Leveraging EPACT and Financing for Commercial Lighting Direct Install Programs

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ABSTRACT

Because of the tight economy, affordability is the most important factor for business owners considering energy efficiency upgrades; they also want to see a clear and attainable payback period. To lower the cost to the customer and decrease the payback period, Central Hudson Gas & Electric reinvented its commercial electric energy efficiency program in 2010 by focusing on lighting, hiring a direct installer and offering financing. In addition, by leveraging the EPACT tax deduction for commercial buildings, the utility was able to make the program essentially free for municipal buildings including public schools.

This paper has four sections: 1) a summary of the economic climate and the challenges of implementing a commercial electric energy efficiency program, 2) how Central Hudson reinvented its program, 3) understanding how the EPACT tax deduction can be leveraged for municipal customers, and 4) the positive results of Central Hudson's reinvented program.

A Comprehensive Program without Participants

Central Hudson is a medium-size utility, serving about 300,000 customers in New York's Mid-Hudson Valley. In the spring of 2009, the utility started a new energy efficiency program for commercial electric customers, targeting lighting, motors, drives, and HVAC measures such as air conditioning. The program offered prescriptive incentives, mail-in rebate forms, and a group of commercial trade allies from which customers could choose.

The utility had approximately 2.5 years to achieve its goal of 50,942 MWh in energy savings. Life was good. On paper, the program seemed like it would work.

There were approximately 23,000 non-residential customers eligible for the commercial program, but the service area is spread across eight counties. Some areas are very rural and there are no urban areas but rather just a few small cities. The commercial program targeted mid-size (100-350 kW of average monthly demand) and small customers (under 100 kW), with most in the small size category.

The program was promoted through commercial energy efficiency workshops, advertisements in business publications, news releases, and articles in chamber of commerce newsletters. The utility also mailed energy reports that targeted businesses likely to benefit from the program. But even after all these tactics, there was very little participation. Very few rebate forms were coming in and even worse, customers had many questions about exactly what measures were eligible and the rebate level for each. Projects were delayed for months. Clearly, something needed to change—and Central Hudson was running out of time.

On the Hook

The commercial electric program was one of several approved by the New York State Public Service Commission (PSC) to help meet New York State's ambitious target of reducing energy use in the state 15% by the year 2015. Approved utility electric programs were subject to an incentive or penalty based on performance from 2009 through 2011. Utilities could earn an incentive if they reached 80% of the PSC's energy savings goal or be penalized for falling under 70% of the goal. For the commercial electric program, Central Hudson stood to face penalties of up to $2 million.

Like other New York utilities, Central Hudson's energy efficiency program administrators wondered if the savings goals were achievable. This was the first time the utility had deployed a commercial energy efficiency program in over 10 years, and the bleak economy was keeping many businesses from making facility improvements. For example, while many business owners viewed the program offerings as a "good deal," they simply were not investing in anything that required an out-of-pocket expenditure.

A Critical Disconnect

During a process evaluation that included surveys with customers and contractors, Central Hudson uncovered a critical disconnect: Many prospective projects went cold after the initial energy audit. Customers could have energy efficiency improvements performed by any approved contractor or trade ally. But because trade allies have different pricing and equipment offerings, the energy auditor was not able to develop specific proposals. Instead, after receiving an audit, customers were required to find a contractor and obtain quotes for the work; busy commercial customers did not follow through with this step during the bleak economy. As a result, most audits were not converted into projects.

After 18 months of almost no progress, Central Hudson decided to reinvent its program in an all-out effort to reach the goal. Program administrators aimed for a program that was easy to sell and deliver, could install energy efficiency measures quickly (they had a lot of lost time to make up for) and required no out-of-pocket expenditures for the customer.

Program administrators thought fewer trade allies would make the program easier for both customers and the utility, and just a single trade ally might even better. To test the model before going into contract with a direct installer, Central Hudson contacted its trade allies administering lighting installations, and asked for proposals to become an "advanced trade ally." Most of the local companies who submitted bids had limited staff to dedicate to the project. Out of the six proposals received, one stood above the rest because it could offer the resources to complete many energy audits in a short time, could work with a utility to offer financing to customers, and was familiar with the EPACT tax deduction for commercial buildings. This contractor fulfilled the advanced trade ally role for two months as a trial period before becoming the exclusive direct installer. The number of energy audits and projects completed started to rise during those two months.

Change Everything

Central Hudson reinvented its commercial electric energy efficiency program by instituting six key program changes in just two months:

1. **Focused on Commercial Lighting**. Central Hudson narrowed program offerings to energy-efficient interior lighting. There was little interest in the other measures, and program administrators learned from other utilities and through industry conferences that lighting (especially T-12 replacements) represented the low-hanging fruit for offices and most commercial buildings.

2. **Used an Exclusive Direct Installer**. Central Hudson replaced several trade allies with one exclusive direct installer with the staff and the financial motivation to complete hundreds of lighting projects in a short amount of time. Lighting trade allies had submitted proposals to become the exclusive direct installer. The direct installer hired was able to dedicate to the program six full-time energy auditors who developed site-specific proposals and converted proposals into projects efficiently. Because the direct installer was headquartered in a neighboring state, there were some complaints from local trade allies and installers, but the direct installer did hire local electricians to install projects.

3. **Realigned Incentive.** Instead of prescriptive rebates for different types of lights and replacements, Central Hudson offered 70% off the cost of the entire lighting upgrade, including installation. This one-size-fits-all offer applied to every business customer no matter how many T-8s, T-5s, ballasts, reflectors and occupancy sensors were installed. Central Hudson concentrated more program funding into incentives because it was important to offer a low-cost solution to cash-strapped businesses. This left less money for Central Hudson’s regular energy efficiency budget line items such as trade ally training and marketing, but the direct installer made up for this by adopting a sales approach to reach more customers faster. Central Hudson started paying the incentive to the direct installer, who handled all parts of the energy efficiency upgrade, including the energy audit, proposal, paperwork, installation, and disposal of old lights. Rebate forms were eliminated, and the customer was responsible for only the amount owed.

4. **Added a Financing Option:** For the cost of the energy efficiency upgrade, Central Hudson covered 70% and offered 0% financing for the remainder. Central Hudson gained approval from the PSC to provide financing as part of the program, but implementing on-bill financing would have been costly and time-consuming. Instead, Central Hudson enacted third-party financing through separate bills with the following features:
   - The direct installer (which was owned by a large, national corporation) covered the cost of the entire project, and billed Central Hudson for the incentive portion. This means that customers who chose financing had no up-front costs for the project. Central Hudson then billed the customer through sundry bills for the financed portion and paid the direct installer as payments were received from customers.
   - The utility handled the administrative part of the financing and incurred the risk of default, which was very low.
   - Although it was the direct installer who fronted the funds for the financing, the customer perceived that the financing was part of the Central Hudson program. The customer filled out a short application that was part of the proposal but did not have go through a credit check. Any customer whose account was not in arrears was accepted.
   - Central Hudson started by offering financing for either one or two years, and then program administrators limited the term to one year to better match the typical payback period of projects.

5. **Leveraged EPACT Provision**: Central Hudson became aware of the EPACT (Energy Policy Act of 2005) tax deduction for commercial buildings and used it to make the program free for government buildings, including municipalities and public schools. Program administrators took advantage of the special rule that allows government buildings to allocate the tax deduction to the designer or energy-efficiency installer (or qualified direct installer). Central Hudson’s energy efficiency team made many presentations to town and school boards, who were pleasantly

surprised to learn they could get bright, energy-efficient lighting with no cost, and then have lower electric bills thereafter.

6. Retooled Marketing: Central Hudson aimed to make all parts of the commercial lighting program easy to understand, and this included the following:

- Marketing materials featured shorter and less complicated messaging. Central Hudson changed from messages about helping the environment to the total value of an energy-efficient lighting upgrade: Better lights and lower electric bills with no up-front costs.
- The direct installer designed shorter proposals that clearly stated the cost, energy savings and payback period.
- Central Hudson had marketed its commercial energy efficiency programs through a micro-site and separate logo, but decided to align with the more credible utility brand, which was important for business customers to see. Customers wanted to verify that this was not a sales offer from a lighting or energy company that was not affiliated with their utility.
- Central Hudson eliminated stock photos from printed and the web materials and created testimonials featuring real customers.
- Central Hudson changed from a more traditional utility program outreach model to a sales model with its own hotline and dedicated customer service representative instead of the general utility call center telephone number. The utility also began more aggressive email blasts and targeted direct mail campaigns. Central Hudson outlined territories for six full-time energy auditors, and monitored sales and energy savings through daily and weekly progress reports.
- Central Hudson used utility contacts to reach key business owners, chambers of commerce, and municipal officials. Furthermore, Central Hudson leveraged economic developers and leaders contacts since energy efficiency and economic development go hand-in-hand. This created a synergy where economic developers could reach local businesses with good news about lowering overhead costs.

Table 1: Comparing Commercial Program Features

	Old program	**New program**
Measures	Lighting, motors drives, etc.	Lighting only
Incentive	Up to 70% of equipment	Exactly 70% of entire project
Incentive type	Prescriptive rebates	One size (70% discount) fits all projects
Installer	Multiple trade allies	One exclusive direct installer
Proposal	Not explicitly included	Offered as part of turn-key package
EPACT	Not offered	Offered for municipalities
Payment	Pay in full now, wait for rebate	Pay only what you owe
Financing	No financing offered	0% financing for 1 year
Incentives distributed	$679,829	$6.8 million
Projects completed	190	1,100

How does the EPACT Tax Deduction Work?

The EPACT tax deduction for commercial buildings, sometimes referred to by its location in IRS the Internal Revenue Service tax code, Section 179D, provides an immediate tax deduction for the cost of energy-efficient improvements to commercial property designed to save energy through envelope, HVAC and lighting system improvements. Intended to offset some of the costs of qualifying energy-efficient improvements to commercial buildings, the deduction allows taxpayers to take an immediate expense for the cost of property that would normally be recovered through depreciation over decades.

To qualify, energy-efficient improvements must reduce total annual energy and power costs with respect to the interior lighting, systems, heating, cooling, ventilation and hot water systems by 50%. Partial deductions are allowed. Inspection and testing must be completed by a qualified engineer or contractor. The EPACT tax deduction was extended to December 31, 2013 by the Emergency Economic Stabilization Act of 2008.

How Much is the Deduction?

- The maximum deduction is $1.80 per square foot for a 50% reduction in total annual energy and power costs**;** and this is not to exceed the amount equal to the cost of energy-efficient commercial building property placed in service during the taxable year.
- A partial deduction of 60¢ per square foot is allowed for a 25% to 40% reduction in lighting power density.

The deduction is usually given to the organzation making the investment in energy-efficient improvements (typically the owner). However, for government buildings, the tax deduction may be taken by the designer or energy-efficiency installer.

For government owned facilities, Central Hudson covered 70% of the project, as with regular commercial customers, but the remainder was never charged to the organization. Instead, a representative from the organization signed a form affirming the project was completed by the qualified direct installer and allocating the tax deduction to the installer. This meant that the remaining 30% of projects for government owned buildings could be absorbed by the direct installer, and the utility could offer energy-efficient lighting at no cost to muncipal buildings, public schools, fire houses and police departments.

Results from the Reinvented Program

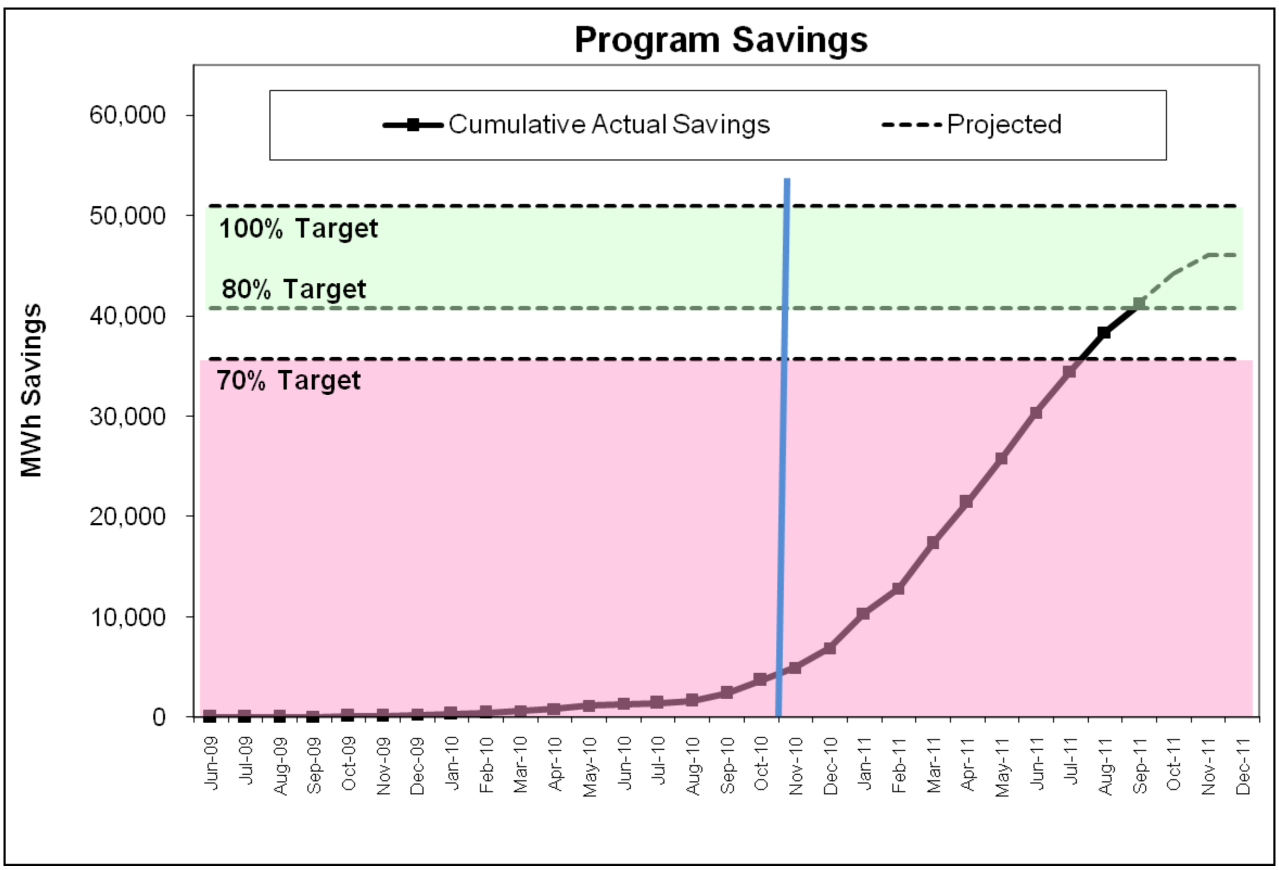
The re-invented program was not a hit with customers at first, even with the generous 70 percent discount on lighting upgrades. Furthermore, promoting a lighting upgrade to municipal-owned facilities at no cost was not as easy to sell as one might expect; it seemed too good to be true.

Central Hudson stepped up efforts by sending letters to school districts and publishing an editorial in a daily newspaper that asked why school and public officials would not want to participate in a program that saved taxpayer dollars. The editorial asked what officials would say if consituents found out they had passed up an offer to upgrade public facilties at no cost to taxpayers. A few school districts went forward with projects, and then word spread to others through regional meetings for school officials.

Using additional tactics, including repeated messaging, direct mailings and email blasts, the program began to began to spread quickly and produce these results:

- The direct installer hired more employees, and the utility started earning 3,000 MWh per month.
- Central Hudson moved projects through the pipeline in weeks instead of months.
- Approximately 75% of participating small businesses and 65% of mid-size businesses took advantage of the financing option.
- Central Hudson gave away $6.8 million in incentives in about seven months. Not only did the utility come very close to achieving the savings goal for this program, it qualified for incentives from the PSC instead of the penalties that were initially projected.
- In 2010, Central Hudson's commercial electric program (small and mid-size commercial programs combined) averaged approximately 576 MWh per month. With the re-invented program (narrowed to cover lighting only), the monthly average rose to 3,000 MWh.
- The program reduced usage for the small and mid-size commercial sector by approximately 3.5% in only 14 months.
- Approximately 30% of the savings came through municipal projects such as public schools.

Figure 2: Increase in Program Energy Savings



Caption for Figure 2: The savings goal of the program was 50,942 MWh. If Central Hudson earned below the threshold level of 70% of the target, the New York Public Service Commission (PSC) would have assessed penalties. If the utility earned above 80% of the target, the PSC would have awarded incentives. The blue line represents the point when the program was reinvented.

Recommendations

Program administrators should not hesitate to overhaul a program that is not performing. Based on its experience, Central Hudson recommends the following:

- **Re-evaluate Target Measures**: When making a broad appeal or starting a new program, it is better to limit the scope to what can be communicated clearly and concisely. Consider focusing on just one measure that offers solid energy savings instead of a suite of eligible measures.
- **Use a Direct Installer:** The advantage of a direct installer is that it is easier to create package offers for customers. Consider a director installer large enough to provide sales, energy auditing and financing. When managed effectively, direct installers can take paperwork and other hindrances out of the equation for customers. A best practice is to work with a direct installer early on to develop accurate energy savings calculations.
- **Leverage EPACT's Provisions**: Program administrators should consider the EPACT tax deduction's special rule for government-owned buildings, which allows owners of government-owned buildings to allocate their tax deduction to the designer, which can be the energy services provider.
- **Explore Financing Options**: Program administrators should consider any kind of financing that reduces the up-front costs to business owners operating under tight budget restrictions. A key reason Central Hudson achieved success is that it created financing to remove up-front costs. Furthermore, because the utility used third-party financing, it was able to make program funding go much further. If Central Hudson had to use program funding for financing, it would have taken away approximately $2.5 million that it needed to distribute through incentives in order to meet the energy savings goal.
- **Adopt a Sales Approach**: It may be necessary to move from a more traditional "Your utility now has rebates" type of messaging to a sales model, where program administrators, energy auditors and installers are motivated to sell the benefits of the program and persuade the customer using clear estimates of costs and savings. Also, the best sales models closely track numbers of participants, their position in the process and progress toward energy savings goals.

References

Internal Revenue Service Bulletin: Notice 2008-40 "Amplification of Notice 2006-52; Deduction for Energy Efficient Commercial Buildings"