



Case Study #2-3

Company Name: General Motors

Number of Facilities (as applicable): 1

Year of Implementation: 2002

Description of Activity: General Motors has undertaken a series of initiatives to reduce energy use and greenhouse gas emissions at its truck plant in Janesville, Wisconsin including:

- Removed bulbs illuminating the front panels of 104 pop machines.
- Removed more than 600 light bulbs in the plant with an eventual goal of 1,200. As a result, many robotic paint and welding operations will be done in the dark.
- Reprogrammed the extensive line of robots to utilize a "sleep mode," dramatically reducing the amount of energy consumed while waiting to do the next job.
- Use of pagers to control remote parking lot lights, saving about \$2,600 per year. The plant had dusk-to-dawn lights, but when it is shut down, it is not necessary to keep those lots lit.
- Utilization of an Ethernet link from the plant to control the heating and cooling system at a nearby training facility.
- Change of a carrier system in the paint department, which meant a reprocessing booth could be shut down.
- Reconfigured exhaust fans in welding areas to run only when needed.

Specific Environmental Benefits Achieved (i.e., materials, energy, waste, CO2 reductions):

ECONOMIC BENEFITS OF STRATEGIC EQUIPMENT SHUTDOWNS

During the 2002 vacation shutdown, electrical usage was down 72%, steam usage was down 100%, and compressed air usage was down 87% compared with normal production rates due to concerted efforts to make sure everything possible was shut down. Savings totaled \$31,586 compared with 2001 shutdown numbers.

ENVIRONMENTAL IMPACT

- With the completion and operation of a new paint sludge system, hazardous wastewater treatment sludge was reduced by almost 2,000 tons per year.
- Paint purge use was reduced by 32,000 gallons per year resulting in approx. 120,000 fewer pounds of *volatile organic carbon* emissions per year.
- Substitution of a cleaner with lower methyl isobutyl ketone (MIBK) content in manual spray equipment areas reduced reportable MIBK emissions by 18%.
- In 2000, 22,960 tons of material was recycled.
- In 1999, plant demolition materials, such as metal scrap iron and steel were sent to a local reclaimer for recycling. This project kept over 12,000 tons of waste out of the landfill and saved \$580,000.