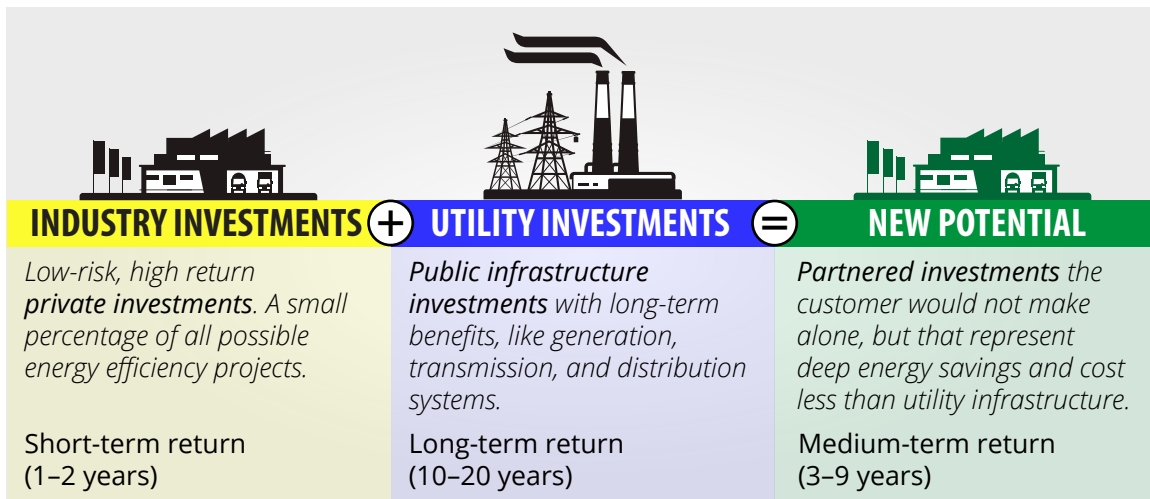


The Dollars and Cents of Industrial Efficiency Program Investment



When the short-term investment criteria of private companies are combined with the longer-term investment capabilities of utilities, many more potential energy efficiency projects become cost effective. The typical requirement for rapid return on investment in the private sector may not allow investing in these projects alone, but the availability of utility program dollars often makes the business case for energy and cost savings opportunities that would not otherwise occur.

INVESTMENT PERSPECTIVE OF INDUSTRY

Private companies are constrained by a demand for quick and high returns on all of their capital investments. The private business model often hinges on maximizing productivity, limiting spending, and avoiding debt, which requires companies to make investments with very short-term payback periods of just one to two years. This means chief financial officers can consider only a small number of energy efficiency projects—those that meet the criteria of a low-risk, high-return private investment strategy. The few efficiency projects that clear this hurdle are also in competition for funding from the same, limited capital budget as dozens of other high-priority projects in a given year.

INVESTMENT PERSPECTIVE OF UTILITIES

Utility companies have more flexible investment requirements and can tolerate longer payback schedules than their industrial customers. The utility business model is designed to tolerate

large-scale investments in public infrastructure, like power plants and transmission lines, which have slower returns on investment and may not pay off until 10 to 20 years in the future. That means utilities can afford to be more patient in their investment decisions, especially when they prioritize least-cost resources like energy efficiency. Utilities that are motivated to capture energy efficiency resources can contribute program dollars to help fund more complex and customized efficiency projects at industrial facilities with medium-term payback periods in the range of three to nine years.

COMBINED INDUSTRY AND UTILITY INVESTMENTS INCREASE ENERGY SAVINGS

Utility programs that effectively address the capital planning processes and financial hurdles of the private sector can achieve far greater energy savings than industrial customers can when they are left to act alone. Participation in utility programs is often the catalyst to identifying projects as well as the incentive to implement them. According to one of Xcel Energy's customers in Wisconsin, participation in the Large Energy Users program was the deciding factor in implementing several energy efficiency projects. "We wouldn't have implemented these projects without the technical and financial support of the Focus on Energy Program," said Randy Stoeckel, president of Flambeau River Papers.¹

¹ Focus on Energy, Flambeau River Papers (2014). focusonenergy.com/About/Flambeau-River-Papers.

These energy savings directly translate into greater business value for industrial customers. When completed, the energy efficiency upgrades at the Flambeau mill are expected to save more than 2 million kilowatt hours and more than \$500,000 in electricity costs each year. “Without the support of the Focus on Energy program, our mill would be less competitive, less green, and less energy efficient, and we might not be in business today,” said William (Butch) Johnson, CEO and owner of the mill.

SIX WAYS INDUSTRIAL PROGRAMS PROVIDE FINANCIAL VALUE TO BUSINESS CUSTOMERS

In general, investments in energy efficiency lower operating costs for manufacturers, which increases their productivity and improves competitiveness. When these investments are made through utility programs, businesses get the added value of access to technical expertise, project implementation support, and financial incentives that reduce the cost of initial investments. Program implementers bring a fresh set of eyes and may find opportunities that plant staff overlooked. The existence of utility programs can also have broader, system-wide economic effects that result in financial benefits. Participation in these programs can lower costs for business customers in at least six ways.²

1. **Programs help reduce the customer’s electricity consumption and thereby reduce monthly energy expenses.** Efficiency programs enable businesses to save more energy than they can on their own. Because programs can wait longer for returns, they are willing to make investments that the business would not make with its own money.
2. **Programs reduce the need for additional electric system supply resources.** As a result, the need for investments in new generation, transmission, and other infrastructure by utilities is either postponed or eliminated entirely. If these assets are not built, their costs will not need to be recovered in rates, thereby lowering electric bills for all customers, including industry.
3. **Programs reduce customer demand, which lowers wholesale energy prices.** Electricity is subject to the same rules of supply and demand as other commodities. Decreasing demand lowers prices. Increasing demand drives prices up.

² For a more detailed discussion, see Rogers 2015, The Value Proposition of Industrial Energy Efficiency Programs, available in the conference proceedings of the 2015 Industrial Energy Technology Conference: ietc.tamu.edu/wp-content/uploads/2015/04/ESL-IE-15-06-26.pdf.

4. **Programs provide benefits additional to energy savings that can lead to lower costs for customers.** These ancillary benefits may include increased productivity, improved safety, reduced output of wastes and emissions, and lower maintenance costs.³

The following additional benefits apply in states where the electric-generation market has been deregulated:⁴

5. **Programs can increase the volume and variety of resources bid into wholesale capacity markets, lowering capacity prices.** Clearing prices in wholesale capacity auctions are lower when available energy efficiency resources are bid in.
6. **Programs can provide new revenue streams for companies that bid energy into the various energy resource auctions.** These revenues, earned from participation in energy markets such as those organized by PJM or ISO New England, can help offset efficiency program costs or directly fund private-sector investments in energy efficiency.

THE VALUE OF PARTICIPATING IN PROGRAMS

There are many times when it makes sense for businesses to give priority to the long-term benefit of the communities in which they operate. Participating in utility sector efficiency programs could be an example of this, but it is more likely just another good business decision. The value a business receives from participation in efficiency programs can be much greater than what it contributes through payment of system benefit charges or fees. Businesses that want to lower their energy expenses and lower their future energy rates should support state efficiency programs by paying the fee, participating in the program, and actively engaging with program administrators. Doing so will have short-, medium-, and long-term benefits that are of much greater value than the fees they pay.

³ C. Russell, et al., Recognizing the Value of Energy Efficiency’s Multiple Benefits (Washington, DC: ACEEE, 2015). aceee.org/research-report/ie1502.

⁴ The remaining benefits in this list apply in states where the wholesale generation and transmission of power is deregulated. Competitive markets exist in much of the Northeast, Mid-Atlantic, and Midwest, and in Texas and California.