



**A TYPICAL AUTOMOTIVE MANUFACTURING FACILITY WOULD NEED TO MAKE AN ADDITIONAL 27 CARS ANNUALLY TO EQUAL THE MONEY SAVED BY SWITCHING TO ENERGY EFFICIENT DIRECT-FIRED HEATING EQUIPMENT \***

Not only can automotive 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, HVAC and compressed air systems, the following benefits can occur:

- Worker and customer comfort, safety and satisfaction
- Decreased maintenance costs
- Increased worker productivity
- Decreased equipment failure

**\* Based on a 2017 DNV GL study**



**“... DIRECT-FIRED HEATERS [INCREASE] OUR ABILITY TO BETTER MAINTAIN THE DESIRED PROCESS TEMPERATURE WHICH RESULTS IN MORE HIGH QUALITY PRODUCTS”**

**- Ian Stone, Energy Manager,  
Ford Motor Company**

Consumers Energy offers rebates, technical services and more to help automotive manufacturing facilities like yours become more energy efficient. Our team is here to walk you through the program requirements and available resources.

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# The Additional Impacts of Energy Efficiency in Automotive Manufacturing

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



## Increased Production

In the automotive manufacturing industry, preventing product defects are a top priority. Installing LEDs can increase visibility and improve quality control, reducing the number of defective parts by 1 to 5 percent. An efficient compressed air system will stabilize the pressure and air flow to all pneumatic devices, causing them to work more consistently and reduce scrap rates.



## Increased Safety

Employee safety in the automotive manufacturing industry is essential and installing energy efficient products can reduce the risk of accidents. 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 percent.

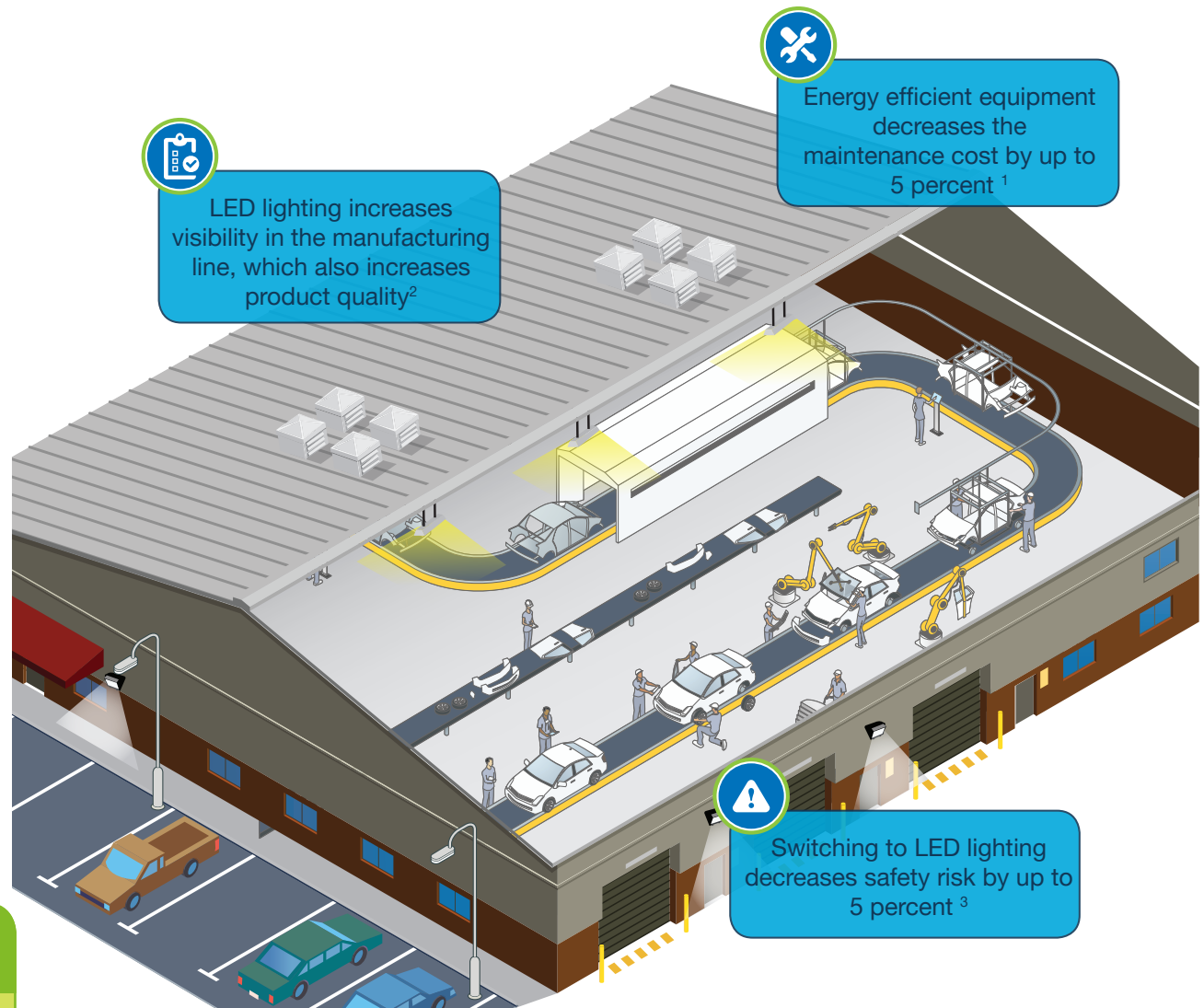


## O&M Cost Savings

Energy efficiency investments in new equipment, system optimization or change of processes can lead to reduction in costs for maintenance by up to 5 percent and an additional 30 to 50 percent in maintenance materials.

## 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	\$3,559	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	\$54,407	2.50 yrs.	2.50 yrs.



1. Ford Motor Case Study. DNV GL.

2. Nexteer Case Study. DNV GL.

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