to leveraging its partnership with Efficiency Smart to complete additional projects in Efficiency Smart participating communities in the future.

PROJECT FACTS AT A GLANCE

Annual kWh Savings:
115,900 (combined)

Annual Cost Savings:
\$9,100 (combined)

Lifetime Cost Savings:
\$124,900 (combined)

Rate of Return on Investment:
30% (average)

Payback:
3.52 years (average)

Annual CO₂ Reduction:
219,000 pounds (combined)

PROJECT PARTNERS

Mike Huttinger, Vice President,
Wolff Brothers

John Wenneman, Plant Manager,
Advance Bronze

Bruce Meyer, Lead Engineer,
Quality Castings

Harold Kasten-Krause,
Superintendent of Utilities,
Village of Lodi

Jeff Brediger, Director of Utilities,
City of Orrville

Mike Hedberg, Marketing Manager,
City of Orrville



THE BREWER-GARRETT COMPANY

GALION, OHIO (location of featured project)

Efficient Lighting and Refrigeration Project

COMPANY BACKGROUND:

The Brewer-Garrett Company has been delivering award-winning commercial energy efficiency services to meet its clients' energy, process, and building services needs for more than 50 years. Brewer-Garrett works with its customers to reduce facilities' operating costs, and to improve the condition and value of building and production assets. The company's goal is to be its customers' single source for all energy and mechanical system services, empowering them to reduce their impact on global energy resources.

PROJECT GOALS:

Provide energy-saving improvements for the four schools within the Galion City School District.

SOLUTION:

Replace existing 32-watt T8 lamps with 28-watt T8 lamps, enhance metering and load shedding, implement an energy conservation education program, and install load managing devices on vending machines.

PROJECT SUMMARY:

The Brewer-Garrett Company worked closely with Efficiency Smart to complete an energy-saving project that upgraded lighting and refrigeration technologies at the Galion City School District's high school, middle school, intermediate school, and primary school. The project included:

- Upgrading existing 32-watt T8 lamps to 28-watt T8 lamps
- Enhancing the district's power monitoring system to enable it to react to peaks in demand
- Developing an energy conservation education program to provide training for the school district's students, faculty, staff, and administration
- Installing load managing devices to turn off vending machines when the surrounding area is unoccupied

These projects improved lighting efficiency throughout the district and reduced unnecessary run-time for vending machines, which has led to lower energy usage and reduced operating costs.



"I am pleased to share our excitement over the recent energy conservation project we completed through Efficiency Smart. Amazingly, the savings achieved for the installation period and the first performance year more than doubled the projected energy and operational savings. Needless to say, we are very pleased with the first-year results."

—Kathleen S. Jenney, Superintendent,
Galion City School District



PROJECT FACTS AT A GLANCE

Annual kWh Savings:
304,000

Annual Cost Savings:
\$27,200

Lifetime Cost Savings:
\$174,400

Rate of Return on Investment:
11%

Payback:
6.80 Years

Annual CO₂ Reduction:
577,700 Pounds

PROJECT PARTNERS

Joe Ziska, Project Manager,
Brewer-Garrett Company

Joe Tucker, Maintenance Director,
Galion City School District

Kevin Early, Director of Operations,
Galion City School District

Gene Toy, City Manager, City of Galion

Karen Walters, Director of Finance,
City of Galion

EVOLVED LIGHTING SOLUTIONS

COLUMBUS, OHIO (location of featured project)

Efficient Lighting Project



PROJECT FACTS AT A GLANCE

Annual kWh Savings:
29,400

Annual Cost Savings:
\$3,200

Lifetime Cost Savings:
\$36,500

Rate of Return on Investment:
46%

Payback:
2.20 Years

Annual CO₂ Reduction:
57,300 pounds

COMPANY BACKGROUND:

Evolved Lighting Solutions is a full-service lighting company that specializes in custom commercial and industrial lighting upgrades. Its specialists focus on efficiently and effectively distributing light through spaces, providing lighting analysis, design, installation, and incentive processing. By utilizing the best methods and technologies available, Evolved Lighting Solutions is able to provide its clients with a better-quality working environment and help them reduce operating costs.

PROJECT GOALS:

Reduce energy usage and operational costs while improving visibility and safety for client Tommy's Pizza.

SOLUTION:

Upgrade existing lighting systems to more energy-efficient fixtures, replace incandescent lighting with efficient lighting, and install occupancy sensors.

PROJECT SUMMARY:

Evolved Lighting Solutions delivered a turnkey lighting project for Tommy's Pizza in Columbus, Ohio. The project included replacing incandescent lights with CFLs and LEDs, upgrading existing T12 fluorescent systems to more efficient T8 lamps and ballasts, replacing high-intensity discharge lighting with more efficient and longer-lasting induction system lighting, and installing occupancy sensors in low-traffic areas. The company partnered with Efficiency Smart to complete the project, ensuring that the products and equipment installed would provide both optimal energy savings and maximum rebates for its customer.

All goals for the project were achieved, and Tommy's Pizza is now enjoying improved light quality and safety at its facility, while realizing the benefits of decreased energy usage and operating costs.



PROJECT PARTNERS

Jace McGonigle, Project Manager,
Evolved Lighting Solutions

Rick Iacono, Owner, Tommy's Pizza

Susan Ashbrook, Assistant Director for
Sustainability, City of Columbus Division
of Power and Water

Erin Miller, Environmental Steward, City
of Columbus Division of Power and Water



**EPHRATA,
PENNSYLVANIA**



MINSTER, OHIO



WOODVILLE, OHIO



CLEVELAND, OHIO



RESIDENTIAL *Program*

“Efficiency Smart hosted an incandescent trade-in event to reach Minster and New Bremen customers during our annual Grand Open House. Efficiency Smart’s staff came in and ran everything on their end, and it all went very smoothly. They’ve also been very accommodating when we’ve worked with them on coupon campaigns, making sure that we have promotional signage that meets our needs. Efficiency Smart does what it takes to get the word out to the public.”



MIKE VARNO
RENTAL MANAGER, TRUE VALUE HARDWARE
(MINSTER, OHIO)

“We really appreciate the partnership with Efficiency Smart because it has allowed us to reach communities that we wouldn’t normally reach. We’ve been able to focus our attention on building relationships with teachers and students, and partnering with more schools. The students enjoy the program because they get to become leaders in their home by teaching their families about energy efficiency.”



SHAUNI NIX
EDUCATION COORDINATOR, OHIO ENERGY
PROJECT (STATE OF OHIO)

Efficiency Smart's Residential program provides several options for customers of participating municipal electric systems who want to make their homes more energy-efficient.

One of the easiest and most affordable opportunities for these customers to date has been the replacement of incandescent light bulbs with CFLs. During 2012, residential customers purchased 47,229 energy-efficient light bulbs through our residential point-of-sale (POS) lighting campaigns and our online lighting store. An additional 40,957 CFLs were distributed through efforts such as our incandescent trade-in events and our community outreach activities. This translates to 3,248 MWh of energy savings as a result of these efficient lighting endeavors.

Two initiatives that launched in 2012 to support residential efforts were our incandescent trade-in events and our partnership with local schools through the Ohio Energy Project (OEP). The incandescent trade-in activities further enhance our relationships with area hardware stores developed through our POS lighting campaigns; our collaboration with OEP utilizes the power children have to create positive change in their households. More about both of these initiatives can be found later in this section.

During 2012, we continued to offer residential rebates for the purchase of energy-efficient refrigerators and clothes washers. In August 2012, we introduced four new efficient-product rebate options: dehumidifiers, heat pump water heaters, ceiling fans with lights, and furnace fans with electronically commutated motors (ECM). Additionally, customers now have the option to request four free CFLs on their rebate form, which provides another money- and energy-saving opportunity. Residential customers redeemed rebates for 1,448 products in 2012, for a total of 1,884 MWh of energy savings.

Two enhancements were made to the appliance recycling initiative in 2012. The first was to increase the incentive for recycling a secondary refrigerator or freezer, from \$35 to \$50. This is a temporary increase, but it is expected to continue as long as it maintains a higher interest in recycling. The second was to secure a new appliance recycling contractor. Recycling is now coordinated through JACO Environmental, which has a stronger presence in our market than the previous contractor and allows for more convenient options for our customers. In 2012, 859 customers took advantage of our appliance recycling offerings, reducing their energy consumption by 1,531 MWh of energy.

Efficiency Smart also offers a residential meter loan service. Although savings aren't claimed directly, this option helps customers identify the biggest energy hogs in their home. When a meter is loaned, we also issue an electrical usage chart so customers can see how quickly energy costs increase as a result of inefficient products. Our customer support staff is also available to assist customers in understanding how energy-efficient products can help them save energy and money. During 2012, 39 meters were loaned out through this service.

Overall, customers benefited from our residential offerings on 9,829 occasions and saved 5,042 MWh of energy in 2012. This is more than double the MWh saved on the residential side in 2011. Although residential savings have been lower than originally projected, we continue to make significant progress as program awareness grows. Efficiency Smart remains committed to achieving energy savings targets for residential customers, and it will continue to focus on increasing residential savings during 2013.



OHIO ENERGY PROJECT (OEP)

LAUNCHED IN 11 EFFICIENCY SMART COMMUNITIES

Energy Efficiency Curriculum for Students



Teacher training sessions were held in selected Efficiency Smart participating communities through a partnership with Ohio Energy Project. At these trainings, teachers participated in a half-day informational session before introducing the curriculum in their classroom. The photos here were taken at one such training in Cuyahoga Falls, Ohio.

PARTNERSHIP SUMMARY:

OEP strives to empower the next generation of energy consumers by helping students and teachers understand the science of energy and its efficient use. Incorporating energy efficiency education into the K-12 curriculum can be an excellent way to help families make smarter energy decisions, because children often have the ability to influence change in their households. OEP and Efficiency Smart have joined together to reach teachers, students, and families in participating Efficiency Smart communities.

INITIATIVE GOALS:

Educate teachers and students about electricity and the benefits of energy efficiency, empower students to make their homes more energy efficient, and claim energy savings related to CFLs installed as a result of the initiative.

SOLUTION:

Identify and engage teachers in pilot communities, conduct training sessions, provide supplies, and track energy savings by community.

INITIATIVE SUMMARY:

Efficiency Smart partnered with OEP on a venture to prepare students to teach their families how to save energy at home by installing energy efficiency measures. Eleven school districts were chosen for the pilot initiative, each having a large percentage of students from homes served by a participating municipal electric system.

Teachers participated in a half-day training session, where they learned energy concepts and conservation strategies to teach their students. The teachers then took their knowledge to the classroom, giving students hands-on energy lessons and the opportunity to apply what they learned at home. Participating teachers received science equipment and supplies from OEP for use in their classroom as well as an energy conservation kit for each student. Each student with signed permission from a parent or guardian received a kit with free CFLs from Efficiency Smart for installation in the student's home.

INITIATIVE RESULTS

COMMUNITY	TEACHERS PARTICIPATING	STUDENTS PARTICIPATING	NUMBER OF FREE CFLS DISTRIBUTED
AMHERST	4	253	1,012
BOWLING GREEN	1	97	485
CUYAHOGA FALLS	4	140	700
GALION	1	50	200
MINSTER	2	131	524
NAPOLEON	2	46	230
NILES	3	175	700
OBERLIN	1	40	160
ORRVILLE	2	123	492
WADSWORTH	2	73	292
WELLINGTON	2	63	252
TOTAL	24	1,191	5,011



SELECTED FEEDBACK RECEIVED FROM OEP TEACHER SURVEYS:

“This gave me a better understanding of energy as a whole, which in turn will help me have a positive effect on students.”

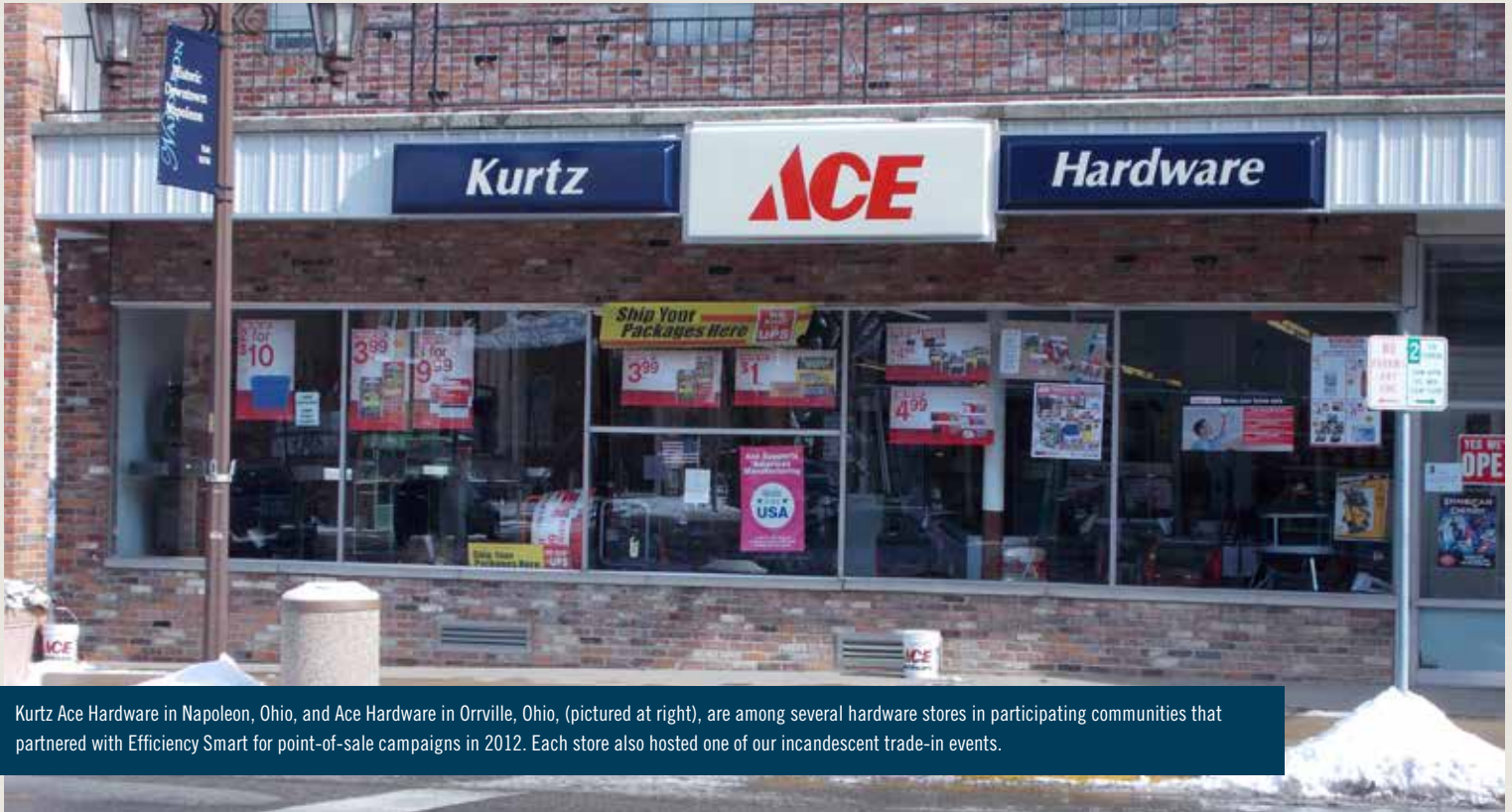
“The activities were really authentic to the kids’ lives. Many reported talking with their parents after each lesson—just what we were hoping for!”

“I can’t believe the things we are getting in our kit—thank you, thank you, thank you! And it’s all free for us.”

“I think students will better understand energy, its types, and how it is produced. The kits can reduce the use of resources and will make the kids feel empowered.”

INCANDESCENT TRADE-IN EVENTS LAUNCHED IN EIGHT EFFICIENCY SMART COMMUNITIES

Incandescents for CFLs Bulb Exchange



Kurtz Ace Hardware in Napoleon, Ohio, and Ace Hardware in Orrville, Ohio, (pictured at right), are among several hardware stores in participating communities that partnered with Efficiency Smart for point-of-sale campaigns in 2012. Each store also hosted one of our incandescent trade-in events.

PARTNERSHIP SUMMARY:

Efficiency Smart is committed to supporting local businesses in the communities it serves. In 2011, Efficiency Smart launched a retail point-of-sale (POS) campaign, partnering with many small hardware stores serving its participating communities. These campaigns often provided extra incentive for utility customers to shop locally, thus helping these retailers compete with larger chains. In 2012, Efficiency Smart further enhanced these relationships, teaming up with hardware stores to offer incandescent bulb trade-in events. These events bring additional business to retailers while enabling utility customers to exchange their working incandescent light bulbs for free, energy-efficient CFLs.

INITIATIVE GOALS:

Encourage utility customers to replace inefficient incandescent light bulbs with CFLs, share information about our services and the benefits of energy efficiency, and attract additional business for hardware stores that serve our participating communities.

SOLUTION:

Offer free CFLs in exchange for working incandescent light bulbs, hand out information kits, have trained staff available to answer program and energy efficiency questions, and promote local retailers to help bring additional business to their stores.

INITIATIVE SUMMARY:

Efficiency Smart identified seven hardware stores (serving eight participating communities) as partners for the incandescent trade-in initiative, selecting those with strong patronage by utility customers of participating municipal electric systems. We then worked closely with these retailers on event logistics, in-store advertising, and local promotion needed to make the events a success.

Efficiency Smart staffed trade-in events at partner hardware stores on specified Saturdays to collect incandescent light bulbs, hand out information kits with CFLs, and field questions on everything from the benefits of CFLs to what energy efficiency services are available through Efficiency Smart. Afterward, the incandescent light bulbs were turned over to a recycling center. Positive feedback was received from several of the hardware stores and the customers who took advantage of this opportunity.

INITIATIVE RESULTS

COMMUNITY	PARTICIPATING RETAILER	LIGHT BULBS EXCHANGED	ENERGY SAVINGS CLAIMED
BOWLING GREEN	MAIN STREET ACE HARDWARE	335	11,092 kWh
CUYAHOGA FALLS	HUDSON DRIVE LOWE'S	811	19,181 kWh
MINSTER/NEW BREMEN	WESTERN OHIO HARDWARE	83	2,808 kWh
NAPOLEON	KURTZ ACE HARDWARE	761	25,193 kWh
NILES	HANDYMAN'S ACE HARDWARE	153	5,065 kWh
ORRVILLE	ACE HARDWARE	296	9,810 kWh
WELLINGTON	FARM & HOME HARDWARE	107	3,550 kWh
TOTAL		2,546	76,699 kWh



Attention Cuyahoga Falls Electric Department Customers:

FREE CFLs at Lowe's

Bring your general purpose incandescent light bulbs and receive as many 13 Watt compact fluorescent light bulbs (CFLs) free.

*Limited supplies. Offer valid only on June 16 and while supplies last.

Saturday, June 16, from 10 a.m. until 2 p.m.

Eligibility: Must be an electric customer of the Cuyahoga Falls Electric Department or another Efficiency Smart municipal utility partner.

Requirements: Bring a copy of your utility bill to verify which utility you use and your working general purpose incandescent light bulbs to exchange.

Lowe's
3570 Hudson Drive
Stow, OH 44224

Brought to you by:



Don L. Robart, Mayor



Michael Dougherty, Superintendent

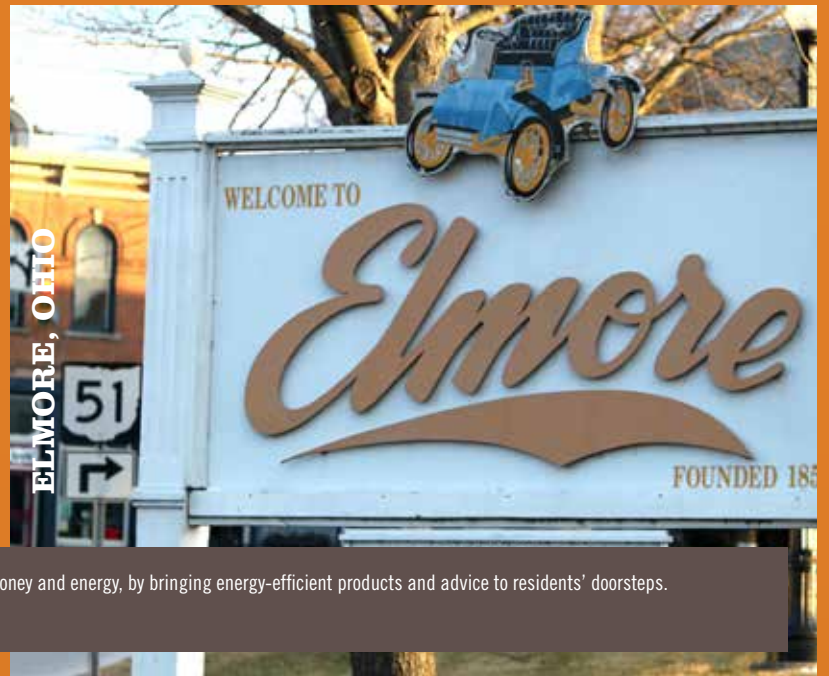
EFFICIENCY SMART

For information about incentives available through Efficiency Smart, call 1-877-889-3777 or visit www.energysmart.org

LUCAS, OHIO



ELMORE, OHIO



Efficiency Smart's Door-to-door Initiative makes it even easier for participating communities to save money and energy, by bringing energy-efficient products and advice to residents' doorsteps. Our 2012 events included Lucas and Elmore, Ohio (pictured above).

Community & Small Business OUTREACH *Program*

The Community and Small Business Outreach (CSBO) program launched in late 2011 to address the unique needs of Efficiency Smart's diverse communities. Originally intended to focus on a handful of underperforming residential and small business efforts, the initial pilots were so well received that the program has since grown into a multifaceted offering that makes most initiatives available to all participating communities.

Our staff frequently visits and interacts with customers of our subscribing municipal electric systems through our CSBO activities. As part of our commitment to support local economies, we regularly utilize and support local groups such as Scout troops and booster clubs to help implement these activities. We also enjoy partnering with local leaders, who assist in further establishing the benefits of energy efficiency among their constituents.

The CSBO program helps ensure that all customers in participating communities have ample opportunities to benefit from our services. One focus of the program is providing additional assistance to those who might not have the resources to complete energy efficiency upgrades on their own, such as the elderly and lower- to moderate-income customers. These community-centered activities have been successful in raising awareness of Efficiency Smart, achieving energy savings for participating electric systems and their customers, and promoting overall energy efficiency.

Several criteria are used to evaluate the most effective method to deliver the CSBO program in each community, such as the percentage of people who pay their bills in person, patronage of local hardware stores, and census data. In 2012, we completed 44 activities through our CSBO program, which translated to 1,175 MWh of energy savings for our participants.

“Efficiency Smart went out of its way to accommodate the Amherst residents who had interest in high-efficiency light bulb kits. We had overwhelming response, and I was impressed that your representative made a special trip to get more kits for the second day. Even then, we still ran out and rain checks were provided to council members to deliver to their constituents. Additionally, another batch of kits arrived a week later for those residents who inquired about the opportunity at a later date. Thank you for your support.”



JENNIFER WASILK
WARD FOUR, AMHERST CITY COUNCIL
(AMHERST, OHIO)



OBERLIN (FAMILY FUN FAIR)



HUDSON CUSTOMER APPRECIATION EVENT

2012 COMMUNITY & >>> SMALL BUSINESS *Outreach Program Initiatives and Results*

Community Events

Efficiency Smart celebrates with its participating communities by handing out free CFLs, sharing information, and answering questions during local events.

COMMUNITY	NUMBER OF FREE CFLS DISTRIBUTED	NET SAVINGS CLAIMED
BEACH CITY (FIREMAN'S FESTIVAL)	152	3,591 kWh
BRADNER (DAY IN THE PARK)	192	4,532 kWh
CLEVELAND (EARTH DAY AND POWER EXPO)	837	19,768 kWh
CUYAHOGA FALLS (ENERGY EXPO)	1,220	28,792 kWh
HUDSON (GREEN DAY)	830	23,539 kWh
MILAN (OPEN HOUSE)	120	3,521 kWh
MINSTER (OPEN HOUSE)	475	13,470 kWh
OSHERLIN (FAMILY FUN FAIR AND BLOCK PARTY)	1,636	47,198 kWh



NEWTON FALLS CUSTOMER APPRECIATION EVENT

In addition to distributing light bulbs to Newton Falls Electric Department customers, Efficiency Smart installed efficient lighting while at the municipal building.

Council Outreach

Staff visit the municipal councils of subscribing municipal electric systems to discuss the benefits of using energy-efficient products. During these visits, leaders are given free CFLs to try at home to prepare them to answer questions their constituents may have.

COMMUNITY	NUMBER OF FREE CFLS DISTRIBUTED	NET SAVINGS CLAIMED
MINSTER	27	1,034 kWh
NEWTON FALLS	125	2,950 kWh
VERSAILLES	30	708 kWh



HASKINS DOOR-TO-DOOR INITIATIVE

Customer Appreciation Events

(Formerly the Bill Pay Give Away) Free CFLs and kits with rebate forms, program information, and energy efficiency tips are handed out at utility offices on key dates when residents typically pay their bill in person.

COMMUNITY	NUMBER OF FREE CFLS DISTRIBUTED	NET SAVINGS CLAIMED
AMHERST	3,145	89,132 kWh
ARCANUM	1,000	28,349 kWh
BEACH CITY	1,012	28,649 kWh
BREWSTER	2,167	62,202 kWh
CLEVELAND	1,557	41,000 kWh
CUYAHOGA FALLS	1,815	42,834 kWh
DOVER	2,278	67,247 kWh
ELDORADO	135	3,191 kWh
GENOA	770	21,852 kWh
GLOUSTER	668	15,796 kWh
GRAFTON	755	21,407 kWh
HUDSON	584	16,561 kWh
JACKSON CENTER	361	9,523 kWh
LAKEVIEW	600	14,188 kWh
MINSTER	1,710	48,496 kWh
NAPOLEON	1,760	49,879 kWh
NEWTON FALLS	1,500	42,531 kWh
OAK HARBOR	110	3,117 kWh
PEMBERVILLE	301	10,704 kWh
PROSPECT	1,000	28,359 kWh
ST. MARYS	2,375	67,355 kWh
WAYNESFIELD	750	21,265 kWh
WELLINGTON	1,070	30,338 kWh
YELLOW SPRINGS	1,634	46,312 kWh

“Many thanks for the great raffle basket of light bulbs and surge protectors. I was the lucky recipient at the Cuyahoga Falls Energy Expo held at the Cuyahoga Falls library on October 11, 2012. It was a wonderful gift—quite a money and energy saver.”

 **MARILYN BARBER**
RESIDENT, CUYAHOGA FALLS (CUYAHOGA FALLS, OHIO)



BEACH CITY CUSTOMER APPRECIATION EVENT



JACKSON CENTER CUSTOMER APPRECIATION EVENT

Door-to-door Initiative

Staff, community officials, and volunteers go from house to house to hand out free CFLs, share information, and answer questions.

COMMUNITY	NUMBER OF FREE CFLS DISTRIBUTED	NET SAVINGS CLAIMED
BREWSTER	667	15,741 kWh
ELMORE	1,705	48,324 kWh
HASKINS	844	19,940 kWh
LUCAS	369	8,721 kWh



CUYAHOGA FALLS EXPO

At the Cuyahoga Falls Energy Expo, our staff were among the attendees who utilized an energy bike to demonstrate the properties of electricity. This isn't the only time an Efficiency Smart team member can be spotted on a bike—some staff occasionally bike to work!

Senior Facility Direct Install

Energy-efficient products are installed free of charge in senior housing complexes where the resources to do this may otherwise not be available.

COMMUNITY	NUMBER OF FREE CFLS DISTRIBUTED	NET SAVINGS CLAIMED
CLEVELAND	612	15,747 kWh

Smaller Business Outreach

This initiative makes energy efficiency more accessible to smaller businesses that may not have the knowledge or resources to complete upgrades on their own. It targets businesses that use less than 20,000 kilowatt-hours of electricity annually, providing additional incentives such as the direct installation of products at reduced costs.

COMMUNITY	NUMBER OF FREE CFLS DISTRIBUTED	ENERGY SAVINGS CLAIMED
CLEVELAND	47	1,109 kWh

MILAN OPEN HOUSE

As part of Milan's Open House event, council members received free CFLs so that they could test firsthand the products being used by their constituents.



MORNING STAR TOWER

CLEVELAND, OHIO

Senior Facility Direct Install (Energy-Efficient Lighting)

COMPLEX BACKGROUND:

Morning Star Tower is an 11-floor senior housing community in the Glenville area of Cleveland, Ohio. The 200-unit complex provides an affordable housing option to income-qualified adults age 55 or older. The housing complex is subsidized through the federal government's Department of Housing and Urban Development (HUD).

PROJECT GOALS:

Upgrade remaining inefficient lighting identified through an energy audit to more energy-efficient options.

SOLUTION:

Replace incandescent light bulbs with energy-efficient CFLs.

PROJECT SUMMARY:

After identifying Morning Star Tower as a high-volume energy user, Cleveland Public Power (CPP) assisted its management in finding ways to reduce energy usage at the complex. Morning Star then took CPP's recommendations and put a plan together to become more energy efficient.

Morning Star first utilized Efficiency Smart's assistance to complete two efficient lighting upgrade projects on floors 5 through 11 of the facility, which included upgrading T12 lights to T8 lights, replacing incandescent light bulbs with CFLs, and upgrading to LED exit signs. Efficiency Smart later worked with Morning Star Tower to upgrade remaining incandescent light bulbs in its tenants' apartments through its CSBO program.

In addition to upgrading lighting in apartments, Efficiency Smart and CPP staff spoke with residents about their energy usage habits and suggested additional options for saving energy. The residents were excited to receive the free lighting upgrades, and appreciated that the installation team helped them choose the bulb with the best number of lumens for their lighting preference.



“Efficiency Smart's interaction with the seniors is invaluable. This is a sensitive population and the outreach effort of Efficiency Smart enabled residents of Morning Star Tower to have a one-on-one consultation regarding energy usage.”

—Joy Perry, Deputy Commissioner,
Cleveland Public Power



PROJECT FACTS AT A GLANCE

Annual kWh Savings:

15,474

Annual Cost Savings:

\$1,346

Lifetime Cost Savings:

\$8,815

Annual CO₂ Reduction:

27,957 pounds

PROJECT PARTNERS

Shirley Wilson, Administrator,
Morning Star Tower

Ivan Henderson, Commissioner,
Cleveland Public Power

Barbara Phillips, Project Coordinator,
Cleveland Public Power

Joy Perry, Deputy Commissioner,
Cleveland Public Power

Bill Williams, Commercial Accounts
Manager, Cleveland Public Power

WELLINGTON, OHIO



COLUMBIANA, OHIO



NEW BREMEN, OHIO

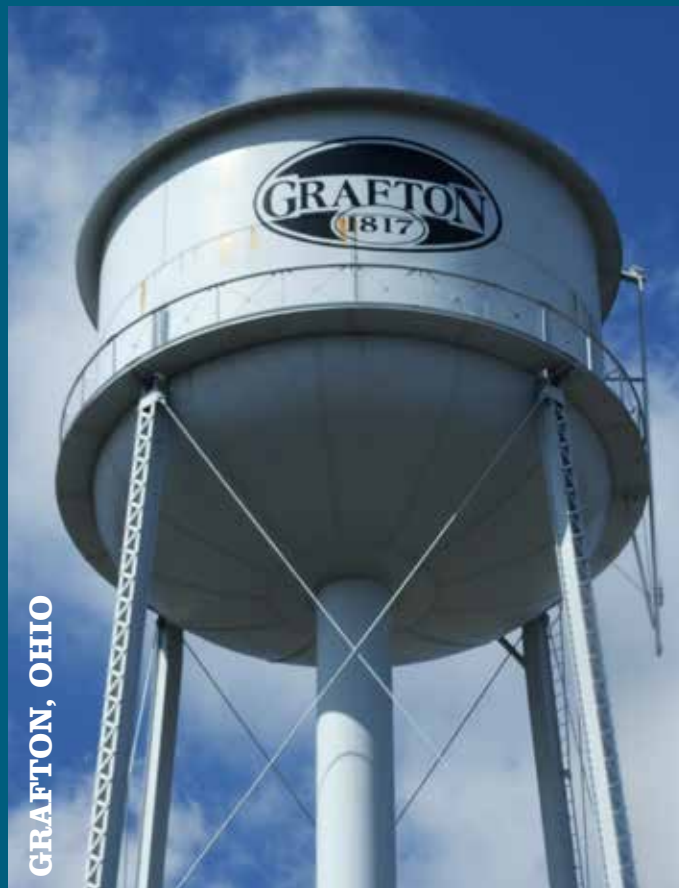


VERSAILLES, OHIO





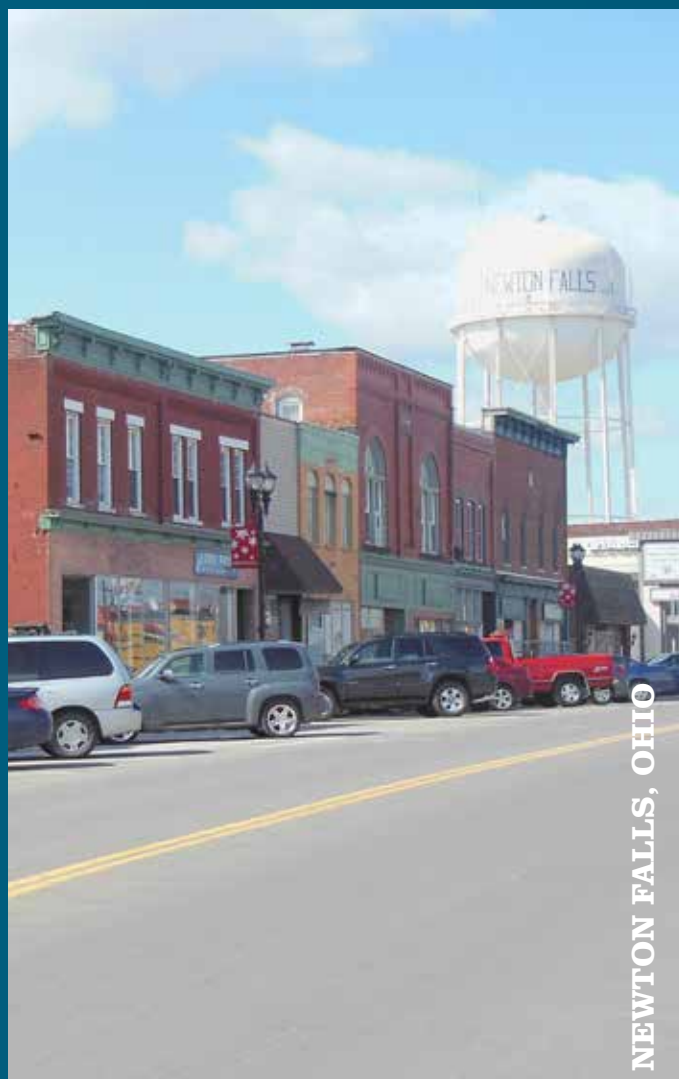
MILAN, OHIO



GRAFTON, OHIO



LODI, OHIO



NEWTON FALLS, OHIO

POSITIVE RESULTS

>>> *energizing our future*

	TOTALS							
	INDUSTRIAL SERVICES		COMMERCIAL SERVICES		RESIDENTIAL SERVICES		ES SERVICES & INITIATIVES	
	2011	2012	2011	2012	2011	2012	2011	2012
EFFICIENCY SMART EXPENDITURES¹								
Expenditures by Year	\$1,249,015	\$2,149,008	\$1,059,783	\$2,130,394	\$1,396,123	\$1,753,132	\$3,704,921	\$6,032,535
Annual Budget Estimate	\$2,271,876	\$2,258,487	\$1,813,230	\$2,126,214	\$2,638,212	\$2,294,547	\$6,723,317	\$6,679,248
Unspent Annual Budget Estimate	\$876,487	\$109,479	\$417,841	-\$4,180	\$1,242,089	\$541,415	\$3,018,396	\$646,713
% Annual Budget Estimate Unspent	39%	5%	23%	-	47%	24%	45%	10%
ANNUAL MWH SAVINGS								
Cumulative MWh Savings	10,262	28,737	5,468	23,727	2,018	7,060	17,748	59,524
3-Year MWh Goal ²	30,000	33,371	22,000	23,126	23,000	24,165	75,000	80,662
% of 3-Year MWh Goal	34.2%	86.1%	24.9%	102.6%	8.8%	29.2%	23.7%	73.8%
COINCIDENT KW SAVINGS								
Coincident Peak kW	1,267	2,986	1,077	4,066	292	446	2,636	7,497
TOTAL RESOURCE BENEFITS SAVINGS³								
Total Resource Benefits	\$6,330,890	\$14,252,826	\$3,624,981	\$11,551,436	\$1,184,828	\$2,103,765	\$11,140,699	\$27,908,027
LIFETIME CUSTOMER SAVINGS								
Lifetime customer savings (\$)	\$11,774,060	\$19,994,495	\$6,777,030	\$20,852,190	\$1,904,337	\$3,787,706	\$20,455,427	\$44,634,391
Lifetime customer savings (MWh)	145,857	258,691	81,279	238,171	17,489	40,348	244,625	537,211
NET LIFETIME ECONOMIC BENEFITS⁴								
Overall Lifetime Economic Value of Efficiency Smart Investments	—	—	—	—	—	—	\$5,901,710	\$16,536,703
NET END USER COMPLETIONS OF EFFICIENCY MEASURES								
Project Completions	39	122	103	244	6,582	9,829	6,724	10,195

¹ Underspending in 2012 was due to higher project yields and lower program expenses. Surplus funds have been reallocated to support new initiatives and increase financial incentives in 2013.

² 2011 savings goal is based on subscription level of approximately 6.3 million MWh in retail sales, while 2012 is based on subscription level of 6.7 million MWh.

³ Total Resource Benefits Savings represents the present value of lifetime avoided electrical energy and demand charges as well as fossil fuel and water savings that result for energy efficiency measures.

⁴ Net Lifetime Economic Value is equal to Total Resource Benefits plus Operation and Maintenance Savings, minus the costs paid by Efficiency Smart to operate the program and the measure costs paid by participants.



Emission Reductions¹

EMISSION REDUCTIONS	TOTAL REDUCTIONS	
	2011	2012
CARBON DIOXIDE (CO ₂)	32,759,874 LBS	106,815,167 LBS
MERCURY (HG)	0.92 LBS	3.01 LBS
METHANE (CH ₄)	369 LBS	1,203 LBS
NITROGEN OXIDE (NO _x)	64,582 LBS	210,573 LBS
NITROUS OXIDE (N ₂ O)	554 LBS	1,805 LBS
SULFUR DIOXIDE (SO ₂)	270,332 LBS	881,398 LBS

¹ Emission Reductions are based on the Environmental Protection Agency's eGrid GHG annual output emissions rates: www.epa.gov/cleanenergy/energy-resources/egrid/index.html



ELDORADO, OHIO

AMP Expenditures ¹

SERVICES EXPENDITURES	AMP ADMINISTRATION	
	2011	2012
EXPENDITURES	\$391,853	\$708,036
ANNUAL BUDGET ESTIMATE	\$565,854	\$797,753
UNSPENT ANNUAL BUDGET ESTIMATE	\$174,001	\$89,717
% ANNUAL BUDGET ESTIMATE UNSPENT	31%	7%

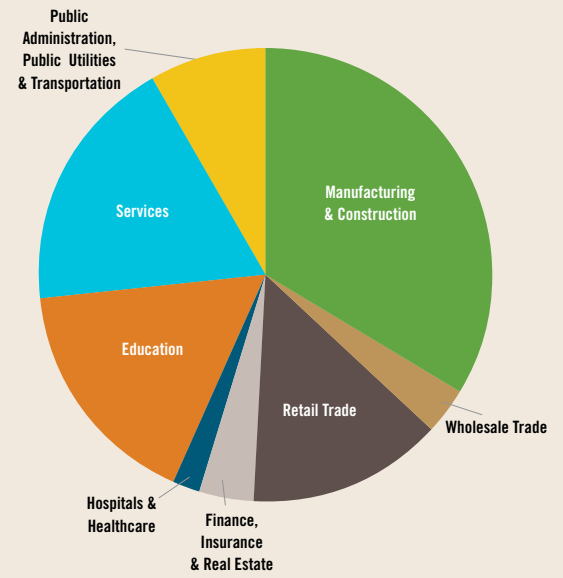
¹ Source: AMP Budget vs. Actual Statement for the quarter

Aggregate Benefits by Year

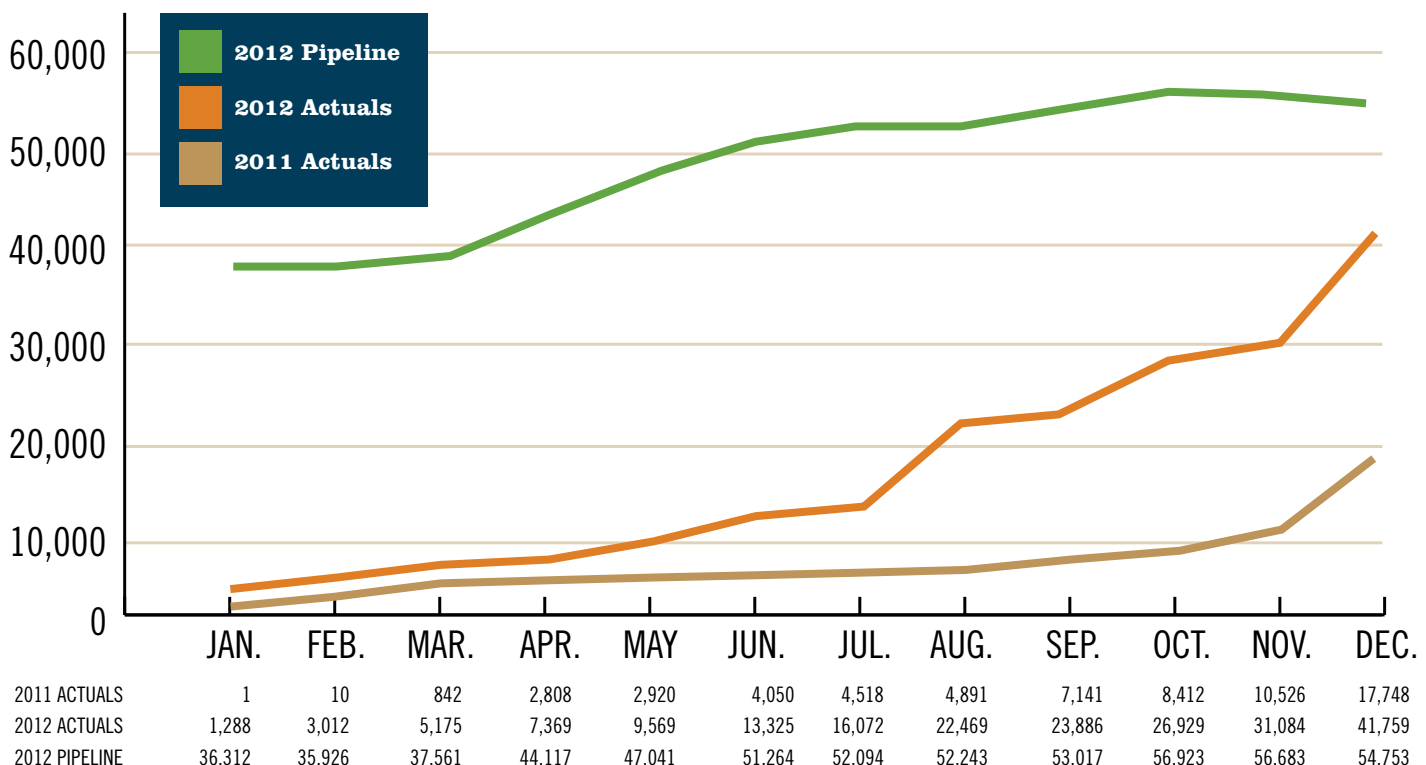
SERVICES	AMP ADMINISTRATION	
	2011	2012
TOTAL RESOURCE BENEFIT	\$11,140,699	\$27,908,027
TOTAL PROGRAM COSTS PAID BY PARTICIPANTS	\$3,219,740	\$9,055,678
BENEFIT-TO-COST RATIO	3.46	3.08

Project by Sector

The eight key sectors that completed the most projects through Efficiency Smart in 2012 were Manufacturing & Construction; Services; Education; Retail Trade; Public Administration, Public Utilities & Transportation; Finance, Insurance & Retail; and Hospitals & Healthcare. This chart illustrates the 2012 breakdown of Efficiency Smart projects by these sectors.



Efficiency Smart Cumulative Energy Savings by Month



POWERING >>> FORWARD

Efficiency Smart has made a substantial impact by helping subscribing municipal electric utilities decrease their customers' energy consumption. During 2012, Efficiency Smart helped these utilities reduce their electric load by an average of 0.80 percent.¹

Efficiency Smart will continue to ensure electric usage reduction well into the future through its pipeline of commercial and industrial energy efficiency projects. "Pipeline opportunities" are categorized into three groups—projects that have at least a 25 percent, 50 percent, or 75 percent likelihood of completion. Heading into 2013, we had identified 383 energy efficiency projects in our pipeline with a combined projected savings of 46,637 MWh.

As overall awareness of Efficiency Smart grows, and as more and more businesses utilize Efficiency Smart's services to complete subsequent projects, it has become evident that there is long-term demand for energy efficiency services in our participating communities. This need is also apparent on the residential side, where momentum is building as customers' awareness, understanding, and adoption of energy efficiency continues to expand.

To support our growth, we will continue to enhance our marketing and communications to end-use customers. This includes unveiling a better-defined brand, launching a new website, and establishing a presence on multiple social media platforms. These items will be the building blocks of future promotional campaigns, and will support other endeavors aimed at improving the customer experience, such as the integration of online videos.

Efficiency Smart will also expand on services by incorporating several new items at the program level to further increase energy savings for subscribing municipal electric systems. Details about new and enhanced services planned in each area can be found under the program headings in this section.

Custom Program

Efficiency Smart's Custom program will remain focused on achieving performance goals for all participating municipal electric systems in 2013. Rather than introducing new initiatives, we will augment current efforts by:

- Providing extra support to communities that require additional assistance to meet their goals
- Maintaining a robust pipeline of opportunities in all communities
- Working to convert opportunities into projects and energy savings
- Uncovering multiple projects at businesses where more than one potential energy savings opportunity exists
- Identifying industries with high potential for significant energy savings across participating communities

Business Energy Rebates (BER) Program

Two key improvements will be incorporated into the BER program in 2013. The first includes standardizing rebate amounts for HPT8 lights that replace T12s or that are new, additional fixtures. This is expected to reduce confusion among customers regarding different rebate amounts and categories, result in fewer measures having to be recategorized and fewer rebate amounts changing, and produce better MWh yields. With these changes, Efficiency Smart will retain more generous T8 rebates than most investor-owned utilities in its service territory.

The second enhancement encompasses expanding LED rebate categories. Seven new LED measures have been added for 2013, including:

- Landscape/accent flood and spot lighting
- Architectural flood and spot lighting
- Freezer case lighting
- Linear panels: 2x2
- Linear panels: 1x4
- Linear panels: 2x4
- High-bay and low-bay fixtures



In addition to these new measures, the BER program will accept retrofit kits for existing LED measures for parking and roadway fixtures, wall packs, and parking garage or canopy fixtures. The mentioned LED augmentations conceivably make Efficiency Smart's commercial and industrial rebate offerings the most comprehensive in Ohio for LEDs.

Vendor & Contractor Outreach Program

By the end of 2012, 23 allies had been accepted into the VPA initiative and 45 more companies had applied. In 2013, we will concentrate on helping potential VPAs meet the established criteria for inclusion, increasing the total number of trained allies available to complete projects in participating communities. All current VPAs will also be reevaluated to ensure they still meet the program requirements.

The VPA partnership will continue to be a mutually beneficial relationship. Efficiency Smart will serve as an information source for its VPAs, while some of these allies will provide training for Efficiency Smart staff in their area of expertise.

Residential Program

Efficiency Smart's Residential program will experience significant enhancements in 2013. The program upgrades will provide individuals with more options for making their homes as efficient as possible. Additionally, increased market penetration through more robust retail account management and in-store promotions will help make these options more accessible.

New Residential program offerings planned or currently under consideration include:

- Expanded lighting coupon campaigns that would include category coupons such as any ENERGY STAR® rated CFLs rather than just manufacturer-specific coupons
- In-store lighting buy-downs in regions with a concentration of AMP communities if third-party EM&V deems it suitable in selected areas
- New home construction rebates to coincide with the three levels of ENERGY STAR® rated homes, which will include preconstruction outreach through municipal development offices
- Home Performance with ENERGY STAR® audits that will encompass technical assistance, plan review, and rebates for efficient home upgrades
- Special incentives for all-electric homes such as rebates for electric HVAC systems or electric ranges
- Rebates for additional energy-efficient appliances and equipment—potential products being evaluated include super-efficient clothes dryers; high-efficiency electric water heaters; LED lighting; pool pumps; room air conditioners; ENERGY STAR® LED televisions, computers, printers, and imaging equipment; smart power strips; cordless yard care tools; and skylights
- Education-based initiatives for emerging markets to help reduce market barriers to introducing new technologies
- An innovative retail point-of-sale initiative that could revolutionize the way residential rebate programs are structured

Several of the above options will be tested through pilot initiatives and, if successful, will be implemented on a larger scale in the future.



Community and Small Business Outreach (CSBO) Program

Each of the 2012 CSBO activities—community events, council outreach, customer appreciation events, door-to-door initiatives, senior center direct installs, and smaller business outreach—will continue in 2013 with various improvements. Additionally, Efficiency Smart will offer several new initiatives during 2013 to ensure that customers of subscribing municipal electric systems have numerous opportunities to benefit from its services.

New 2013 activities include:

- Community Partnerships— Efficiency Smart staff will further develop relationships with community groups to help support outreach efforts through an inventory of local volunteers and partnerships such as relationships with local Habitat for Humanity affiliates, community gardens, food banks, and other community-centered groups.
- Educator Partnerships— Efficiency Smart will become more involved in the K–12 education arena through an enhanced partnership with OEP and other efforts, such as a possible science and energy summer camp and energy efficiency program development.
- Multifamily Initiative— free or heavily-discounted energy-efficient products will be offered to tenants and landlords of multifamily complexes in economically disadvantaged areas based on criteria derived from census data.
- Product Catalog and Fulfillment— Efficiency Smart will offer smaller businesses a rebate form and a catalog of discounted energy-efficient lighting, appliances, and equipment, with order fulfillment through a major home improvement retailer.
- Student Housing and Student Life— Efficiency Smart will partner with colleges and universities to implement initiatives in collaboration with student groups, and will also offer free or heavily discounted energy-efficient products to student residence facilities, student housing agencies, and those students in a home served by a subscribing municipal electric system.

In addition to the above initiatives, Efficiency Smart may begin introducing LED lighting through CSBO activities in communities where market data indicates an accelerated level of CFL penetration. Extra staff will also be dedicated to the CSBO program to help support additional and enhanced initiatives.

ENERGIZE YOUR COMMUNITY *with proven programs*

Energy efficiency options are a service that end-use customers have come to expect from their electric utility provider. Efficiency Smart offers public power communities a collaborative partnership, turnkey energy efficiency programs, and extensive technical services and assistance to meet their customers' expectations while relieving them of the challenges inherent to internal program implementation.

In addition to offering benefits to the end user, energy efficiency gives communities a competitive advantage. Saving energy is less expensive than incurring new, long-term power supply costs. Efficiency Smart encourages residents and businesses to adopt cost-effective energy efficiency solutions that provide reliable and verifiable energy savings. When end-use customers install energy efficiency measures, municipal electric systems can keep costs lower and avoid or defer higher-priced power in the future.

Service Delivery Period

A subscription effort will be initiated in 2013 for a contract beginning in 2014. AMP members not currently participating in Efficiency Smart that are interested in participation may enroll for a January 1, 2014, start date, or at selected enrollment times in the future.

Services Currently Offered or Under Consideration

- Discounts on residential energy-efficient lighting
- Rebates on qualifying energy-efficient appliances and equipment for homes
- Free pickup of and incentives for recycling secondary refrigerators and freezers
- Residential new construction incentives
- Home Performance with ENERGY STAR® audits
- Community-based energy efficiency initiatives, such as CFL giveaways and product direct installs
- Services targeted to lower- to moderate-income customers and those with other barriers to implementing energy efficiency measures
- Education-based initiatives focused on introducing energy efficiency concepts at the K-12 and college levels and reducing market barriers through general education
- Special incentives and assistance for small businesses that use less than 20,000 kWh of electricity annually
- Rebates for more than 90 energy-efficient products for businesses that use between 20,000 and 500,000 kWh of electricity annually
- Custom technical assistance, account management services, and financial incentives for businesses that use 500,000 kWh or more electricity annually
- Information sources such as a call center, a website, and promotional materials
- Regular reporting of energy savings data
- Independent savings verification by a third-party evaluation, measurement, and verification company
- New and emerging technologies in energy efficiency

Efficiency Smart looks forward to assisting current and future participants with all their energy efficiency needs. The enrollment period for 2014 program offerings will begin in the summer of 2013. AMP member utilities interested in learning more about re-subscription or future participation are encouraged to connect with Randy Corbin at rcorbin@amppartners.org.



“One of the biggest benefits of participation in Efficiency Smart has been the cost savings realized by our customers who have taken advantage of the program. They have reduced operating costs, which makes them more competitive and keeps money in the local economy. Also, the entire community benefits when our system demand charges are reduced. With the positive customer response and the success in our community, it is highly likely we will re-subscribe to the program.”

BRIAN P. O'CONNELL, P.E.
UTILITIES DIRECTOR, CITY OF BOWLING GREEN
(BOWLING GREEN, OHIO)



“There’s no cheaper power than the power you don’t have to buy. There certainly is a cost to energy efficiency. But if you look at what the cost of the program is versus what it would actually cost to go to market and buy that power, you’ll see that you’d save tremendous amounts of money. Plus, your customers WANT this type of program—I’m guaranteeing it. These are the kinds of incentives that customers are not only going to want but are going to DEMAND of power suppliers.”

JON BISHER, PhD
CITY MANAGER, CITY OF NAPOLEON
(NAPOLEON, OHIO)



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