

## MANUFACTURING

# SAVE ENERGY & MONEY

while improving your Manufacturing Plant's output.



### Opportunity and Benefits

Manufacturing is one of the most energy-intensive operations in the U.S. According to ENERGY STAR®, the U.S. manufacturing sector consumes about one-third of the energy used in the United States and contributes about 28 percent of all U.S. greenhouse gas emissions. Energy is a significant, controllable expense for most manufacturers, and energy efficiency is a direct way to reduce this cost while limiting greenhouse gas emissions. Whether making steel, processing cranberry juice, or bagging potato chips, there is great potential for improving energy efficiency.

The Mass Save program offers technical expertise to help you identify what energy-saving measures may be available to you. Our experts understand the importance of reliability and productivity at your plant and want to help you use energy efficiency opportunities to take those aspects to the next level — all while saving you money.

### Incentives and Financing

Financial incentives and financing can help make your energy efficiency projects a reality so that you can start saving energy and money. Our energy specialists can help guide you through this process and identify incentives and financing that may be available.

### Training

Maximize the impact of your investment dollars through the Mass Save program by offering your staff training to learn about the latest equipment and best practices available for energy efficiency. Your staff can then apply the lessons learned to the everyday operation of your manufacturing facility for optimal productivity and efficiency.

### ABOUT MASS SAVE

Mass Save® is an initiative sponsored by Massachusetts' natural gas and electric utilities and energy efficiency service providers, including Berkshire Gas, Blackstone Gas Company, Cape Light Compact, Columbia Gas of Massachusetts, Eversource, Libery Utilities, National Grid, and Unitol.

The Sponsors of Mass Save work closely with the Massachusetts Department of Energy Resources to provide a wide range of services, incentives, trainings, and information promoting energy efficiency that help residents and businesses manage energy use and related costs.

### Start saving now!

Get started on improving your manufacturing plant's performance today. Visit us online at [MassSave.com](http://MassSave.com) Some restrictions may apply.



# Here is a list of some energy-efficient improvements to be considered within your manufacturing facility:

## 1 Lighting:

- Upgrade linear fluorescent lighting (replace T12s with T5s or T8s)
- Upgrade inefficient metal halide fixtures
- Replace incandescent bulbs with CFLs or LEDs

## 2 Lighting Controls:

- Replace wall switches with occupancy sensors or timers
- Use light sensor controls to optimize the use of daylighting
- Use dimmers or bi-level switching to vary lighting levels where appropriate
- Only light when needed

## 3 Motors and Variable Frequency Drives:

- Review motor operations – match motors to loads
- When loads vary, use variable frequency drives (VFDs) to optimize the efficiency of motor operation
- Be sure to effectively meet air handling needs

## 4 HVAC:

- Recommission your system to ensure proper operating parameters
- Consider use of economizers to bring in outside air for free cooling or verify that economizers are operating properly
- Verify operation of controls and sequencers

## 5 Energy Management Systems:

- Review facility operations and automate where appropriate and verify that existing systems are operating properly
- Be sure the building responds to user inputs throughout the day
- Make sure set points are reasonable and accurate
- When installing new equipment, be sure to tie it into the system

## 6 Industrial Processes:

- Integrate energy efficiency into Quality Assurance/Quality Control (QA/QC) policies
- Review energy use to see if there are opportunities to improve efficiency
- Conduct an audit of your operations to evaluate efficiency, including compressed air and steam systems



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