

## WHAT ARE INDUCTION LIGHTS?

Induction lighting is one of the best kept secrets in energy-efficient lighting. Simply stated, induction lighting is essentially a fluorescent light without electrodes or filaments, the items that frequently cause other bulbs to burn out quickly. Thus, many induction lighting units have an extremely long life, up to 100,000 hours. To put this in perspective, an induction lighting system will last more than 11 years in continuous 24/7 operation, and 25 years if operated 10 hours a day. The bulbs that were replaced used over twice the electricity and have a life of only 20,000 hours.

The technology, however, is far from new. Nikola Tesla demonstrated induction lighting in the late 1890s around the same time that his rival, Thomas Edison, was working to improve the incandescent light bulb. In the early 1990s, several major lighting manufacturers introduced induction lighting into the marketplace.

Induction lighting has many superior characteristics, including the following:

- Virtually maintenance-free operation
- High efficacy—in many cases, 60+ or 70+ lumens per watt
- Long life
- Instant start and restrike operation
- No flickering, strobing, or noise
- Low-temperature operation

Source: <http://www.eereblogs.energy.gov/energysavers/post/Induction-Lighting-An-Old-Lighting-Technology-Made-New-Again.aspx>

The City of Warren received an \$88,000 Advanced Lighting Technology Demonstration (ALTD) grant from the State of Michigan to establish this project. The ALTD grant was awarded from the Michigan Energy Office through the American Recovery and Reinvestment Act (Recovery Act) for projects that create and retain jobs, save energy and reduce green house gas emissions.

### Project Budget

City of Warren Contribution:	\$109,138.10
<u>Recovery Act Grant</u>	<u>\$88,000.00</u>
Total Project Cost	\$197,138.10

City of Warren Investment:	\$109,138.10
<u>DTE Energy rebate</u>	<u>-\$27,905.76</u>
Total City of Warren Investment	\$81,232.34

Warren's Annual Energy Savings: \*\$26,927.71

**Warren's Return on Investment = 3 years**

\*not including savings from Powerline Control System

### City of Warren Elected Officials

James R. Fouts, Mayor  
Paul Wojno, Clerk  
Carolyn Kurkowski Mocerri, Treasurer

#### Warren City Council

Cecil St. Pierre Jr., Council President  
Patrick Green, Council Vice President  
Scott C. Stevens, Council Secretary  
Keith Sadowski, Assistant Council Secretary  
Robert Boccomino, Councilman  
Kelly Colegio, Councilwoman  
Steven G. Warner, Councilman



## Induction Lighting Demonstration Project

### Mayor James R. Fouts

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# Induction Lighting Demonstration Project



**PURE MICHIGAN<sup>®</sup>**  
Michigan Economic Development Corporation



## Project Area #1

Warren Community Center - Parking Lot

## Project Area #2

Warren City Hall - Parking Garage



**Quantity: 62**

**200 Watt QSSI 23" Induction Square Shoebox with IES Type V Reflector (Pole Lights)**

Replaces 400 Watt Metal Halite Bulb Fixtures  
Annual Energy Savings: 67,347 kWh



**Quantity: 12**

**200 Watt QSSI 23" Induction Square Shoebox with IES Type V Reflector (Pole Lights on 4th Floor)**

Replaces 400 Watt Metal Halite Bulb Fixtures  
Annual Energy Savings: 13,035 kWh



**Quantity: 48**

**100 Watt QSSI Constellation Large Full Cutoff Induction Wall Pack**

Replaces 250 Watt Metal Halite Bulb Fixtures  
Annual Energy Savings: 39,946 kWh



**Quantity: 178**

**80 Watt QSSI Induction Garage Light VNG40I (1st, 2nd, 3rd Floor)**

Replaces 175 Watt Metal Halite Bulb Fixtures  
Annual Energy Savings: 198,496 kWh



### Greenworx - Powerline Control System

The City Hall parking garage previously ran with 175 watt lights 24 hours a day 7 days a week. This new system provides fixture level control of each new 80 watt induction light so the parking garage lights can now be controlled independently. Lighting zones are programmed based on time of the day to eliminate using energy to light areas lit by the sun, resulting in significant energy savings.

**Estimated Annual Energy Savings: 98,235 kWh**

*kWh= Kilowatt Hour*