

Use Green Manufacturing and Sustainability to Reduce Costs

By David Bradley • Michigan Manufacturing Technology Center

As costs continue to rise and customers repeatedly seek price reductions, it's no surprise that manufacturing profits are feeling the pinch. That's why it's critical for businesses to look into environmental performance as a means to save money. The next steps you take can benefit the environment, create substantial paybacks and lead your business into increasing profitability through sustainability.

According to Google, sustainable manufacturing is defined as the creation of manufactured products that use processes that are non-polluting, conserve energy and natural resources, and are economically sound and safe for employees, communities and consumers. Sustainable manufacturing can save you money by:

- Lowering utility bills
- Reducing scrap costs
- Cutting waste hauling bills
- Minimizing downtime
- Decreasing operational costs

Utility Costs

The three biggest areas for utility savings include:

1. **Lighting:** Switching to LED or other energy-saving lighting systems could save you a lot of green. Don't overlook ways to maximize natural lighting by using skylights.
2. **Compressed air:** One company I know saved more than \$90,000 a year just by eliminating fugitive air leaks.
3. **Water:** I'm amazed at how many companies use water for non-contact cooling and still "pump and dump." Using a closed recirculating system can lead to major savings.

Waste Hauling

Recycling, reusing and reducing materials can greatly decrease the number of dumpster charges. Sometimes, it can even generate much needed income. For example, I witnessed a company that was able to transfer the cost of having pallets hauled away into a revenue stream —



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simply by refurbishing their pallets and selling them. Think out of the box (dumpster) on this one.

Scrap Costs

There are two types of scrap: manufacturing scrap and quality scrap. Using sustainable manufacturing practices can reduce both of these. I've observed how one resourceful company cut its manufacturing scrap (offal) by 80%—just by finding ways to better stamp out their product.

Downtime

A lot of people often overlook Total Product Maintenance (TPM) as a sustainable manufacturing practice. According to Google, TPM is a system of

maintaining and improving the integrity of production and quality systems through the machines, equipment, processes and employees that add business value to an organization. It can drastically decrease the amount of unplanned downtime.

Operational Costs

Unfortunately, we can't produce our products for free. So, the next best thing is to produce products at the lowest cost that quality and delivery can accommodate. The whole premise of sustainable manufacturing is to make products with minimal resources and the lowest environmental impact.

Resources have associated costs. As we shrink our resources being used, the costs will be lowered. Everything mentioned above will not only drive down costs, but also lower our environmental footprint. Sustainable manufacturing = reduced costs = increased profits. The equation is simple. The math works. Let sustainable manufacturing work for you! ⚙️



David Bradley is program manager for Michigan Manufacturing Technology Center. He may be reached at 888-414-6682 and dbradley@the-center.org.

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