

**A typical manufacturing plant would need to produce an additional 130 steel pipes annually to equal the money saved by upgrading their existing compressed air system.\***

*\* Based on a 2017 DNV GL study*

Not only can manufacturing facilities save energy by using more energy efficient equipment, but there are additional positive effects on the overall revenue and environment of the facility.

By simply upgrading to LED lights and compressed air systems, your facility could see the following benefits:\*

- Increased staff and customer comfort, safety and satisfaction.
- Decreased Maintenance cost.
- Increased staff productivity.
- Improved product quality.

“The upgrade to the humidification system in our knitting department helps our machines run better, causes less defects and improved the quality of our product. It’s a win from all aspects.”

*- Katie Chapman, Sustainability Specialist, Duro - Last Inc.*

Consumers Energy offers rebates, technical services and more to help manufacturing facilities like yours become more energy efficient.

Our team is here to walk you through the program requirements and available resources. Learn more at [ConsumersEnergy.com/StartSaving](https://ConsumersEnergy.com/StartSaving)

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1/2025

## Manufacturing

*Hidden Benefits of Energy Efficiency*



# Energy Efficiency Impacts in Manufacturing Facilities

The following non-energy improvements can result from upgrading to energy efficient equipment:

## Increased Productivity

Energy efficiency upgrades for manufacturers support fewer production interruptions, decreasing system downtime and increasing staff productivity.

Upgrades to compressed air systems have less downtime and improve the air quality in the building. LED lights increase visibility that results in fewer product defects during production.

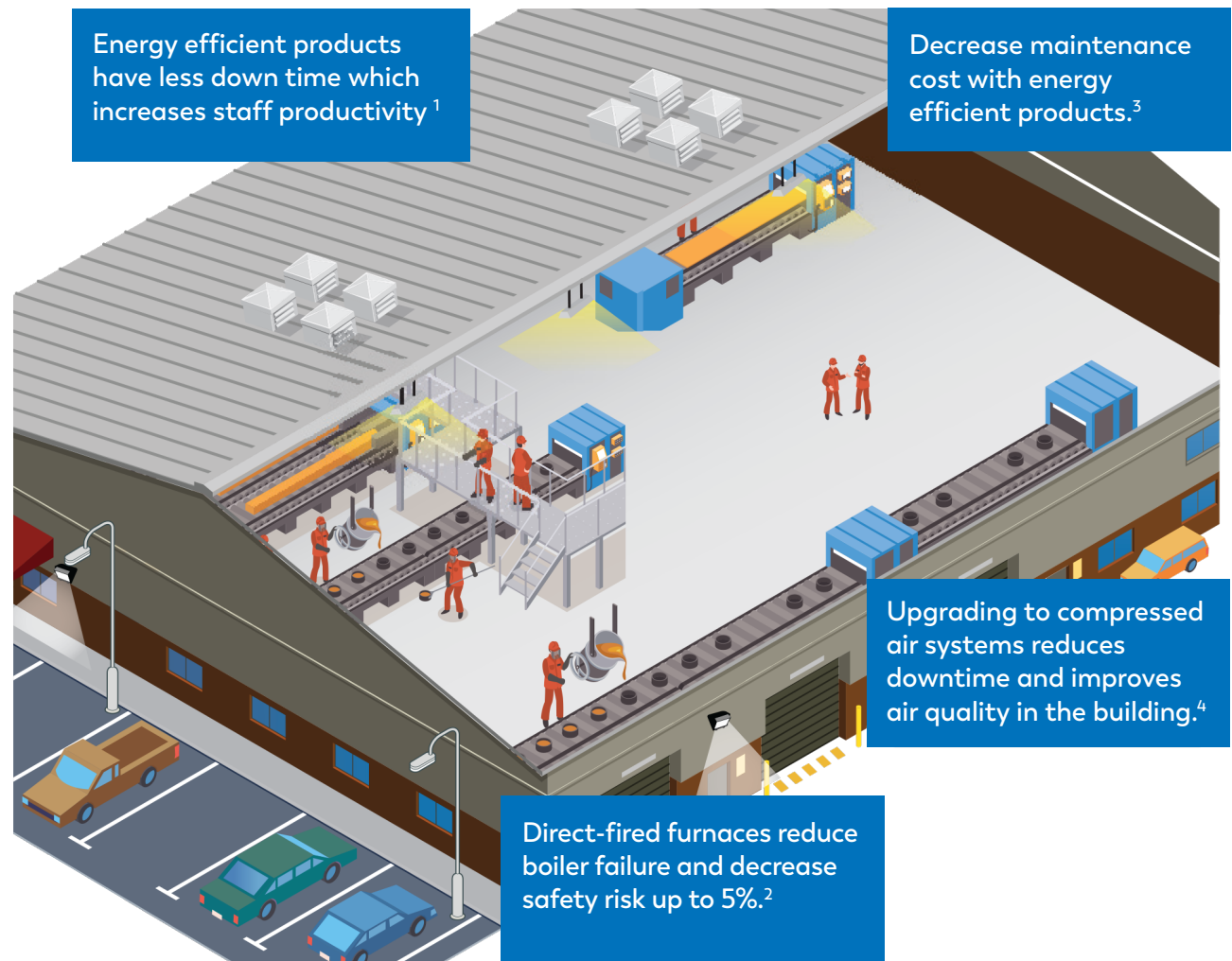
## Increased Safety

Energy efficient equipment can reduce the incidence of work-related accidents or negative impacts on staff health.

LEDs improve employee visibility, minimizing the risk of slips and falls. Installing direct-fired furnaces does not overheat the steam boilers, reducing boiler failure and decreasing safety risks by up to 5%.

## O&M Cost Savings

Energy efficient projects can lead to investments in new equipment, system optimization and changes in production resulting in lower maintenance needs and costs.



1. Non-Energy Impact Marketing Analysis by Industry, Special Cross Sector Research Area[PPT]. (2014). DNV GL.

2. Capturing the Multiple Benefits of Energy Efficiency. (2014). IEA.

3. Including non-energy benefits in investment calculations in industry; empirical findings from Sweden. ECEEE Industrial Summer Study Proceedings 2014.

4. "Ancillary savings and production benefits in the evaluation of industrial energy efficiency measures." Proceedings of the 2005 ACEEE Summer Study on Energy Efficiency in Industry, Vol. 6, West Point, 19-22 July 2014, ACEEE.

O&M Cost Savings					
Equipment	Energy Savings	Non-Energy Savings	Total Savings	Energy Payback	Non-Energy Payback
Lighting	\$6,846	\$24,644	\$31,490	2.46 yrs.	0.54 yrs.
VFD	\$3,559	\$0	\$3,558	2.11 yrs.	2.11 yrs.
Compressed Air	\$3,202	\$92	\$3,293	2.47 yrs.	2.40 yrs.
HVAC & Heating Equipment	\$54,407	\$0	\$54,304	2.50 yrs.	2.50 yrs.