



How Manufacturers Can Keep the Energy Advantage Alive

The emergence of fracking in the United States has been a lifeline for manufacturers, driving down the price of gas and electricity to levels that are now 30 to 50 percent lower than other major exporting countries. The Boston Consulting Group estimates the average cost of domestic manufacturing is now only 5 percent higher than the cost to manufacture in China and is 10 to 20 percent lower than most major European economies.¹

What's even more striking: these numbers have the potential to fall even lower, with some analysts projecting the cost to manufacture in the United States to soon be 2 to 3 percent cheaper than in China.¹ However, significant opportunity still remains to lower energy costs even further and capitalize on the country's growing competitive advantage over its international counterparts.

The key is focusing on the hidden utility within the manufacturer in a way that delivers a low-risk, fast-track opportunity to realize significant economic benefits. The question is, how to do it?

Optimizing Risk Management with Supply and Demand Management: A Case Study

At a time of flat energy prices with low volatility, one Illinois manufacturer still saw an important opportunity to transform costs through energy. In 2015, the plant made the strategic decision to change its product line and retrofit the facility to better focus on its new core business. In early 2016, the manufacturer's monthly electricity spend was about \$200,000, and the company

wanted to understand how much that cost would rise after the retrofit was completed and production increased.

Collaborating with ENGIE, management determined the added costs could hit \$500,000 per month. But that wasn't the manufacturer's only problem. Years of deferred maintenance by a previous owner had left the internal and external lighting systems in the plant in critical need of upgrades.

As a result, the manufacturer presented ENGIE with four distinct requirements:

- Procure power at a lower price
- Improve plant safety with enhanced lighting
- Identify additional opportunities to cut consumption and reduce carbon emissions
- Access data to better manage how and when power is used

¹ "U.S. Manufacturing Costs are Almost as Low as China's, and That's a Very Big Deal," *Fortune*

Because the plant's products are made from 100% recycled material that would otherwise go to landfills, the energy solution also had to underscore the company's environmental commitments.

After months of collaboration with the plant, ENGIE developed an initial solution that hit every target:

- Undertaking a \$1.3 million lighting upgrade to control output from each fixture – turning it up or down as needed. When the retrofit was complete, lighting output in some fixtures was reduced by 75% while ensuring an appropriate amount of lumens for workplace safety.
- Delivering \$230,000 in savings in annual energy and operational costs.
- Locking in a 72-month electric contract extension, leveraging ENGIE's position as a leading power retailer. By closely monitoring the market, ENGIE delivers ongoing recommendations that enable plant leadership to take advantage of shifts in conditions.
- Securing an initial \$134,000 in utility incentives.
- Uncovering three additional efficiency measures that resulted in another \$600,000 in utility incentives.
- Structuring a funding arrangement that allows the manufacturer to pay for the project over time on its monthly invoices.
- Providing VPower™ software to capture usage information and deliver actionable data to make real-time decisions about consumption.

Success Leads to a Second Project: The Case Study

After proving it could deliver on objectives without disrupting the plant's 24/7 operations, ENGIE is now working on a second energy conservation solution to upgrade the boiler operation and reduce natural gas consumption. It is expected to save another 1.4 million kilowatt hours and 1.03 million therms of natural gas annually while reducing annual energy costs by \$500,000.

With a strategy that blends electricity supply and demand management opportunities, this manufacturer is keeping the energy advantage alive – and reaping the economic benefits of a much more efficient solution.

The Value of a Customer-Centric Approach

This case study demonstrates ENGIE's commitment to the Energy Revolution – a dedication to delivering customer-centric strategies that help companies manage price, reduce consumption, and meet their environmental and sustainability goals. It demonstrates the importance of collaborating in order to create tailored solutions designed to meet customer specific goals and operating environments. And it shows how providers and the companies they serve can still find opportunities in the energy landscape by embracing innovative solutions that help make their businesses – and the world – better places to live and work.

Project 1

Undertaking a
\$1.3 million lighting upgrade
to control output from each fixture

Delivering **\$230,000** in savings
in annual energy and operational costs.

Locking in a **72-month** electric
contract extension

Securing an initial
\$134,000 in utility incentives

Uncovering three additional efficiency
measures that resulted in another
\$600,000 in utility incentives

Structuring a **funding arrangement**

Providing **VPower™** software

Project 2

Expected to save another
1.4 million kilowatt hours

Expected to save another
1.03 million therms of
natural gas annually

Expected to reduce energy costs by
\$500,000 annually