



Driving energy efficiency through process improvements

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After materials and labor, energy is often the third largest expense in manufacturing facilities. While markets dictate material and labor costs, manufacturers can have some control over energy costs through process improvements that can reduce energy use.

Overproduction, inefficient facility layout, oversized or old equipment—all of these can lead to energy inefficiencies. Since energy is used in every production step, any efforts to efficiently increase productivity will also lead to energy efficiency and cost savings.

It's important to examine each step of the manufacturing process to identify the inefficiencies and then determine the potential solutions. NYSERDA can help sites conduct a study to understand the feasibility of solutions and develop an objective analysis required to support approval of the project for NYSERDA incentives.

NYSERDA has set aside \$120 million for incentives over the next few years to fund projects that drive industrial process improvements and data center efficiency. There are caps, but they're high: NYSERDA will invest up to \$5 million per facility per year for projects that reduce electricity use and up to \$1 million per facility per year for projects that reduce natural gas use.

Incentives are paid based on annualized energy savings and are capped at 50% of project cost, to be paid when installation is complete and energy savings are verified. They're available for new construction and existing facilities; manufacturing facilities and data centers; and electricity and natural gas savings.

NYSERDA has supported numerous projects at manufacturing sites throughout the state.

One example is a central N.Y. chemical manufacturer that was looking to re-engineer its batch-oriented, energy-intensive process to be more efficient. The company looked at putting in larger reactors and continuous columns, as well as eliminating the use of steam. By doing so, it was able to cut in half its gas and electric use per pound of product while increasing productivity by 32%. Another example is a glass manufacturer in the Southern Tier. At the end of its process line was a polisher that was causing excess breakage and scrap due to a mechanical problem. By upgrading that machine, the manufacturer was able to improve its yield by 27% with no increase in energy input.

Energy-efficiency and productivity improvements are proven investments. They decrease costs, improve product quality, reduce energy pricing risks, engage employees, reduce carbon footprint and demonstrate responsible business practices.

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