



Financing Energy Efficiency Investments of Large Industrial Customers

What is the Role of Electric Utilities?

A Policy Brief of the Electricity Consumers Resource Council

Introduction

The large industrial customers of electric utilities compete in global markets and are not insulated from competitive pressures. Any increase in the cost of energy will have a negative effect on their competitiveness and therefore investments to improve the energy efficiency of their industrial processes are an essential component of their business model. They have no choice—they have to invest in energy efficiency as energy and other costs continue to increase.

In recent years states have mandated increased expenditures for ratepayer-funded energy efficiency (EE) programs by their jurisdictional electric utilities. In this capacity, utilities are directed to act as (1) tax collector and banker, (2) EE facilitator and educator, and (3) EE program administrators and/or impact evaluators. Utility EE programs are almost always implemented using mass marketing techniques.

This policy brief addresses ELCON's concern that regulatory policies designed to mandate large industrial customer participation in utility energy efficiency programs may be counter-productive and result in less energy efficiency improvements or improvements at higher than necessary cost. Large industrial customers have historically not supported regulatory mandates for utility EE programs because:

1. They can and have already increased energy efficiency more cost effectively with their own funds rather than relying on and paying for utility programs, which may not be as effective in realizing the expected returns for the dollars expended.
2. Utility programs are not typically designed to meet the specific needs of a large industrial facility where energy efficiency improvements are intertwined with complex industrial processes and the facility's often unique operational characteristics.
3. Utility programs tend to emphasize inflexible mandates without considering whether the intended results can be more cost effectively obtained by other means such as distributed generation or CHP (combined heat and power) technologies.
4. The higher rates that industrial customers pay to participate in utility-sponsored programs reduce the funds available to the customer for investing in higher value projects that make the most sense in the customer's business situation.

5. No provision is made for rewarding industrial facilities that make EE investments on their own, and in some cases such industrials are punished by being forced to subsidize the investments of their competitors or other ratepayer classes.

Large industrial customers do not face the same market barriers to energy efficiency investments as other utility ratepayers [See box]. Large industrials have access to capital markets and can borrow funds at the same or lower rates as utilities can. They also have in-

Energy Efficiency Profile Of Large Industrial Customers

1. Typically are very energy-intensive and energy comprises a significant cost of doing business
2. Often very price responsive
3. Very knowledgeable about energy efficiency (EE) and have been implementing EE projects for years or decades because it makes good business sense to do so
4. Have already captured “low hanging fruit” such as lighting and motor retrofits
5. It is in their own best interest to adopt the most cost-effective measures
6. Industrial EE projects are generally industry-, facility- or process-specific and do not conform to the “cookie cutter” programs typically offered to residential and small C&I customers
7. Extremely concerned about energy prices and the potential cost and effectiveness of new policy initiatives
8. Understand the complementary roles of energy efficiency and demand response
9. Having implemented EE projects at their facilities for years, are very concerned about subsidizing projects for less efficient customers, some of which may be business competitors

house expertise on the cost/benefits of energy efficiency investments, and this expertise is generally better than what an electric utility or its consultants can provide.

It is in large industrial customers’ best interest to deploy the most cost-effective EE measures in their factories and other facilities. This involves ongoing consideration of energy saving technologies (hardware, retooling and process equipment upgrades), demand response and the deployment of on-site generation such as distributed generation or combined heat and power (CHP) technologies. If state policies are going to be effective in promoting greater energy efficiency in the large industrial sectors, then policy makers must recognize and understand the natural limitations of the utility’s role.

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Summary of ELCON's Recommendations

- Government policies and mandates that intend to promote ratepayer-funded energy efficiency (EE) investments should recognize and give credit to EE improvements that large industrial customers have already implemented at their own expense.
- Large industrial customers should be allowed to demonstrate that they have self-directed EE programs, and be eligible to opt-out from any obligation to pay tariff-based surcharges used to fund utility programs, or alternatively, receive dollar-for-dollar credit to offset or bank revenues collected in any applicable tariff or tariff rider used to fund utility EE program costs.
- Large industrial customers that invest in EE improvements at their own expense are entitled to any energy efficiency certificates (e.g., White Tags™) imputed from such investments.
- Government policies and mandates that target electric power use reductions should recognize that often the most cost-effective measures to improve energy efficiency require net increases in electricity consumption to offset greater reductions (in terms of BTUs) in the use of natural gas or other fossil fuels.
- Large industrial customers should not be forced to “borrow” money from a utility to fund energy efficiency improvements at an effective cost of capital that exceeds a participating customer’s own cost of capital.
- Large industrial customers should not be required to pay for the so-called system benefits alleged from energy efficiency improvements of other ratepayers unless large industrial customers receive credits for comparable system benefits resulting from all energy efficiency investments they made or make at their own expense.
- Energy policies that force large industrial customers to become “free riders” of utility EE programs are counter-productive and wasteful.
- Utilities should not be given special riders or single-issue cost recovery methods to increase rates absent a showing that current procedures for establishing base rates have disadvantaged utilities in any way.
- Large industrial customers strongly support the development of advanced tariffs and business practices that increase their opportunities to provide demand response for price mitigation and improved reliability.
- An overarching principle of government policies and mandates to promote energy efficiency in the industrial sector should be to ‘first, do no harm.’

By using their own funds, large industrial customers do not have to share the bill savings attributed to energy efficiency improvements with the utility. Mandatory EE programs also create the perverse incentive for customers to become free riders. Utility EE programs tend to emphasize plug-and-play type equipment retrofits that are not typical of complex industrial processes and the fact that the large industrial customer is forced to decline to participate in such programs is unfairly attributed to the customer's unwillingness to make EE investments its priority.

ELCON Position & Recommendations

ELCON offers the following recommendations for ensuring that regulatory policies promoting utility energy efficiency programs do not work at cross-purposes with investments in energy efficiency that large industrial customers are willing and able to make at their own expense.

- 1. Government policies and mandates that intend to promote ratepayer-funded energy efficiency (EE) investments should recognize and give credit to EE improvements that large industrial customers have already implemented at their own expense.*

Large industrial customers may already have implemented their share of the EE improvements targeted by new state initiatives. The contributions of those customers should be recognized and given due credit.

Policymakers should recognize that if large industrial customers limit their demand-side investments to only the program offerings of their utilities, the net total benefits to the customer and the utility system (and other customers) would be substantially less.

- 2. Large industrial customers should be allowed to demonstrate that they have a self-directed energy efficiency program, and be eligible to opt-out from any obligation to pay tariff-based surcharges used to fund utility programs, or alternatively, receive dollar-for-dollar credit to offset or bank revenues collected in any applicable tariff or tariff rider used to fund the costs of utility EE programs.*

The substantial ongoing investments of large industrial customers to upgrade or retool manufacturing facilities stand on their own and need no qualification, and options to increase energy efficiency are always considered. A utility's large industrial customers should be eligible to opt-out of participation in utility EE programs if they commit their own resources to self-directed energy efficiency improvements that are equal to or better than what is offered to them in the utility program. This may include a concomitant requirement to self-certify existing and past efforts to promote the energy efficiency at their facilities and demonstrate that reasonable efforts to identify, evaluate, and implement cost-effective EE improvements continue to be made at the facilities. Customers should be allowed to receive dollar-for-dollar credit and to bank such revenues that would otherwise be collected from them as surcharges to fund utility programs—including EE program-related revenue true-ups or the cost of utility incentives that are passed on to customers in rates.

- 3. Large industrial customers that invest in energy efficiency improvements at their own expense are entitled to any energy efficiency certificates (e.g., White Tags™) imputed from such investments.*

Opt-out customers should also have exclusive entitlement to any tradable energy efficiency certificates (EECs) or white certificates (e.g., White Tags™) that are generated by their investments in self-directed EE investments. These certificates provide financial incentive and recognition for businesses that increase their energy efficiency. Companies can trade these certificates in jurisdictions with mandatory EE portfolio standards or retain them to demonstrate reductions in energy use and associated GHG emissions.

- 4. Government policies and mandates that target electric power use reductions should recognize that often the most cost-effective measures to improve energy efficiency require net increases in electricity consumption to offset greater reductions (in terms of BTUs) in the use of natural gas or other fossil fuels.*

Large industrial customers are always seeking new opportunities to make themselves more energy efficient because efficiency in the use of all production inputs is vital to their economic survival. At industrial facilities that use more than one form of energy or fuel, fuel switching is one such opportunity. Thus, maximizing the overall energy efficiency at a facility may often entail making net reductions in one form of energy (e.g., natural gas, fuel oil or coal) while at the same time increasing consumption of another (e.g., electricity). Policy makers should recognize and respect the need to optimize overall energy efficiency and not unwittingly implement policies that punish large industrial customers for making net energy efficiency improvements because a policy targets only one form of energy.

- 5. Large industrial customers should not be forced to “borrow” money from a utility to fund energy efficiency improvements at an effective cost of capital that exceeds a participating customer’s own cost of capital.*

If the costs of a utility’s EE programs are expensed and recovered in rates, the utility’s shareholders are not the investors—it is the program participants who are making the investment. Thus the utility’s cost of capital or return on equity is irrelevant in terms of the costs recovered from ratepayers to fund utility EE programs.

Large industrial customers who routinely finance EE investments with their own capital should not be forced to substitute their capital with funds from their utility with an effective cost of capital that exceeds the customers’ cost of capital. Funds provided by utilities almost always impose an effective cost of capital that greatly exceeds their larger business customers’ capital costs because the effective cost of capital recovered in rates includes the administrative costs of EE programs, subsidies to other customers, revenue true-ups and utility incentives.

- 6. Large industrial customers should not be required to pay for the so-called system benefits alleged from energy efficiency improvements of other ratepayers unless large industrial customers receive credits for comparable system benefits resulting from all energy efficiency investments they made or make at their own expense.*

Customers that opt-out of utility EE programs should not be allocated the costs associated with participation by other customers. Customers that opt-out should also not be allocated “system costs” under the pretense that the net energy savings of programs targeting other ratepayer classes are shared by opt-out customers. The substantial expenditures and investments made by opt-out customers at their own expense also contribute “system benefits,” yet the costs of such benefits are not allocated to other customers. Opt-out customers should only be assessed charges for system costs if they are themselves reimbursed for the costs of providing system benefits that are shared with other ratepayers.

Large industrial customers should also not be required to pay for revenue true-ups associated with decoupling or similar lost-revenue schemes. Most large industrial customers are served under tariffs that are already “aligned” with utility procurement of demand-side resources. There is clearly no alleged “disincentive” to utilities for encouraging EE investments by its largest customers, especially when those customers are using their own money to fund the EE improvements. Large commercial and industrial (C&I) tariffs are structured with separate customer, demand and energy charges and therefore the utility is assured cost recovery of costs actually incurred by each large customer. Many large customers are also on time-differentiated or real-time rates which should further promote efficient decision-making by both the utility and its largest customers.

7. Energy policies that force large industrial customers to become “free riders” of utility EE programs are counter-productive and wasteful.

State energy policies often attempt to force market transformations, *i.e.*, lasting structural and behavioral changes in the marketplace, resulting in increased adoption of energy-efficient technologies. Such policies have merit if focused on clear examples of market failures and do not simply second-guess reasonable decision-making and investment choices under a budget constraint. The risk of mandatory performance by large industrial customers is that they will shift from self-directed investments using their own resources to becoming free riders of the utility programs. The end result is that the most cost-effective energy efficient opportunities are displaced by less cost-effective measures with higher capital costs. This is counter-productive to any policies that seek to maximize efficiency and a wasteful use of resources.

8. Utilities should not be given special riders or single-issue cost recovery methods to increase rates absent a showing that current procedures for establishing base rates have disadvantaged utilities in any way.

An important element of the traditional ratemaking process is to review the dynamic nature of revenues, expenses and investments and establish appropriate base rates that provide utilities with a reasonable opportunity to earn a fair return under prudent management. Almost all state regulatory commissions provide a rate case process to evaluate and measure the appropriate overall cost of service where a balanced review of jurisdictional expenses, rate base investment, the cost of capital, and revenues at present rates are investigated at a common point in time (*i.e.*, the test period). As the procurement of demand-side resources becomes more commonplace, the process for allocating and recovering the costs of these resources becomes part and parcel of each utility’s normal business model. There is no legitimate reason to isolate the process used to allocate and recover the costs of these resources from the process used to

determine the utility's overall revenue requirement or allow any other special treatment. Utilities should be denied any opportunity to seek special riders or to initiate single-issue cost recovery proceedings to escape the more comprehensive—and fairer to ratepayers—treatment of cost allocation and recovery afforded by general rate cases.

9. Large industrial customers strongly support the development of advanced tariffs and business practices that increase their opportunities to provide demand response for price mitigation and improved reliability.

Large industrial customers have long supported the integration of demand response with the short-term deployment of supply-side resources to achieve the least-cost balancing of supply and demand. Industrial demand response is a competitive source of ancillary services such as spinning reserves and regulation, and emergency power. It is also widely recognized that demand response can mitigate price spikes and price volatility, reduce system load factors, mitigate the potential for market manipulation and enhance grid reliability. Demand response is a complementary resource to energy efficiency, and many large industrial customers can increase their potential capability to provide demand response at the same time investments in energy efficiency are implemented. However, any investment to increase a facility's demand response capability must be cost justified, and in many states the requisite tariffs and business practices do not provide the pricing mechanisms and compensation to justify such investments. Such pricing mechanisms do not require utility investment on the customer's side of the meter and can be an important resource in a utility's long-term resource plan and may provide greater long-term value than energy efficiency programs.

10. An overarching principle of government policies and mandates to promote energy efficiency in the industrial sector should be to "first, do no harm."

In these economically uncertain times, large industrial customers are increasingly subject to competitive or financial pressures that may require the customer to reduce or suspend—but not abandon—new investments in energy efficiency. Utility costs are increasing because of environmental compliance requirements, rising fuel costs, and growing capital costs of new and upgraded infrastructure. Regulators and policy makers must be wary of embracing additional initiatives that will needlessly increase both rates and the financial stress on manufacturers.

Program participants must also not be subject to *de facto* regulation as a pre-condition to opt-out eligibility. The substantial ongoing investments of large industrial customers stand on their own and need no qualification. Any pre-condition should not require a participant to submit business-sensitive or confidential information that might compromise the opt-out participant's competitive position, nor should utility EE program designs unduly impair the competitive relationships of the utility's business customers such as forcing a customer to subsidize through rates any of its competitors.



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