

# 2015 Illinois Governor's Sustainability Award Winner



ILLINOIS SUSTAINABLE  
TECHNOLOGY CENTER  
PRAIRIE RESEARCH INSTITUTE

## HOFFER PLASTICS, INC.

**HOFFER**  
*There's a Part of Us in Every Piece™*

Hoffer Plastics, Inc. (Hoffer) located in South Elgin, Illinois, specializes in making custom plastic injection molded items. Their products are found in retail packaging, consumer industrial, automotive, medical, and appliance industries globally. Hoffer is a family-owned and operated company that opened its first manufacturing facility

in 1953 in South Elgin where they maintain their headquarters and a large manufacturing operation.

The company's sustainability program has institutionalized a culture of enhanced corporate responsibility. This corporate culture has helped spur on many innovative cost-saving ideas from employees.

Hoffer Plastics' commitment to constantly innovate and improve operational processes through the lens of sustainability has reduced their costs and earned them an Illinois Governor's Sustainability Award in 2015.

### SUSTAINABILITY STRATEGY AND OUTLOOK

Hoffer Plastics started its first internal facility-wide sustainability program in 2007 with an effort to eliminate all manufacturing byproducts from entering the waste stream. Employees from all departments were involved in this management-backed effort.

Beginning in 2007, Hoffer set a number of goals to achieve by 2020:

- Reduce energy consumption per unit of production by 20%
- Cut overall water usage by 50%
- Produce an Annual Sustainability Report.

Capital saved from these projects has allowed the organization to reinvest in other areas enabling it to become an industry leader.

Since then through their internal sustainability team, Hoffer has taken major strides toward achieving their goals and completed a number of projects that help make them a better company, a safe and enjoyable place to work, and an example for their peers in the industry.



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### KEY STATISTICS

	<b>3,890,952</b> kWh electricity consumption reduced
	<b>1,300,000</b> gallons of water saved
	<b>58,000</b> lbs material diverted from landfill
	<b>51,000</b> lbs hazardous chemicals eliminated
	<b>2691</b> mtCO <sub>2</sub> e of emissions avoided per year
	<b>\$318,731</b> per year saved via energy and resource efficiency

### ABOUT HOFFER PLASTICS, INC.

Established: **1953**

Location: **500 North Collins Street, South Elgin, IL**

# of employees: **380**

Produces: **Custom plastic injection molded products**

NAICS code: **326199**

Website: **[www.hofferplastics.com](http://www.hofferplastics.com)**

### ABOUT THE ILLINOIS GOVERNOR'S SUSTAINABILITY AWARD

Since 1987, ISTC has presented Governor's Sustainability Awards to organizations in Illinois that have demonstrated a commitment to sustaining our environmental and economic health.

Any Illinois public or private organization is eligible to apply.

Find out more at:

[istc.illinois.edu/govsawards](http://istc.illinois.edu/govsawards)

or email [istc-info@illinois.edu](mailto:istc-info@illinois.edu)



## TOOLS FOR SUCCESS

A breakdown of strategies and technologies that help Hoffer Plastics, Inc. increase efficiency and reduce their environmental impact.

### **Employee Engagement**

- ✓ Initiated a 100% facility-wide recycling program

### **Energy Use**

- ✓ Installed high efficiency T5 and T8 fluorescent light fixtures throughout the facility
- ✓ Replaced chilled water pump motors with variable-frequency drive motors
- ✓ Installed thermal blankets on machine barrels
- ✓ Implemented a compressed air efficiency initiative

### **Waste Reduction**

- ✓ Reduced manufacturing waste to landfill down to 1%
- ✓ Eliminated hazardous water treatment chemicals
- ✓ Installed brine reclaim on plant's water softener

### **Water Use**

- ✓ Installed in-line filtration on all cooling tower systems
- ✓ Implemented high cycle, non-regulated treatment program

## ABOUT ISTC

The Illinois Sustainable Technology Center is a division of the Prairie Research Institute at the University of Illinois at Urbana-Champaign.

ISTC's mission is to encourage and assist citizens, businesses and government agencies to prevent pollution, conserve natural resources and reduce waste to protect human health and the environment of Illinois and beyond. Visit our website at: [istc.illinois.edu](http://istc.illinois.edu)

## WATER CONSERVATION



Hoffer Plastics utilizes water in cooling its injection molding machines. The quality of the water is crucial to maintain its ability to remove heat from the process. Hoffer Plastics has reduced water consumption and limited discharge by installing a cooling water filtration system that removes particulates from the water used by the chillers. Retrofitting the filtration system to capture all back-flushed water and reuse it in the

cooling towers has further reduced their water consumption.

Cooling towers evaporate large amounts of water each year. Through evaporation, minerals collect and reach a saturation point in the tower's water. When the saturation point is reached, water must be drained from the cooling tower to prevent fouling in the system. Fouling can result in significant increases in energy and water consumption.

Originally Hoffer utilized a traditional chemical treatment program which was designed to raise the saturation point (thus reducing the need to drain water from the cooling towers). In 2014, Hoffer implemented a treatment program that eliminates corrosive and hazardous treatment products as well as extends the life of the cooling tower through reduced scaling and corrosion, while maintaining the reduction in water use.

## ENERGY EFFICIENCY

Working with their local electric utility, lighting was upgraded to T5 and T8 fluorescent fixtures and motion sensors were added in non-main pathways.

To further reduce energy consumption, Hoffer installed variable-frequency drive motor controllers for the process cooling water pumps. This enhancement not only resulted in energy savings but also reduced maintenance costs.

Compressed air is a critical component to the overall injection molding process. Hoffer conducted a detailed evaluation of the compressed air system and implemented the following improvements:

- Optimized the sequence of compressor operation by installing a master control system, adding more storage, and making piping improvements
- Installed a new two-stage 200 hp VFD trim compressor with master sequencing
- Replaced the compressed air dryer with a new cycling refrigerated air dryer
- Installed a pressure flow controller with additional storage
- Identified and repaired compressed air leaks throughout the distribution system
- Installed no-loss condensate drains.