

Capturing Unclaimed Energy Rebate Revenue with Analytics

Executive Summary:

Energy costs are among the greatest operating expenses for almost any operation. The more locations your organization has, the greater your energy consumption, as well as the greater the potential for energy savings. New technologies and innovations in lighting, heating and cooling, and building management are making it easier to reduce energy use, and utilities are offering more incentives and rebates to encourage companies to reduce power consumption and lower their carbon footprint. The challenge is that the more incentives utilities create to encourage reduced power consumption, the more complicated it becomes for businesses to maximize returns from rebate incentives.

Reducing energy consumption is good for business and it's good for utility companies. However, managing the process of applying for energy efficiency incentives has become sufficiently complex that a new industry has emerged to help both utilities and energy customers manage energy rebates. Implementers help utilities manage incentive programs, including creating rebate metrics, calculating savings, measuring incentive levels, and issuing payments. Rebate administration firms aid corporate customers with rebate program applications and payments, helping them navigate rebate terms, measure energy consumption, manage all the necessary paperwork, and yield greater savings from energy rebates.

There are more than 3,300 separate electricity providers in the United States, each with its own separate energy efficiency programs. It's virtually impossible and incredibly time-consuming for companies to manually manage their own energy rebates. However, by hiring the right rebate administration resources, applying the latest in big data analysts, and having a comprehensive database of energy rebate programs and products, companies can simplify their energy management programs and maximize energy rebate returns.

This white paper will examine the challenges companies face as they strive to maintain greener operations, developing system retrofit and new construction strategies to reduce energy consumption while maximizing returns on energy rebates. It also will discuss how platforms such as Leidos AMPLIFY can help companies more effectively manage energy rebate programs.

Introduction: Energy Rebates Are Overlooked as a Source of Revenue

Companies across the country are under pressure to adopt "greener" business practices to reduce pollutants, making them better corporate citizens and winning the admiration of customers and stockholders. Reducing energy waste is one of the easiest ways to promote greener business practices, and a strategy that can yield substantial returns in the form of energy incentives. Not only do businesses save on energy costs, they can garner substantial revenue from energy rebate programs. In fact, energy rebates are a largely overlooked source of potential corporate revenue.

Businesses are looking to cut their energy consumption, reduce their carbon footprint, and recoup costs by lowering electric bills in a variety of ways. For example, the green building sector is booming as more organizations invest in green construction to cut energy costs and increase property value. According to the U.S. Green Building Council (USGBC)¹, buildings account for 40 percent of CO₂ emissions, more than the industrial and transportation centers. LEED (Leadership in Energy and Environmental Design) certified buildings have 34 percent lower CO₂ emissions, use 25 percent less energy, and use 11 percent less water. LEED construction also has diverted 80 million tons of waste away from landfills. Clearly LEED certification is good for business as well as the planet. The *Digitalist Magazine* reports² that by the close of 2016, more than 13.8 billion square feet of building space were LEED certified.

In addition to new construction, green building retrofits are on the rise. The World Green Building Trends Study³ says that 43 percent of companies surveyed plan green retrofit projects over the next three years. The USGBC estimates that greening building increases property value by 4 percent, and thanks to reduced maintenance and energy costs, green retrofit projects will pay for themselves within seven years. What's more, green building retrofit projects decrease operating expenses by as much as 10 percent in one year.

Reducing pollutants also means substantial savings for business. The *Washington Post*⁴ reports that air pollution from energy production caused damages was valued at \$131 billion in 2011, which is still high but an improvement from 2002 when damages were estimated at \$175 billion. Much of the reduction in damages is thought to be from improved government policies, but pollution still presents losses for businesses. For example, most of the cost of pollution comes from health issues, which means more sick days for employees.

Greening operations yields other business benefits in addition to lowering operating expenses. It demonstrates good corporate citizenship and responsibility to the community. Initiating changes to preserve the environment looks good to the board of directors and makes stockholders feel good about their investment, especially if you can show the ROI that goes with greener operations. One concrete way to demonstrate ROI by reducing energy consumption is by showing payments from energy conservation incentives from utilities. Estimates are that more than \$1.2 billion is allocated to rebates and incentives for lighting alone.

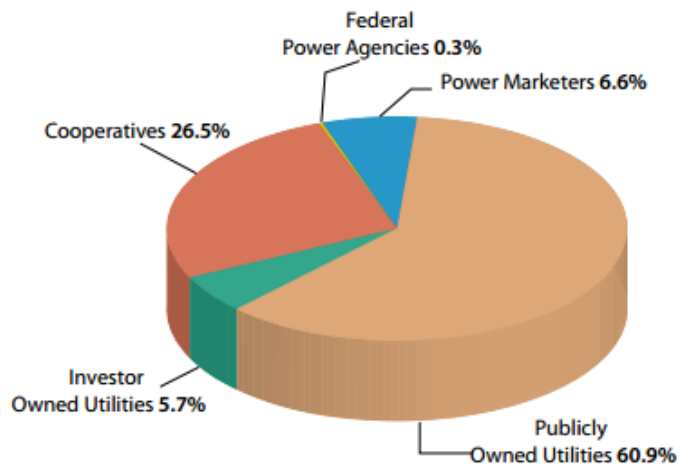
There are certain types of companies that are likely to yield more returns from energy rebates than others. Typically, larger organizations with multiple locations spanning different utility markets (multiple states or regions) have a greater opportunity for returns from energy rebates. Larger operations tend to have more potential areas where they can save energy, such as lighting, data center operations, HVAC, and building management and automation. For example, an organization with 7,512 locations could be eligible for \$10.6 million in energy incentives, and could save \$38.8 million in energy costs annually.⁵

The question for is where will you get the greatest returns? What region and department is the best place to start?

U.S. Electric Utility Industry Statistics

Number of Electricity Providers

		<u>% of TOTAL</u>
Publicly Owned Utilities.....	2,013	60.9%
Investor-Owned Utilities.....	189	5.7%
Cooperatives.....	877	26.5%
Federal Power Agencies.....	9	0.3%
Power Marketers.....	218	6.6%
TOTAL	3,306	100.0%



The task of administering energy rebates, especially for larger organizations, is too much for one person, or even one department. There are too many variables. There are federal, city, and state regulations, in addition to regulations imposed by the utilities. The more locations you operate, the more potential for returns but the more there is to track. With more than 3,300 electrical utilities⁶, it's impossible to try to track all the variables, let alone dealing with the paperwork. In fact, most organizations don't consider revenue from energy rebates as all that important. Energy management is usually part of building management, which has neither the time or resources to initiate an energy rebate program. As a result, companies are abandoning millions of dollars in unclaimed energy incentives.

Energy Rebate Programs Are Growing

Utilities offer companies large cash rewards in rebates each year as incentives to install more efficient equipment and lighting and find new ways to reduce energy consumption.

Lighting, for example, consumes between 40 and 50 percent of energy produced by utilities and is by far the biggest rebate category, and where most contractors and larger installations see as their primary opportunity for ROI from energy rebates. HVAC and cooling systems are another equipment category that consumes a lot of energy, and companies that maintain large facilities and data centers can benefit from improving the efficiency of heating and cooling.

Energy producers have a number of compelling reasons to reduce demand for power, and rewarding customers to conserve offers a payoff for the utility and the company. Here are some of the biggest motivators that compel utilities to promote energy conservation:

1. **Regulatory mandates** – Utilities are falling under increased government scrutiny to reduce emission rates and demonstrate environmental responsibility. Regulators also see most utilities as monopolies so they watch energy rates carefully to protect rate payers. If the utility has to raise energy rates, rebates are one way to help rate payers reduce energy costs and soften the impact of a rate increase.
2. **Reduce peak demand** – To ensure customers' energy needs are met during periods of peak demand, utilities need to produce more energy when demand exceeds capacity in order to prevent brownouts. To get more revenue to pay for more capacity, utilities can raise rates or conserve energy. Conservation is more cost-effective, and more popular with customers and regulatory agencies.
3. **Public perception** – Every company wants to be perceived as green, including utilities. Promoting energy efficiency and conservation improves the corporate image for power companies.
4. **Give customers their own money as an incentive** – One of the great things about offering rebates is it doesn't cost the utilities any real money. Promoting rate payer efficiency programs using rebates gives customers a chance to earn their own money back while promoting energy conservation.

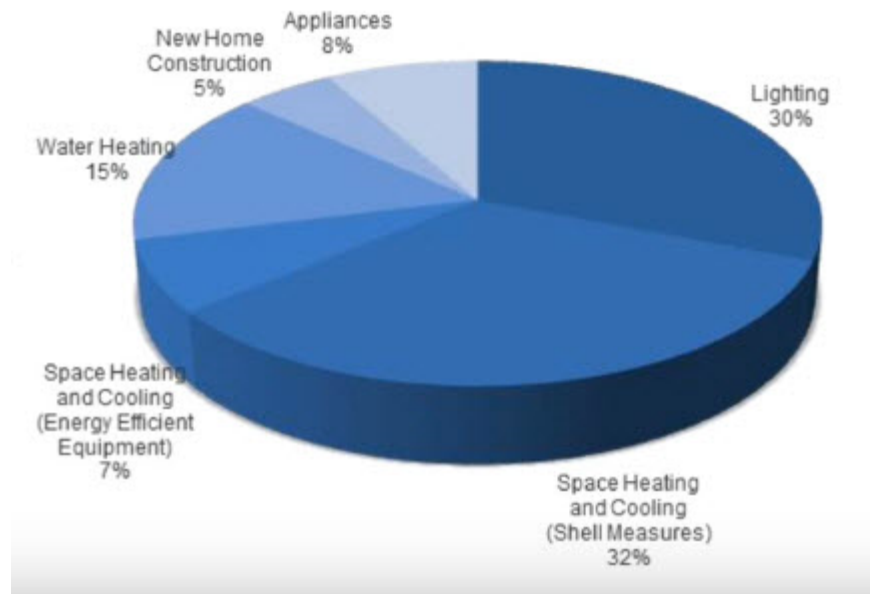
There are different types of rebate programs, each geared to meet the needs of different types of customers and equipment. Rebate programs generally fall into two basic categories:

1. **Prescriptive rebates** – Prescriptive incentives are calculated in advance and allocate as a standardized rebate for replacing specific types of lighting or equipment. For example, replacing a 60W halogen light with an energy-saving 60W LED will yield a preset rebate amount of \$25, for example. Applying for prescriptive rebates requires taking an inventory of all energy-saving upgrades and matching them to a preset rate sheet, which can be a very difficult task.
2. **Custom rebates** – Custom rebates are calculated for the specific amount of energy saved by an individual corporate customer. A baseline for equipment usage is established and compared to power consumption for new, energy-saving equipment. The difference is calculated and the rebates are issued based on a rate for each kilowatt hour saved. For example, replacing 400 200W high bay light fixtures with energy-saving LED lighting would yield an energy savings of, say, 217,000 kW. If you calculate the rebate based on 12 hours of operation, 365 days per year, at \$0.02 per kilowatt hour, the incentive would be \$42,000.

More rebate programs are becoming available as energy rates rise, and regulators are scrutinizing utilities more closely, and more energy providers are adopting more custom rebate programs than prescriptive programs. This makes calculating rebate returns more complex.

Depending on how the energy incentive is structured, you have to track each energy-saving device or product installed, and either match it to a prescriptive rate or establish a baseline for custom rebates. Of course, terms and tiers will differ with each utility provider, or even for different regions services by the same utility company. You also have to understand the ROI from the rebates to determine cost-

effectiveness for your operation, which means calculating equipment and lighting replacement costs, maintenance avoidance, installation costs, target payback period, and other factors.



How utilities allocate energy incentives

Managing energy rebates is more than a full-time job for some organizations, and most companies only have one or two people responsible for managing the company's electric bill. Energy rebates are an afterthought, but they can be incredibly lucrative if you understand how to manage them.

Energy Rebate Managers Simplify Rebates

Energy incentive administration and rebate management companies can simplify claiming and collection of utility rebates. These "rebate harvesters" are part of an emerging service industry that helps corporate customers maximize returns from utility energy conservation incentive programs. As utility incentive programs become increasingly complex, and more lucrative, rebate managers can yield substantive returns from these energy rebate programs, particularly for larger companies with multiple locations.

Clearly utility rebates are too diversified and complex to manage without computer technology. Manual administration processes are time consuming and prone to errors in applications where there is no room for error. As a result, rebate managers maintain databases of the latest incentive program rates and terms from multiple energy providers. They also use intricate algorithms to calculate returns and facilitate rebate paperwork.

While these rebate aggregators can find sufficient returns to pay for their services, many of them still only capture a fraction of available rebate revenue. And most rebate harvesters set a minimum threshold for their services and insist on payment in advance, so application accuracy tends to suffer. In

short, many rebate harvesters tend to be expensive and inaccurate because they lack the resources to execute properly.

As a result, much of the money allocated by the utilities for incentives are left unclaimed and are given away at the end of a program cycle to meet their goals.

Automating Nationalized Rebate Programs

There is a better way. By applying the latest database technology, harnessing big data techniques, and maintaining accurate track of utility rebates, it's possible to calculate rebate revenues in advance, before even filling out the applications. Automating the utility rebate process using a comprehensive data set and automation eliminates human error, reduces time to completion, and increases rebate returns.

To provide effective rebate management services you need to have a number of elements:

1. You have to have comprehensive database tracking rebate programs. As noted above, there are more than 3,300 energy producers in the United States, each with its own changing list of rebate initiatives. To recoup as many energy incentives as possible, you have to start with an up-to-date list or nationwide programs, including terms and tiers, to identify those incentives for which you qualify.
2. You also have to a comprehensive list of certified, energy-saving products that qualify for rebates, including energy consumer specifications. This means cataloging different, fans, heaters, computer hardware, HVAC systems, other devices, all of which qualify for incentives either as prescriptive rebates or part of a custom energy rebate program. For example, there are thousands of Energy Star certified products, each with its own energy rating and energy savings. There also are thousands of different lightbulbs alone, each of which has a different energy rating.
3. To calculate energy savings and potential energy rebate returns you have to be able to match specific products with various rebate programs. When your operation spans multiple products and energy markets, the calculation becomes geometrically more complex.
4. To calculate total ROI, you also have to add in other factors such as procurement costs, maintenance overhead, expected product lifespan, etc. All of those factors can be calculated as part of big data analytics, creating a more accurate forecast of energy savings, potential rebate revenue, and time to ROI.

Consider, for example, one of Leidos' customers, a company that has 263 different locations across the country. To manually calculate rebates for all these locations required 60 man-days and found \$235,000 in rebates. Using a completely automated approach powered by Leidos' AMPLIFY Big Data Tool, more than \$350,000 in incentives revenue were identified in less than two hours – 50 percent more rebate returns were uncovered in a fraction of the time as manual processes.

Big data analytics not only help identify potential savings, but provide a predictive engine that can drill down to identify those areas that will yield the greatest returns. To gain a reasonable ROI from energy rebates is a matter of balancing factors such as initial cost for equipment and installation versus time to

returns. Big data analytics can help prioritize energy rebate program claims, revealing where the immediate returns lie as opposed to longer term revenue gains.

Using a real-time analytical tool such as AMPLIFY makes it possible to perform “what if” scenarios using different variables to assess possible rebate returns. Lighting, for example, is where many organizations start. However, even calculating returns from something as simple as swapping fluorescent tubes for energy-saving LEDs can be difficult. Depending on the organization, you may have to calculate for multiple types of bulbs, different bulb specifications, different rebates/incentives, variables in labor costs, etc. After analysis, it may be found that replacing lighting in one location will yield significantly more returns than another, and in a shorter period of time.

AMPLIFY Energy Incentive Capture Management

Leidos created AMPLIFY to simplify energy rebate management and help maximize returns from energy incentive programs. AMPLIFY is designed to improve the accuracy of reporting for energy conservation incentive programs and simplify incentive program submissions. The software platform provides all the necessary information for completing energy rebate applications, reducing a process that used to take hours or days to minutes.

AMPLIFY gives commercial energy customers easy access to their share of the billions of dollars available in annual energy rebates. AMPLIFY actually encourages use of greener products, since it quickly reveals the returns from program rebates that more than offset the higher costs of green technologies.

AMPLIFY includes all the elements you need for successful incentive capture management:

- A CRM/utility account to monitor potential projects and provide rebate eligibility data;
- A tracking and reporting system that monitors every step of the rebate application process;
- An automated application submission process with preapproval process management that streamlines rebate applications and maximizes incentive capture; and
- A comprehensive database of equipment specifications and components that helps automate the application process for projects anywhere in North America.

In fact, Leidos’ AMPLIFY database includes more than 800 lighting manufacturers, 17,000 lamps and fixtures, and incentive rules for every investor-owned, cooperative, and municipal utility in the United States and Canada. And since AMPLIFY is a hosted service, application data and the rebate calculation tool are available at any time, including instant pre-approvals.

Some call AMPLIFY the “TurboTax of the commercial lighting industry.” AMPLIFY uses an online application procedure that walks users through a step-by-step process that makes it easy to define projects. The interface includes dropdown menus and search functions, and even non-experts can create a customized energy-efficiency project and determine precise savings estimates, including receipt of near instant pre-approval. And the system is incredibly accurate; independent program evaluators in different regions agreed that rate return estimates were near perfect.

Using AMPLIFY, Leidos has validated more than 12,000 commercial equipment applications, verified more than 750,000 megawatt hours of annual energy savings, and approved more than \$120 million in energy incentives. Leidos’ AMPLIFY is being used by companies of all sizes in all markets, including 50 FORTUNE 500 companies that have adopted AMPLIFY as part of their facilities investment strategy.

About Leidos

Leidos is a global science and technology solutions and services leader working to solve the world's toughest challenges in the defense, intelligence, homeland security, civil, and health markets. The company's 32,000 employees support vital missions for government and commercial customers. Headquartered in Reston, Virginia, Leidos reported annual revenues of approximately \$7.04 billion for the fiscal year ended December 30, 2016. For more information, visit www.Leidos.com.

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