



Machining

## Making Your Machine Shop More Sustainable

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As we reported in last month's blog, "Machine Outlook for 2017 and Beyond," market conditions continue to look good for machine shops and other industrial metal-cutting operations. Even in a good market, however, industry leaders know it is important to continue to watch costs. Any edge you can carve out against the competition is beneficial.

According to the brief, "Resource Allocation Strategies for Leading Industrial Metal-Cutting Organizations," this may require companies to think a little outside the box. "In the spirit of continuous improvement, best-in-class managers need to explore all of the ways they can save their operation time and money," the brief states.

One way shops are reducing costs is adopting more sustainable manufacturing practices. Whether implementing strategic energy plans or adopting a few environmentally friendly practices, today's industrial manufacturers are finding that "going green" can provide bottom-line savings.

As reported *here* by *Modern Machine Shop*, manufacturing consumes the equivalent of 3.6 billion barrels of crude oil every year—1/5 of all energy consumed in the U.S. Additionally, depending on the manufacturing process, energy can encompass as much as 50 percent of the cost of production. Based on these numbers, it seems reasonable to argue that not only do manufacturers have a social responsibility to reduce their energy usage, but they could save some money by doing so.

London-based sheet metal company *Harlow Group,* for example, was able to reduce electrical costs by approximately \$38,000 per year after installing a new heating system, low-energy lighting, and implementing a formal shut-down policy for heavy equipment.

To help your machine shop begin the move toward sustainability, an article from *ThomasNet.com* describes three key steps:

- 1. Analyze Your Current Organization's Environmental Impact. Start by analyzing your energy usage. Determine how energy sources are used in your production processes and how they might influence the environment. It is also important to look at your operation's water usage and the types of materials you are using on the shop floor. Are they recyclable or hazardous? How necessary are they to the production process?
- 2. **Reduce Waste Where You Can**. Once you understand where your organization stands, you can take steps towards a more environmentally friendly facility. Fortunately, these steps don't have to be giant strides; you can start small and make incremental, strategic improvements.
- 3. **Find Ways To Leverage Renewable Energy**. Leveraging renewable energy is one of the best ways to create a more sustainable facility. Renewable energy options are plentiful, and they include sunlight, wind, rain, tides, waves and geothermal heat. In addition to saving on raw energy costs, you may also be able to take advantage of tax incentives, depending on the state you live in.

For some more specific actions your shop can take, check out *this list of energy-saving tips* from Michigan Manufacturing Technology Center, which includes ideas such as avoiding peak energy rate periods and checking for compressed air system leaks. You may also want to read *this article* from *Canadian Metalworking* that discusses eco-friendly coolants and coolant recycling.

Does your shop consider sustainability as a bottom-line operating principle? If so, what new practices can you adopt to keep your industrial metal-cutting company at the leading edge?

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