



2015

Energy Efficiency Program for Business

LED Lighting Technologies

Technical Training

June 11, 2015



Welcome

Sean McCoy
Outreach Manager



Safety First
Exits
Restrooms
Other site features



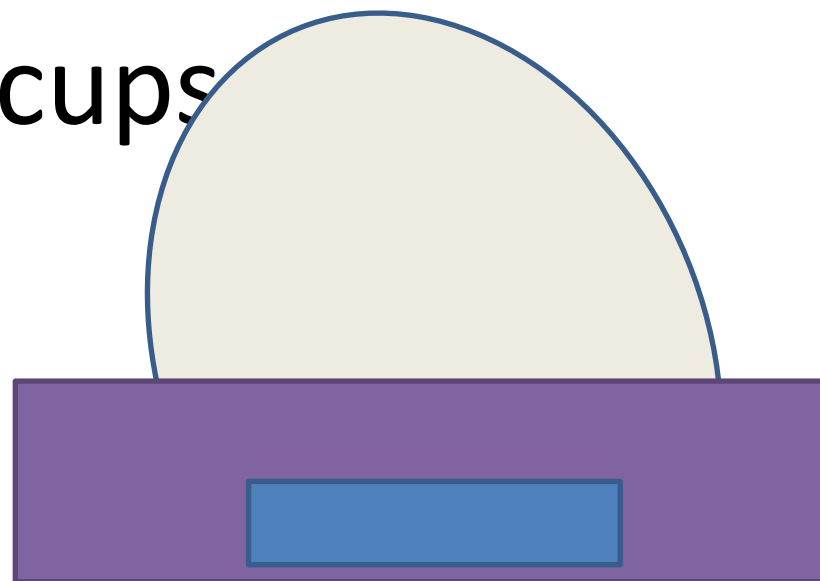
Kimberly LED Lighting



KPL LED Outdoor Area Lighting

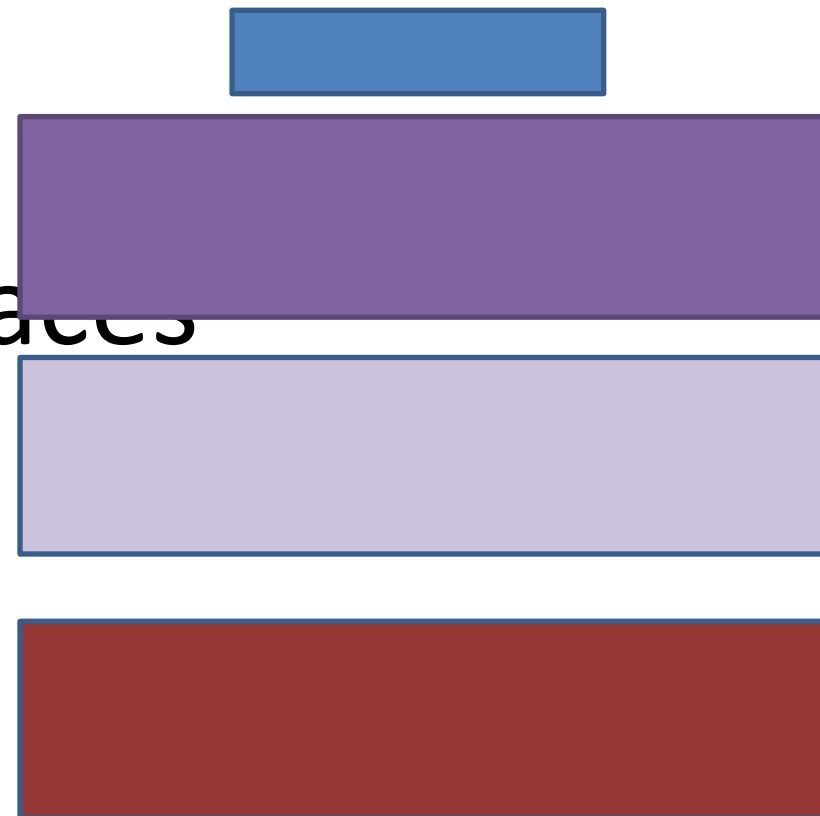
Single Die Technology

- State of the Industry
- First Generation Hiccups



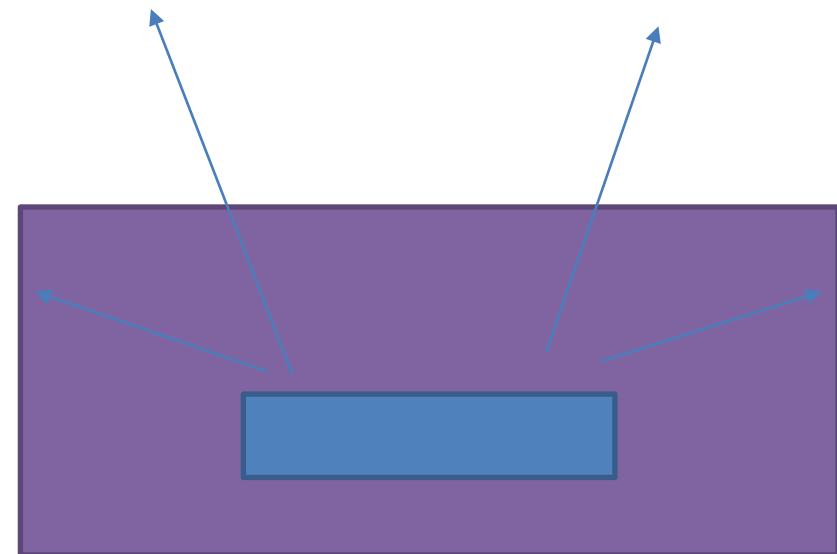
Single Die Problem 1

- High Junction Temperature (120+ C degrees typical, 150 max)
- Three thermal Interfaces
- 1 Substrate
- 2 Slug
- 3 MCPCB
- Heat Sink



Single Die Problem 2

- Walled in Plastic/Ceramic Packaging
- Beam Angle Obstruction (20 to 25%)

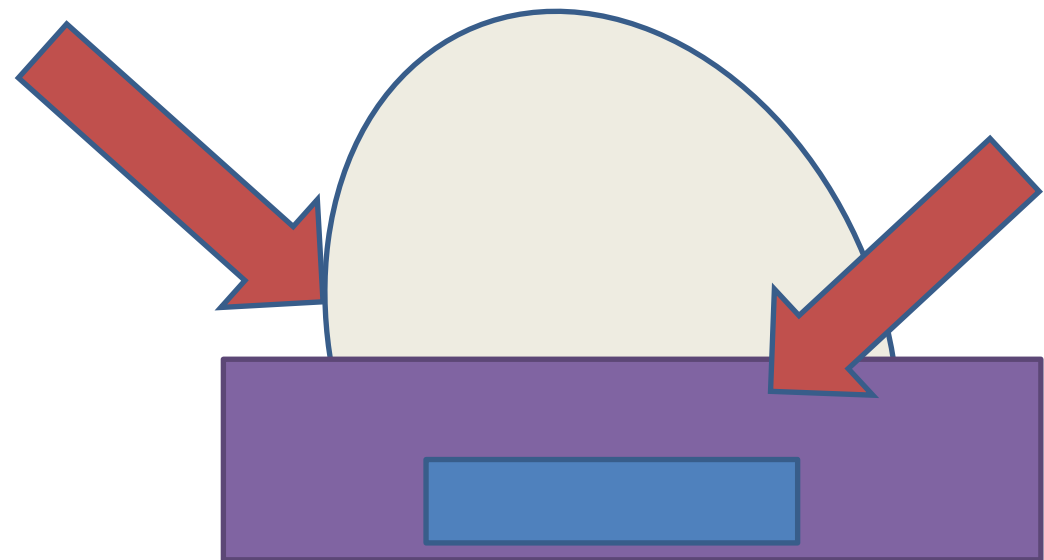


Single Die Problem 3

- Large MCPCB Series Circuit Footprints
- Large Footprint & Heavy Fixtures
- Subject to mechanical flexing and vibration to cause open circuit paths
- Subject to Thermal flexing to cause open circuit paths
- 30 to 45 lbs and up for 200+ watt fixtures
- Exponential wind loads

Single Die Problem 4

- Packaging Flaws
- Floating Glass Dome allows VOCs to stain LED Die



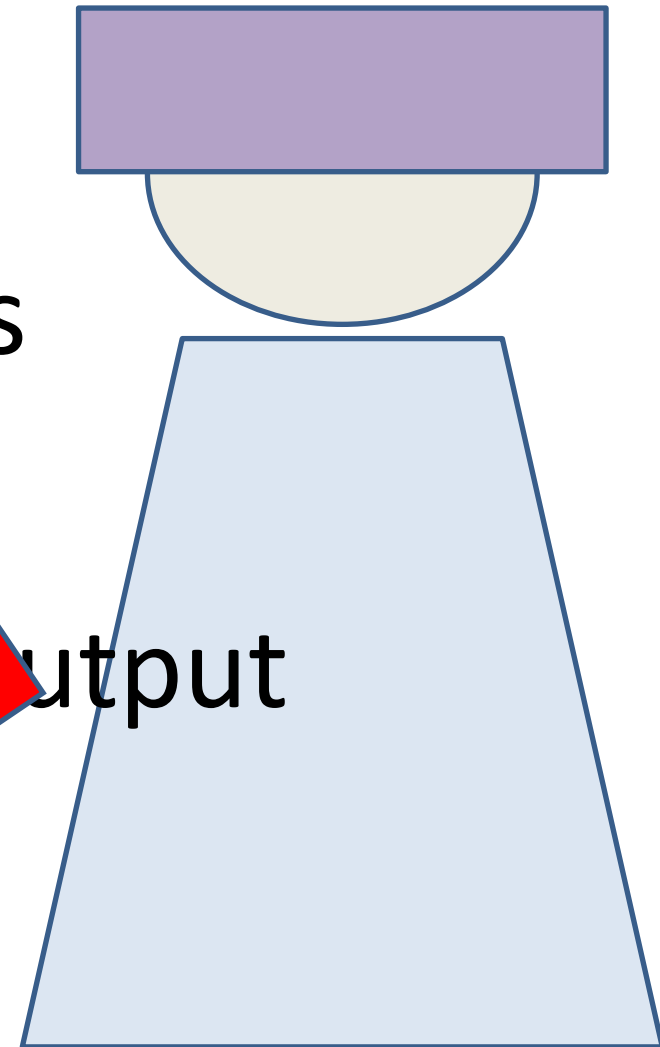
- VOC Volatile Organic Compounds

Single Die Problem 5

- Wire Bond Failure
- 50/50 chance of
- A closed circuit leading to current overload an remaining leds
- Cascading Catastrophic System Collapse (Current Overload)
- Total system failure

Single Die Problem 6

- Inefficient Optics
- Plastic TIR or Reflector Lenses
- 30 to 60% reduction in light output
- TIR - Total Internal Reflection



Results of Single Die Technology

- Large and Heavy Fixtures
- Very Expensive
- High Failure Rate
- Poor Performance
- Poor Return on Investment
- Not a compelling reason to switch

Kimberly KPL Solutions

- New Generation (3rd)
- DCCM - Direct Coupled Copper Mount Technology
- COB Chip On Board

Solution 1

Single Die

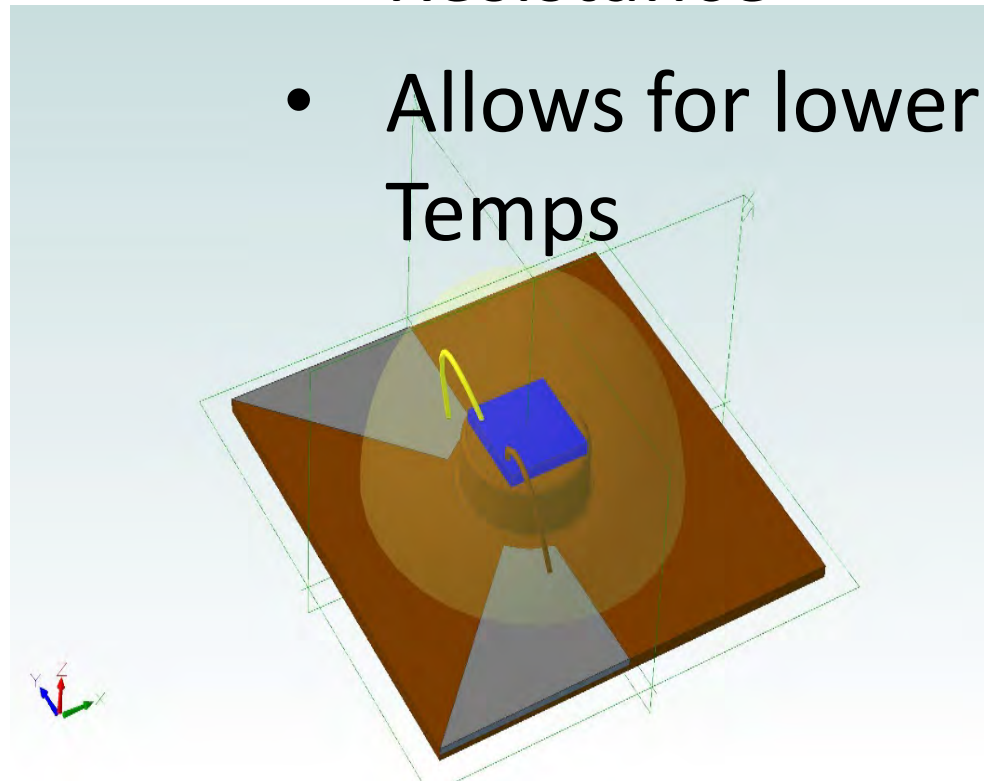
High Junction Temperature

- 3 thermal interfaces
- Aluminum 200 μW
- Increased Thermal Resistance
- Creates Higher Junction Temps

KPL

Direct Copper Mount

- LED Chip on Single Copper Substrate
- Copper 400 μW
- Decreased Thermal Resistance
- Allows for lower Junction Temps



Solution 2

Single Die

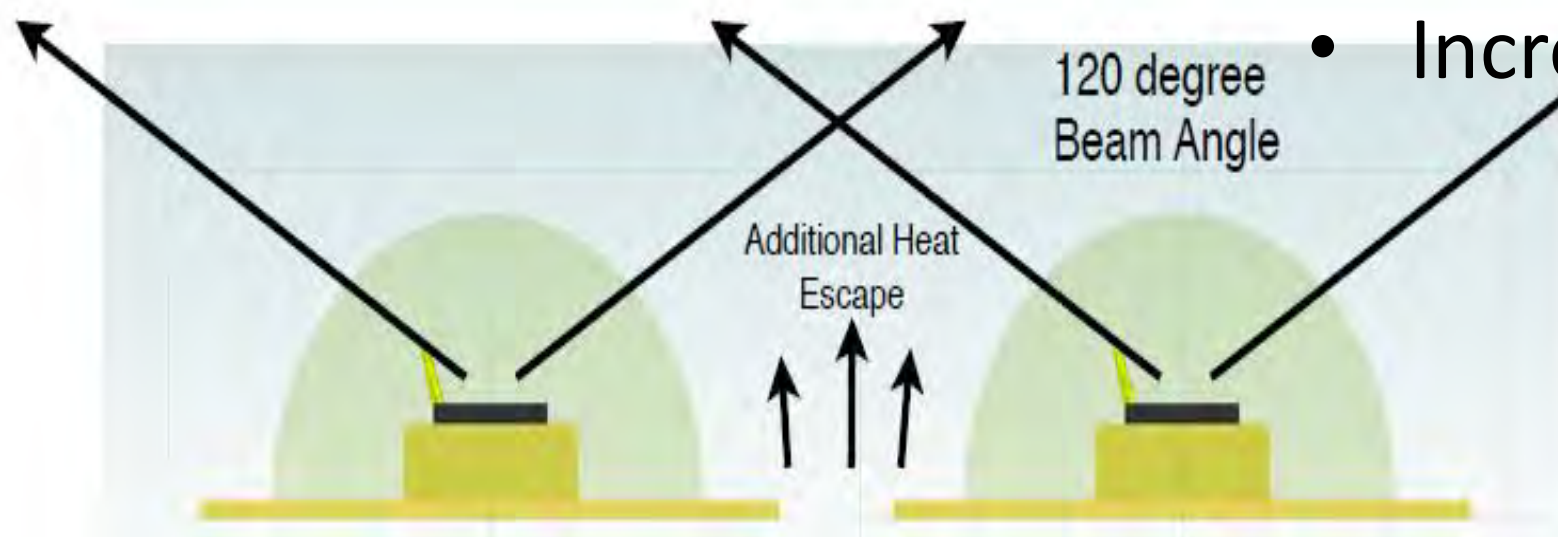
High Wall Package

- Beam Angle Obstruction
- Blocks 20 to 25 % of light emissions
- Efficacy takes a big hit

KPL

Direct Copper Mount

- Raised Copper Dimple
- No package obstruction
- No neighboring Led obstruction
- 100% of emissions escape and fully utilized
- Increase efficacy



Solution 3

Single Die

Large MCPCB Series Circuit Footprints

- Large Footprint
- Large Heavy Fixtures
- Mechanical flexing and vibration
- Thermal flexing
- 30 to 45 lbs and up for 200+ watt fixtures
- Exponential wind loads
- More Material = Higher Costs

KPL

COB Chip On Board

- Small compact package
- Lightweight Fixture 18Lbs
- Small Ridged Circuit
- Low Thermal & Mech Flex
- Small wind load 1' x 2' x 3"
- Less Material = Lower Cost

Solution 4

Single Die

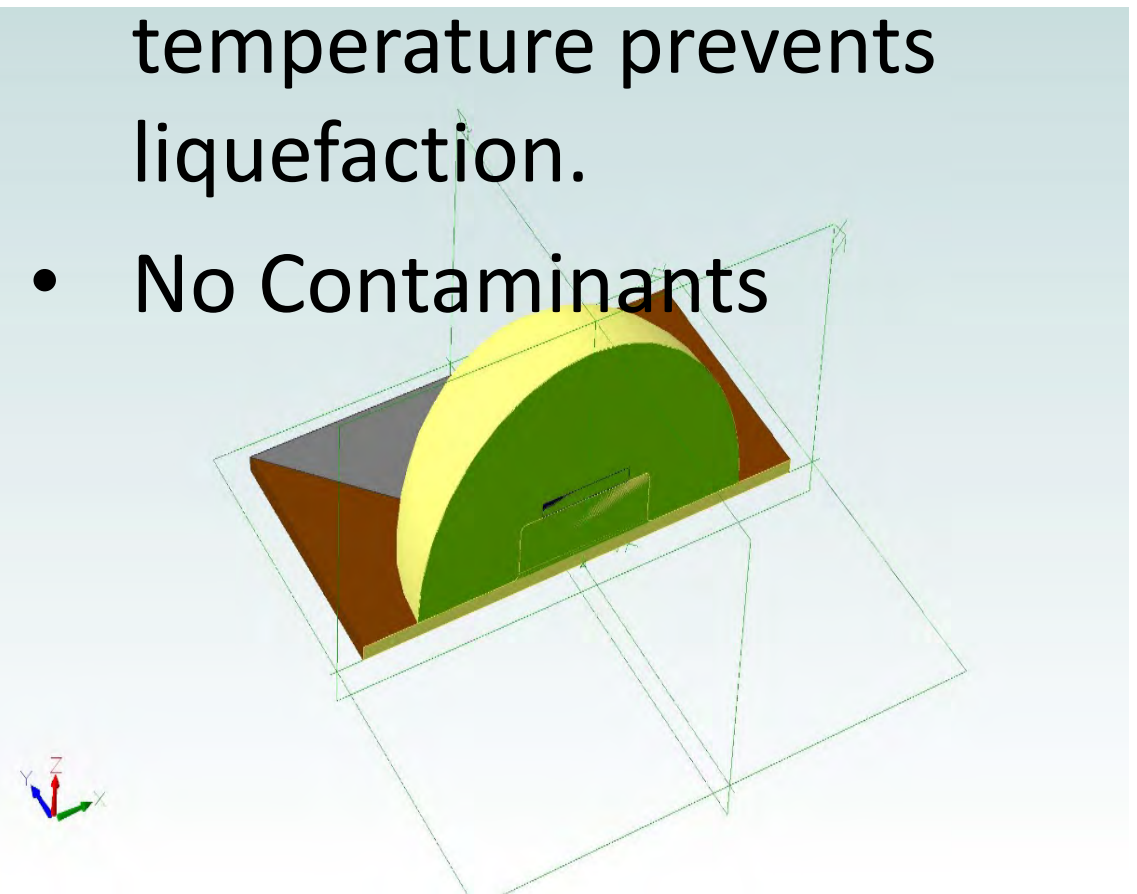
High Wall Package & Glass Dome

- High Heat liquefies Silicon Encapsulate and loses seal
- High Heat cause convection air flow and vacuum that draws in VOC that stain die.
- Contaminants burn and create visibility obstructions and wire epoxy failure.

KPL

Direct Encapsulation

- No Glass Dome
- Silicone Encapsulate is sealed
- Lower operating temperature prevents liquefaction.
- No Contaminants



Solution 5

Single Die

Wire Bond Failure

- When the epoxy fails due to the previous listed problems, the wire bond pulls loose and falls opening or closing the circuit with a loss of light output

KPL

Direct Encapsulation

- Lower operating temperature prevents liquefaction.
- Silicone Encapsulate is sealed and stays solid preventing Wire Bond from falling.
- Prevents Series and String failure

Solution 6

Single Die

Inefficient Optics

- Plastic TIR or Reflector Lenses
- Amorphous Material (under a microscope the edges look like mountain ranges)
- 30 to 60% reduction in light output

It's one of the Industry's Dirty Little Secrets

KPL

Glass Covers or Lenses

- No substitute for real

Glass

- 3% diffusion

Leapfrog the Industry

Single Die - First Gen

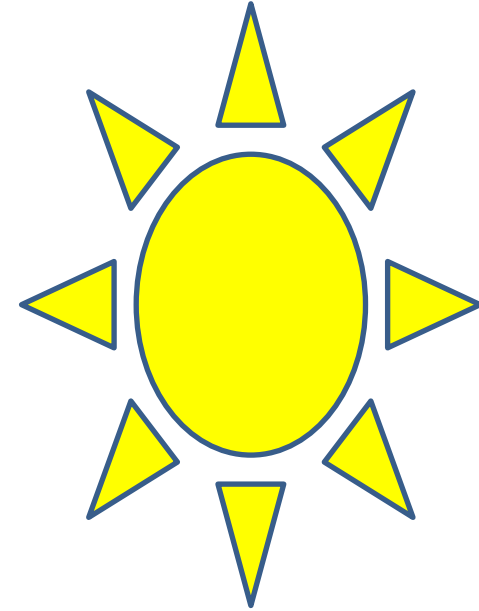
- Burdened with many problems
- High cost of materials
- Poor Performance
- Still Expensive (typically 100 to 300% over existing technology)
- Second Gen is circuit bypass

DCCM - Third Gen

- Problems Solved
- Lower material cost
- Higher Performance
- Fast R.O.I. (Return on Investment)
- 30%+ lower cost than the competition

Dirty Secret Number 2

- Lumens



- They don't mean much

Lumens

- Customers
- Can't See them
- Can't Measure them
- What are they good for?

Nothing

For a customer

Performance

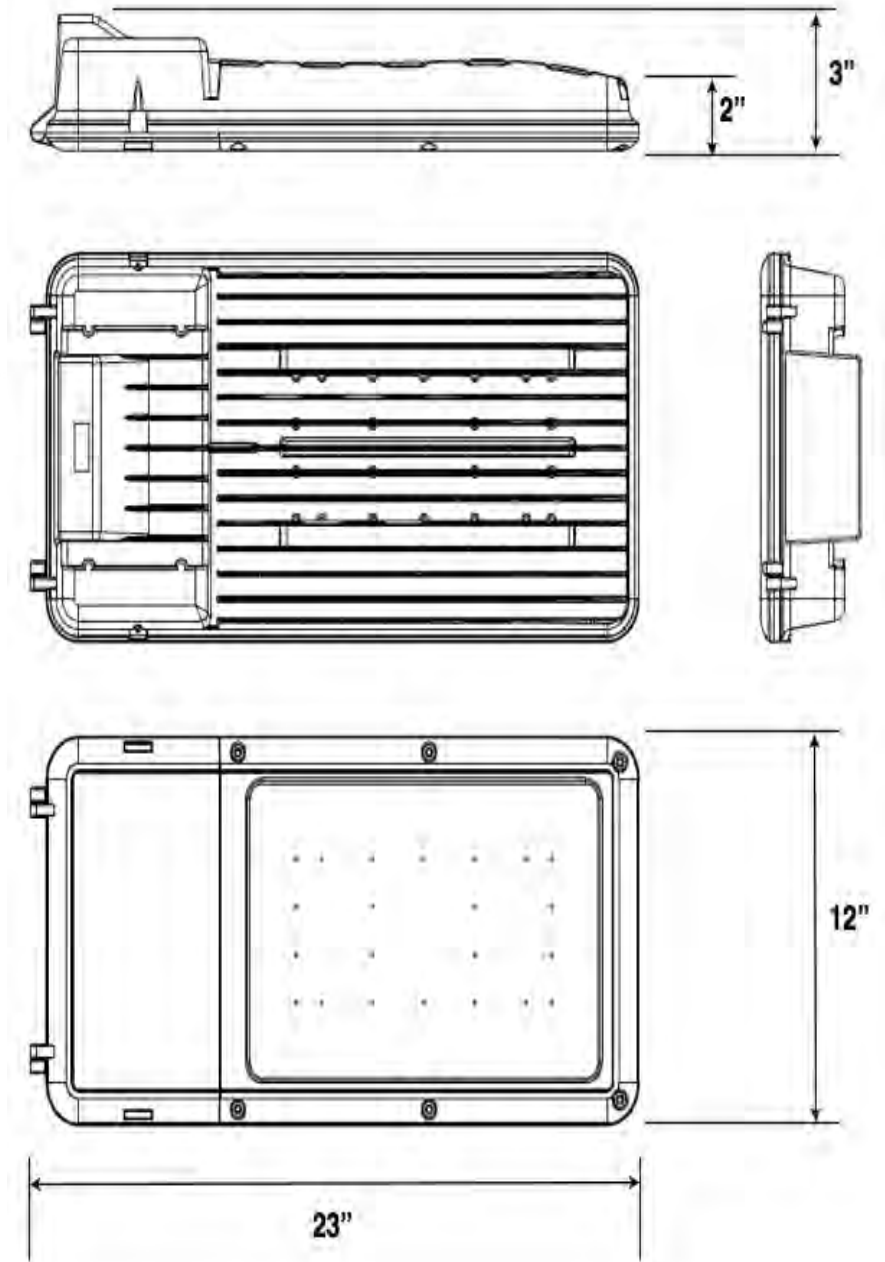
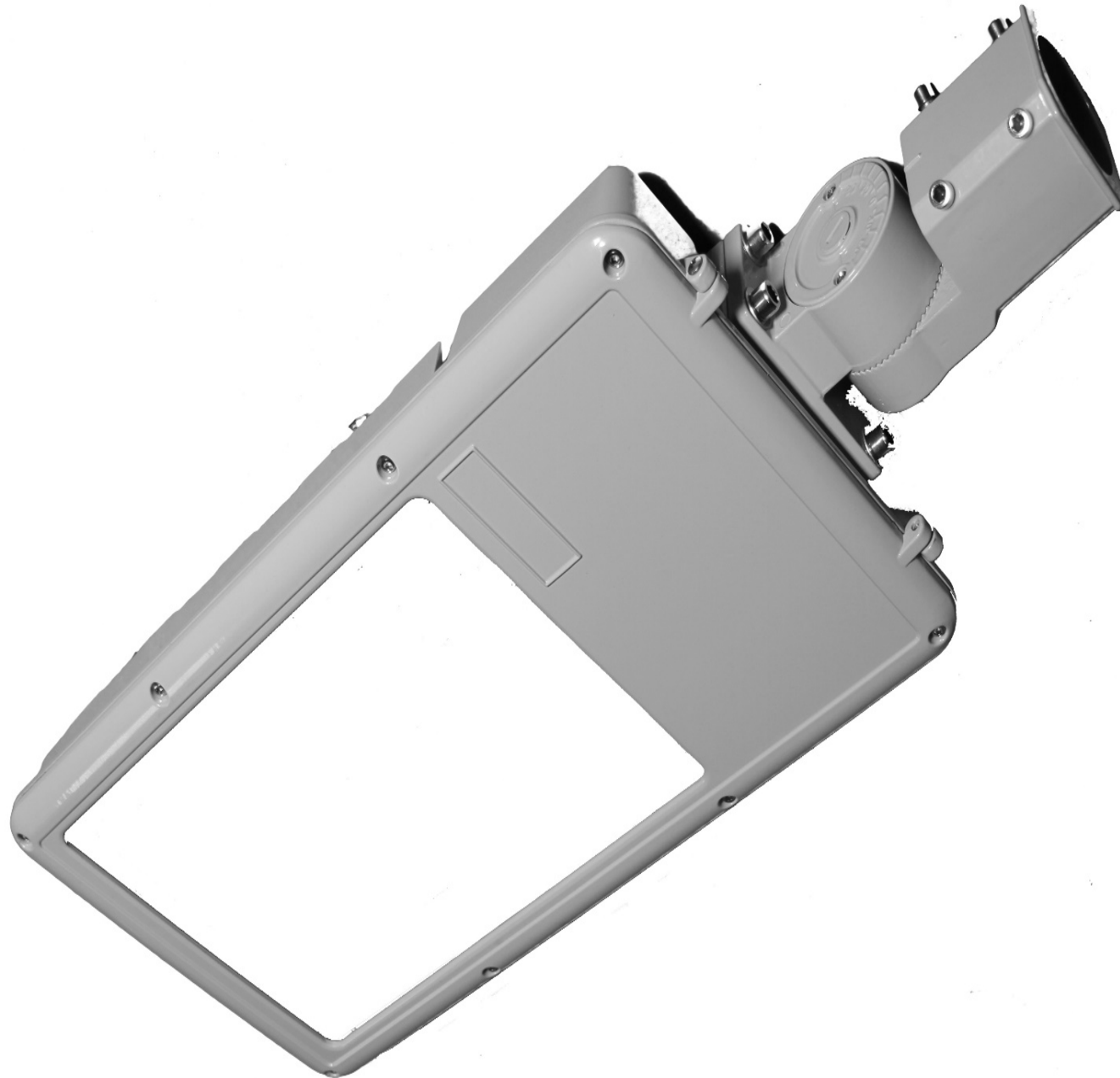
- You can only Manage what you can Measure
- Footcandles or Lux
- 1 Footcandle = 10.1 Lux
- A simple inexpensive Light Meter (starting around \$100)

Performance Comparisons at 26 feet high

Product	Foot-candle Measurement
• Kimberly KPL150 150 Watts	• 4.2
• Brand A 150 Watt	• 1.6
• Brand B 150 Watt	• 2.4
• Brand C 150 Watt	• 2.6
• Deaconess Hospital – 3I Engineering	

The Premier 1000 Watt MH/HPS Replacement

- KPL-250



KPL250 250 Watt Performance

Mounting Height (feet)	Foot-candles
15	40
20	29
25	20
30	14
35	11
40	7



Synapse



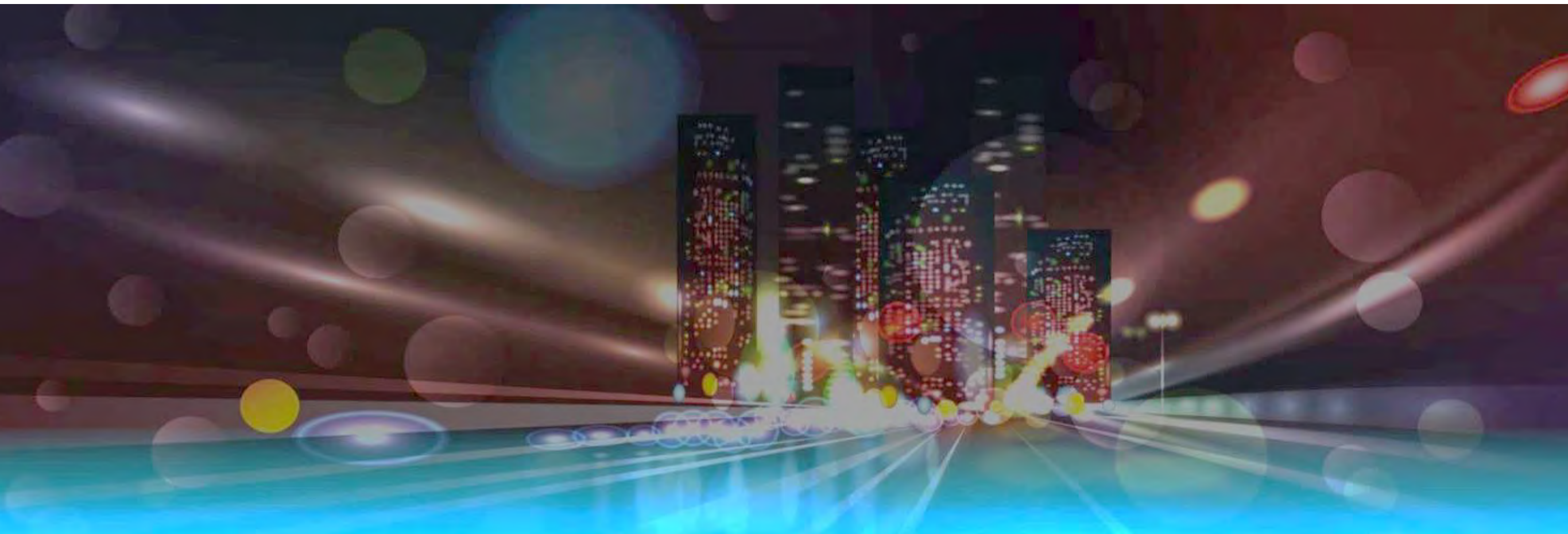
Smart Wireless Lighting Controls- A Quick Overview

June 2015



Why Smart Wireless Lighting Controls

- **Energy Savings**
 - Control single fixtures or banks of lights
 - Responds to more than 'time of day' and provides more than 'on/off' functionality
- **Installation**
 - Survey and Commissioning Tools
 - Flexible enough for site based set up or cloud based configuration
- **Smart**
 - Enhanced load shedding detection
 - No single point of failure



Wireless Lighting Controls- Potential Savings

Timers: up to 40%

Dim and turn off lights when rooms are unoccupied.

Photo Sensors: up to 20%

Adjust electric light levels to take natural light into account.

Occupancy sensors: up to 40%

Adjust lights based on occupancy detection.

Task Tuning: up to 20%

Dim lights to reduce maximum light levels for each space.

Personal control: up to 10%

Wireless Lighting Control- System Overview



Smart Wireless Lighting Applications



Outdoors

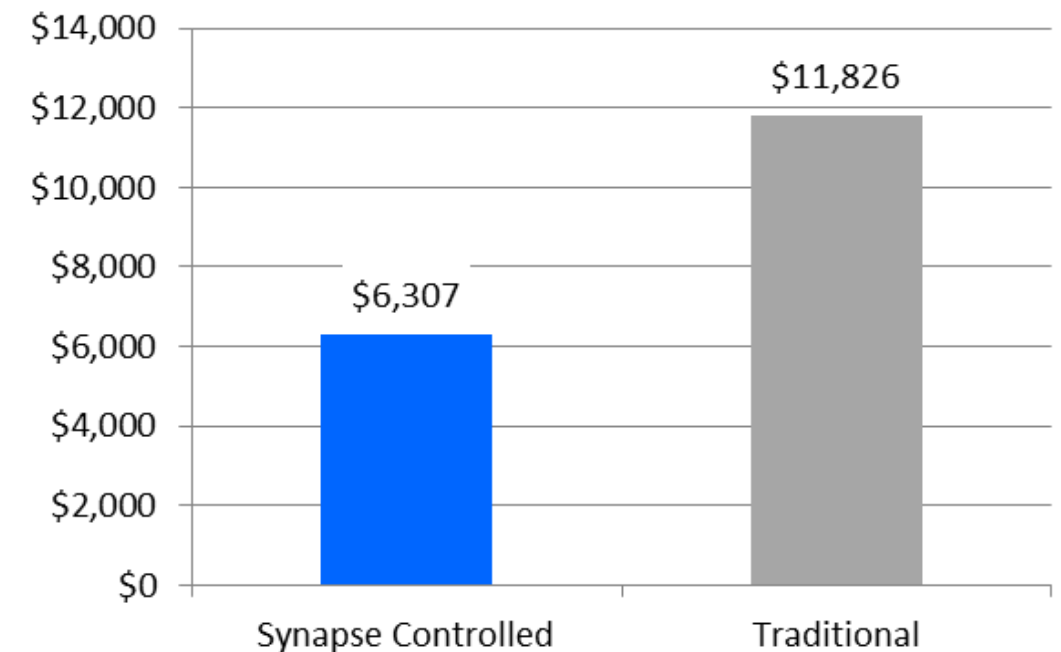
- Parking Lots
- Stadiums
- Garages

Indoors

- Warehouses
- Office Buildings
- Gymnasiums



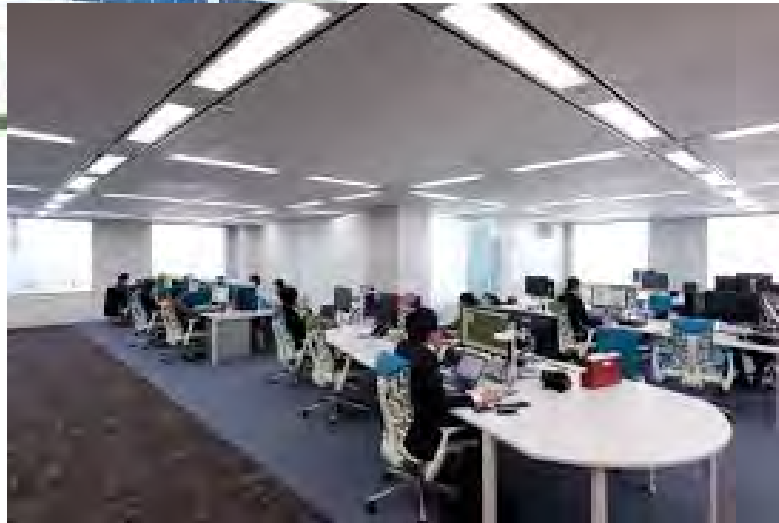
Outdoor Application Case Example



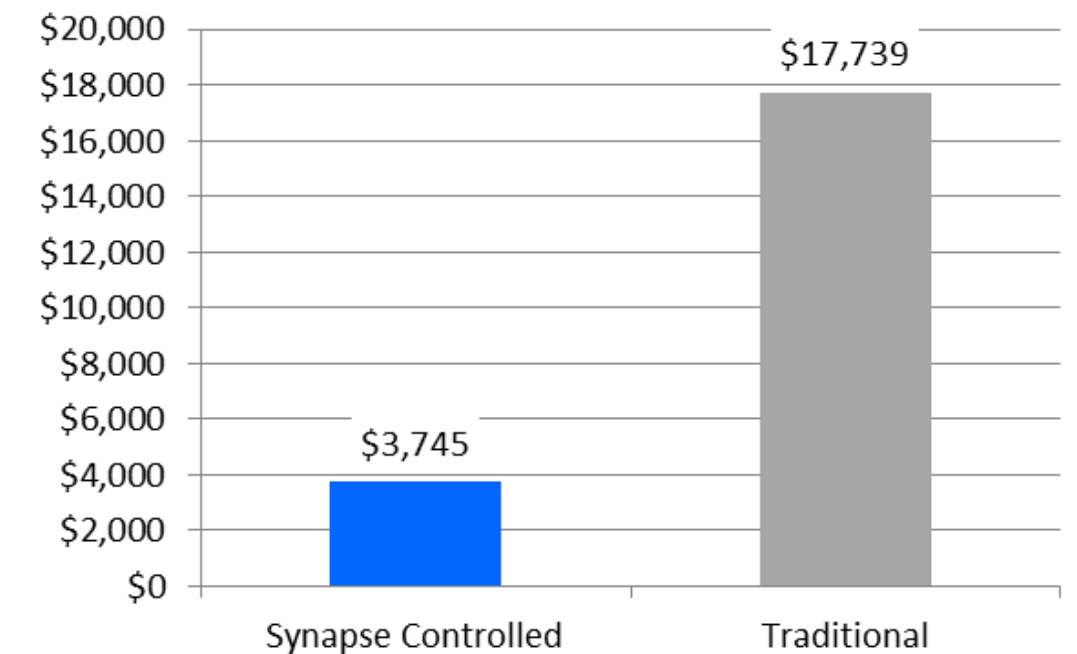
Annual Savings of \$110 per fixture, yielding a less than 2 year payback

- Wireless controllers installed in every pole
 - Motion Sensors used to enable additional dimming during off hours
 - Sunrise / Sunset fade to maximize savings
- 50 Fixture Parking Lot (all 360 watt)
 - Energy Rate \$0.12 per kWh
 - Traditional Installation controlled by timer or photo cell

Indoor Application Case Example



- Occupancy Sensors with integrated ambient detection enabling daylight harvesting
- Bank control of fixtures cuts installation cost
- RF running through plenum space to maintain seamless appearance



Annual Savings of \$30 per fixture, yielding a less than 2 year payback

- 500 Office with LED Troffers (all 45 watts)
- Energy Rate \$0.12 per kWh
- Traditional Installation without controls

Smart Wireless Lighting Solution and Components

One Operating Platform... Two Implementation Methods

Site Based Solution

- Key Features:
- No Internet Required
- Mobile friendly html5 interface
- Optimal Applications:
- Single-site installations

Cloud Based Solution

- Key Features:
- Control Anytime, Anywhere
- Secure Cloud
- Optimal Applications:
- Multi-site installations
- Greater than 500-node network
- Benefits:
- Nominal annual software charge
- Integrated dashboard and data analytics

Local Control Solution

- No Internet Required – Site based control
- html5 mobile application based commissioning and control
- Android Install and commissioning tool
 - Scans QR Code and pulls Mac Address in Phone
 - Latitude and longitude pulled from device and stored with Mac Address
 - Holds Data for Multiple Sites
 - Flags tells you upload to Site Controller Needed
- Multiple Zones, Scenes, Events, and Weekly Schedule
- Data and events stored on local gateway
- Upgradable to Lighting Cloud Solution



Flexibility
to manage your
lighting your way

Local Solution Components



No
Internet
Required
Control

Site Server



SS420
(Cased)
SS425
(Board)

Cellular

Wireless Controllers



LP150-001
3Amp Relay
Flying Leads

LP250-11,
LP280-11

Apr-15
Commissioning Tool
Android Phone
Kit Kat OS

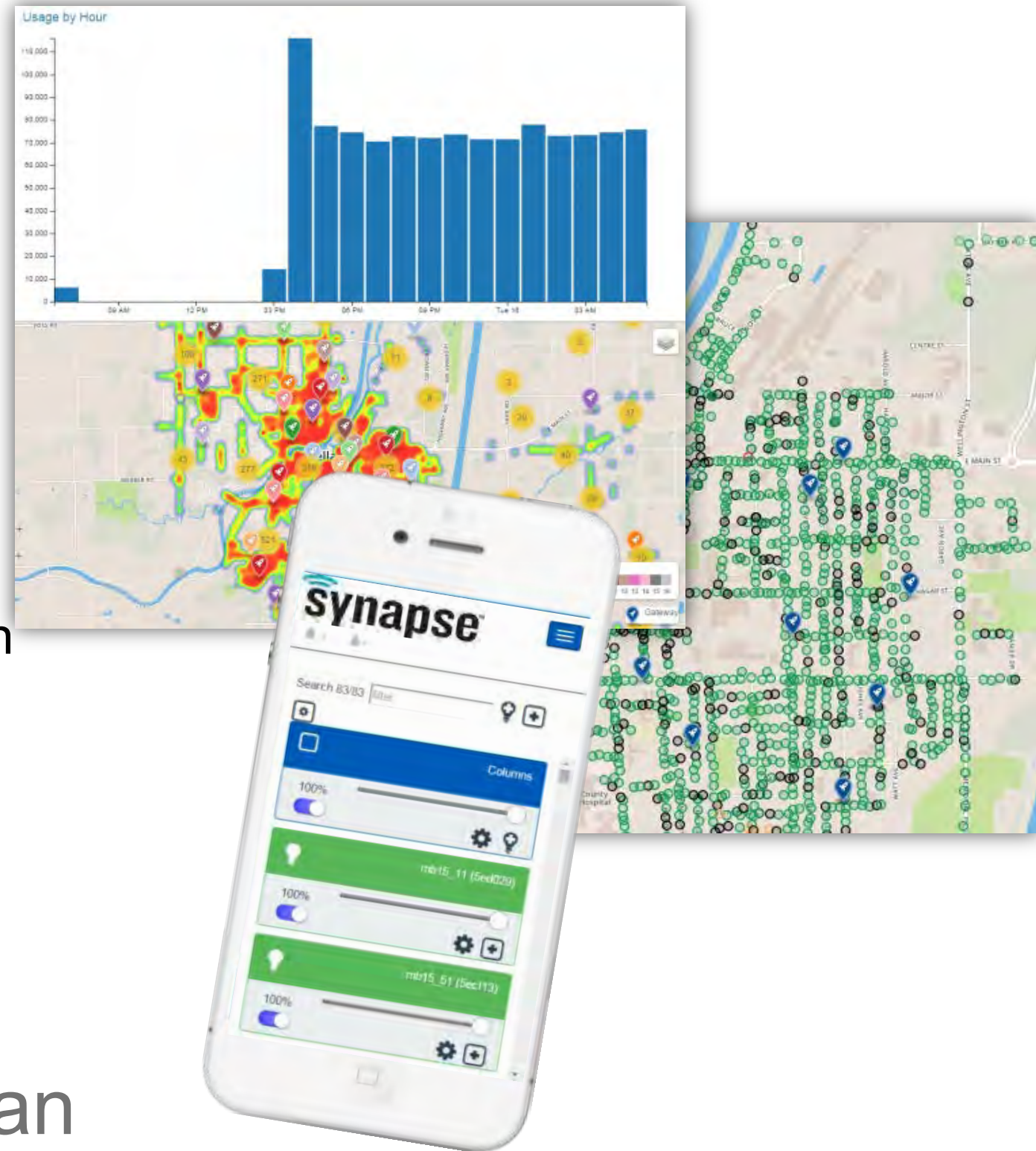


Input
Output
Terminal

Lighting Cloud Control Solution

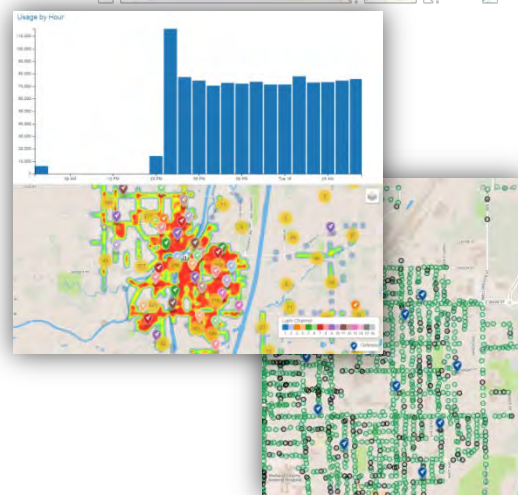
- **Cloud Based Control**

- Control Anytime / Anywhere
- Dashboards and Reports
- Power Monitoring
- Custom Alarms and Alerts
- Unlimited Zones, Scenes, Events, 365-day calendar
- Map Latitude/Longitude View
- Partners with mobile application
- Integrated Network Topology



Opportunity
to enhance more than
just lighting

Lighting Cloud Control Components



LPSET
Site
Initialization

n

Gateway



LP420
(Cased)
LP425
(Board)

Cellular

Wireless Controllers



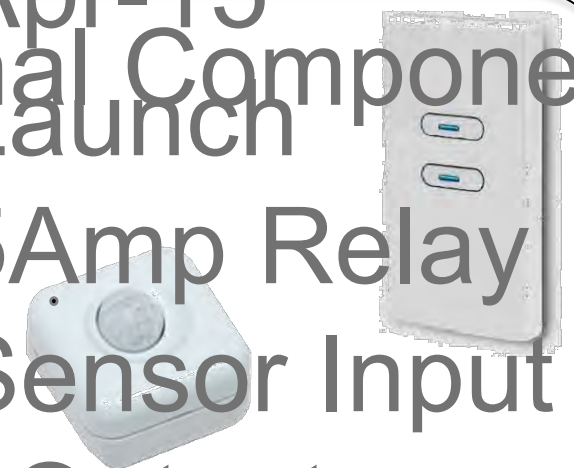
LP150-001
3Amp Relay
Flying Leads

LP250-11,
LP280-11

Apr-15

Additional Components
LP201-002
Sensor

Launch
5Amp Relay
Sensor Input
/ Output



LP301-

Terminal

Site Controller

- Linux Embedded Appliance running either site specific or cloud based software
 - ARM Cortex-A9, 800MHz
 - 4GB eMMC Flash
 - Wi-Fi 802.11 a/b/g
 - SNAP SM220 20 dBm Radio
 - 100M Ethernet
 - 3G internal cellular modem
 - Planned Certifications
 - Verizon
 - AT&T
 - Rogers carrier
- Industrial Temperature -40°C to +80°C
- Powered via 12-24V DC
 - Barrel Jack
 - Terminal Block



Solution	Config.	Case	Board
Lighting Local	Standard	SS420	SS425
	with Cellular	SS450	SS455
Lighting Cloud	Standard	LP420	LP425
	with Cellular	LP450	LP455



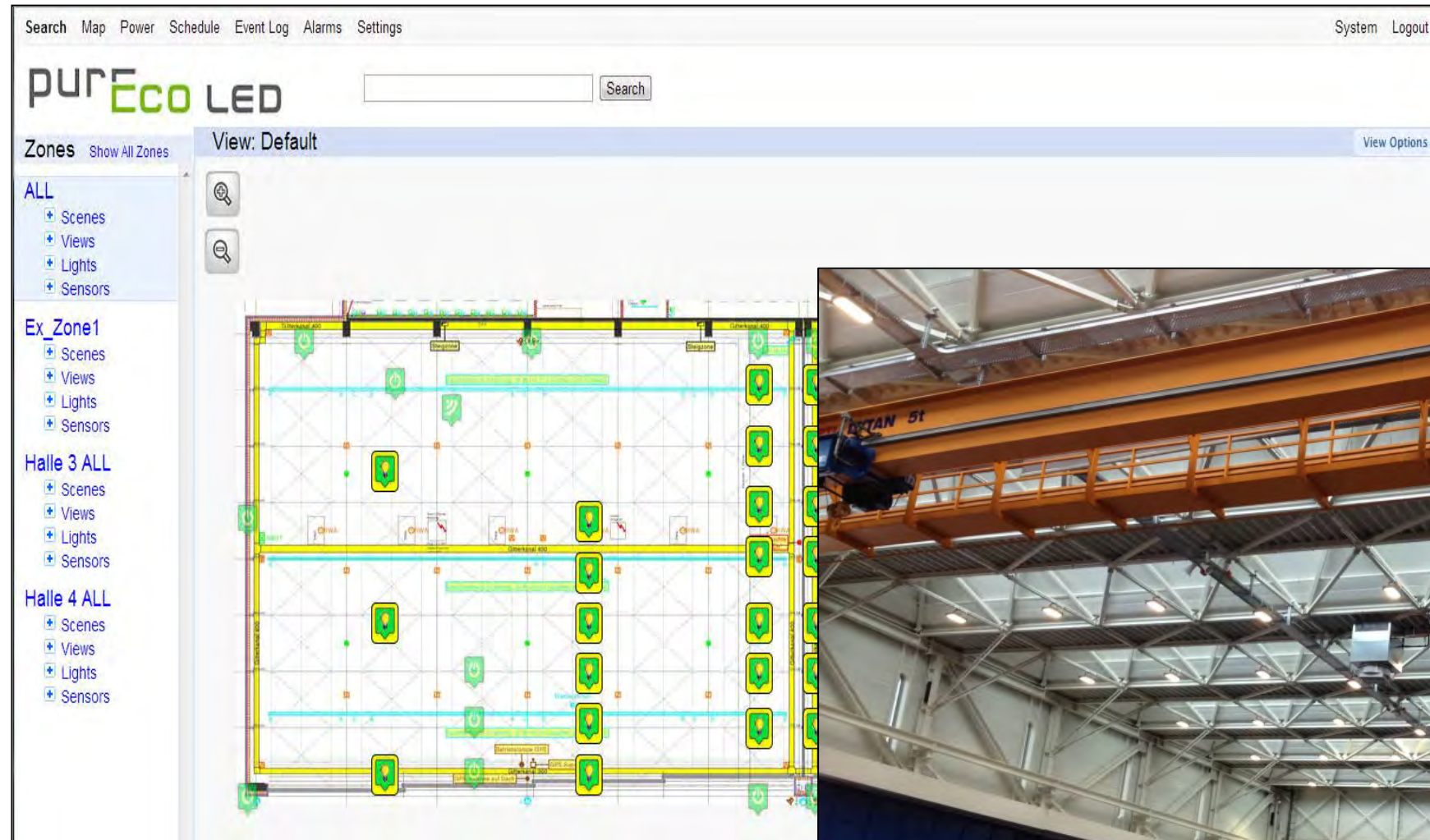
Intelligent Wireless
Lighting Solutions

Proven Solutions for the Internet of Things

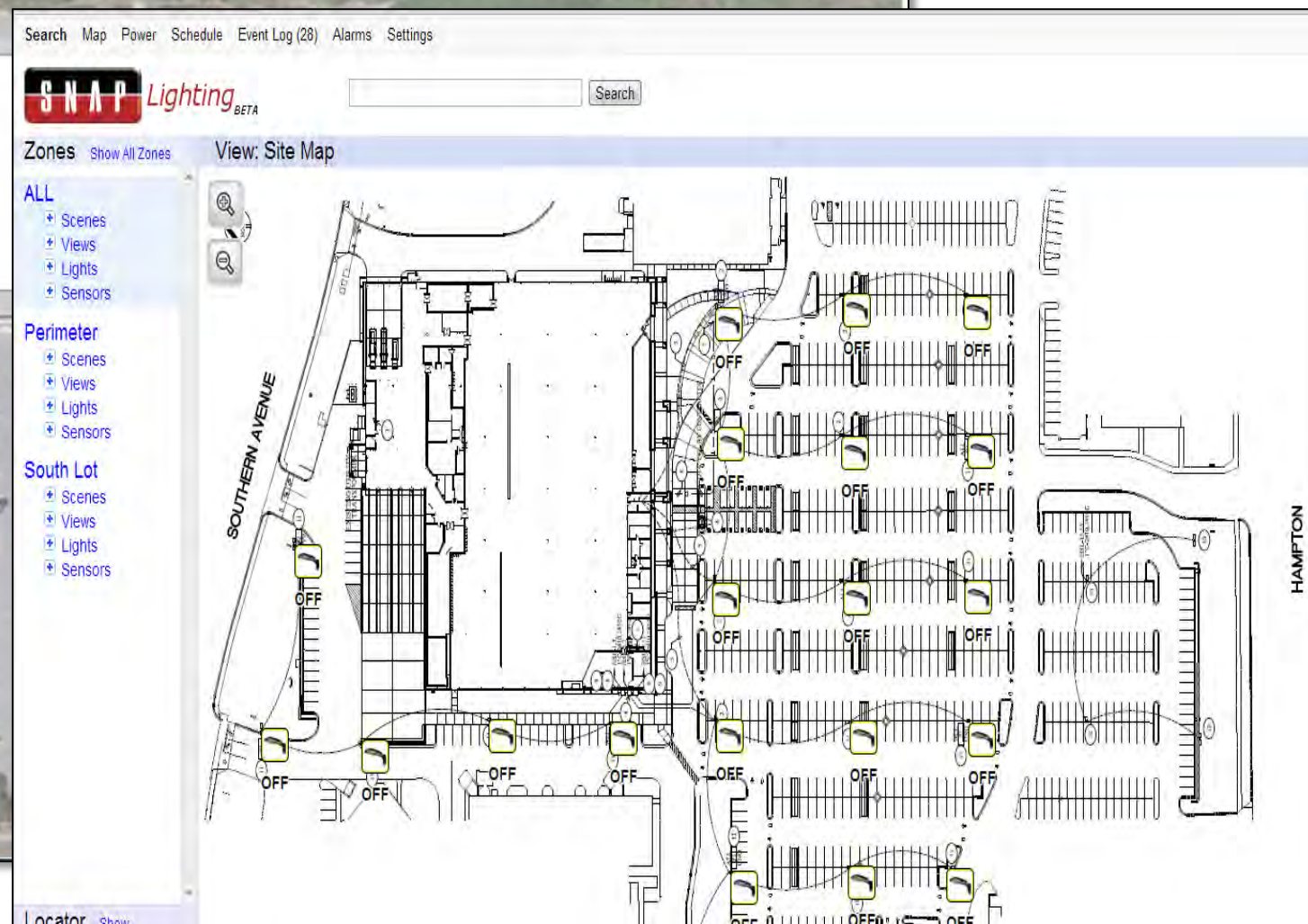
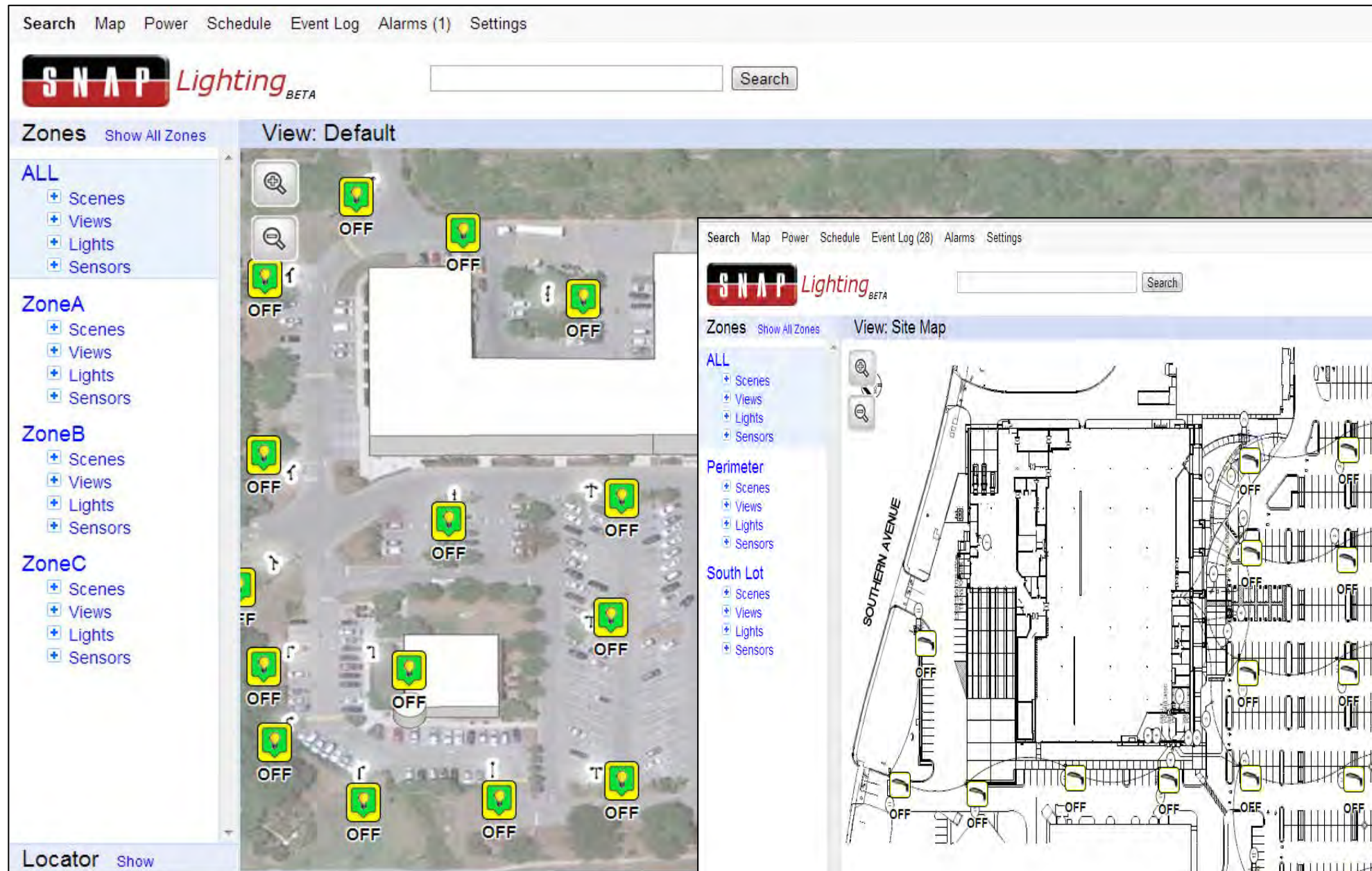
Technology to take Lighting further

Appendix

Warehouses (High Bays)



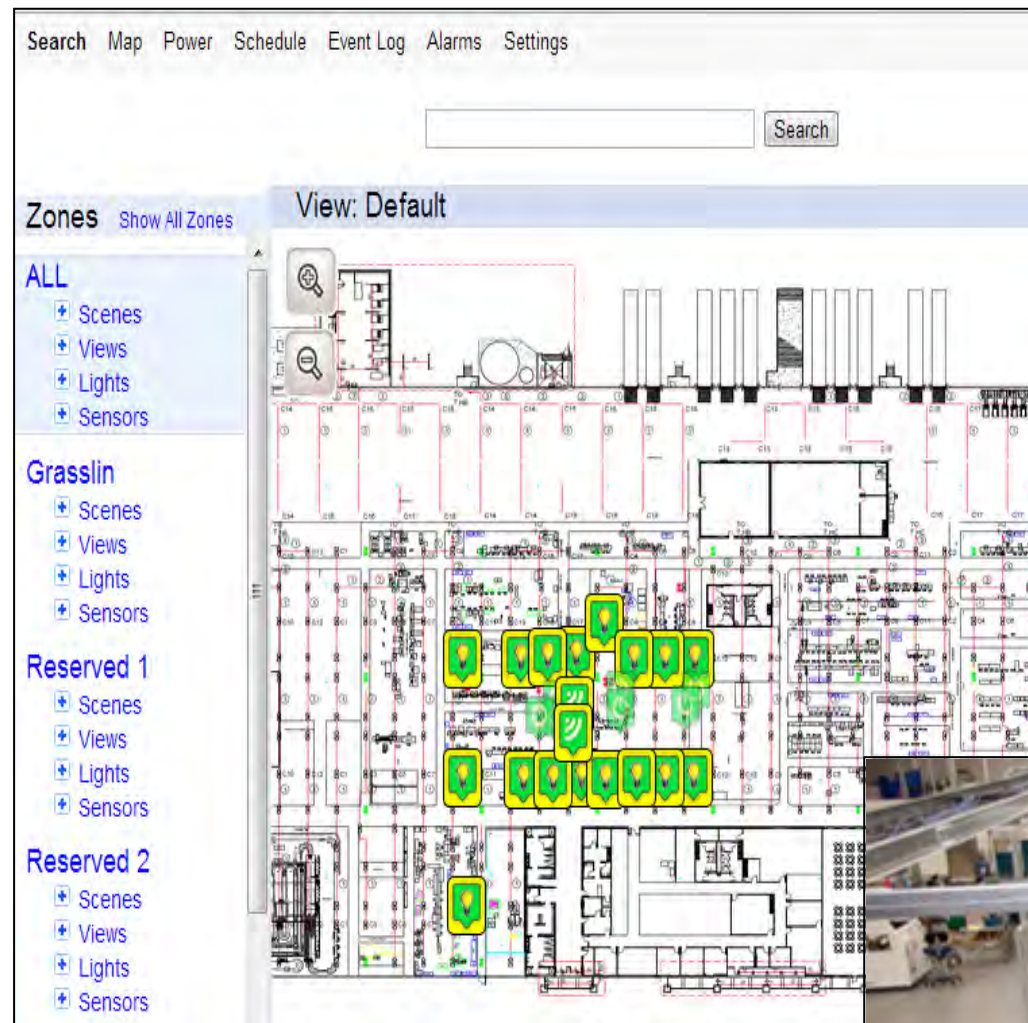
Big Box Store Parking Lots



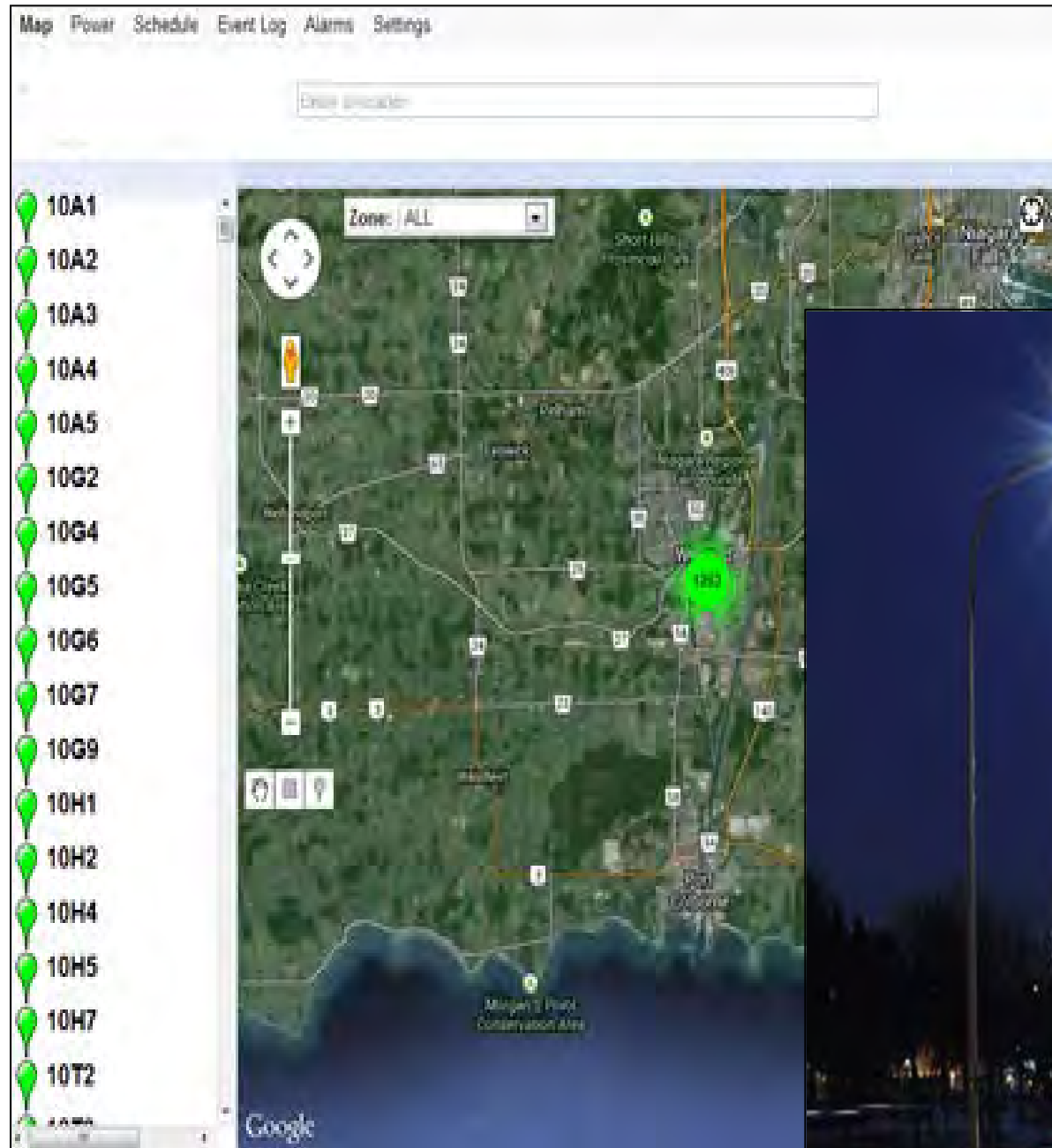
Emergency Stairwells



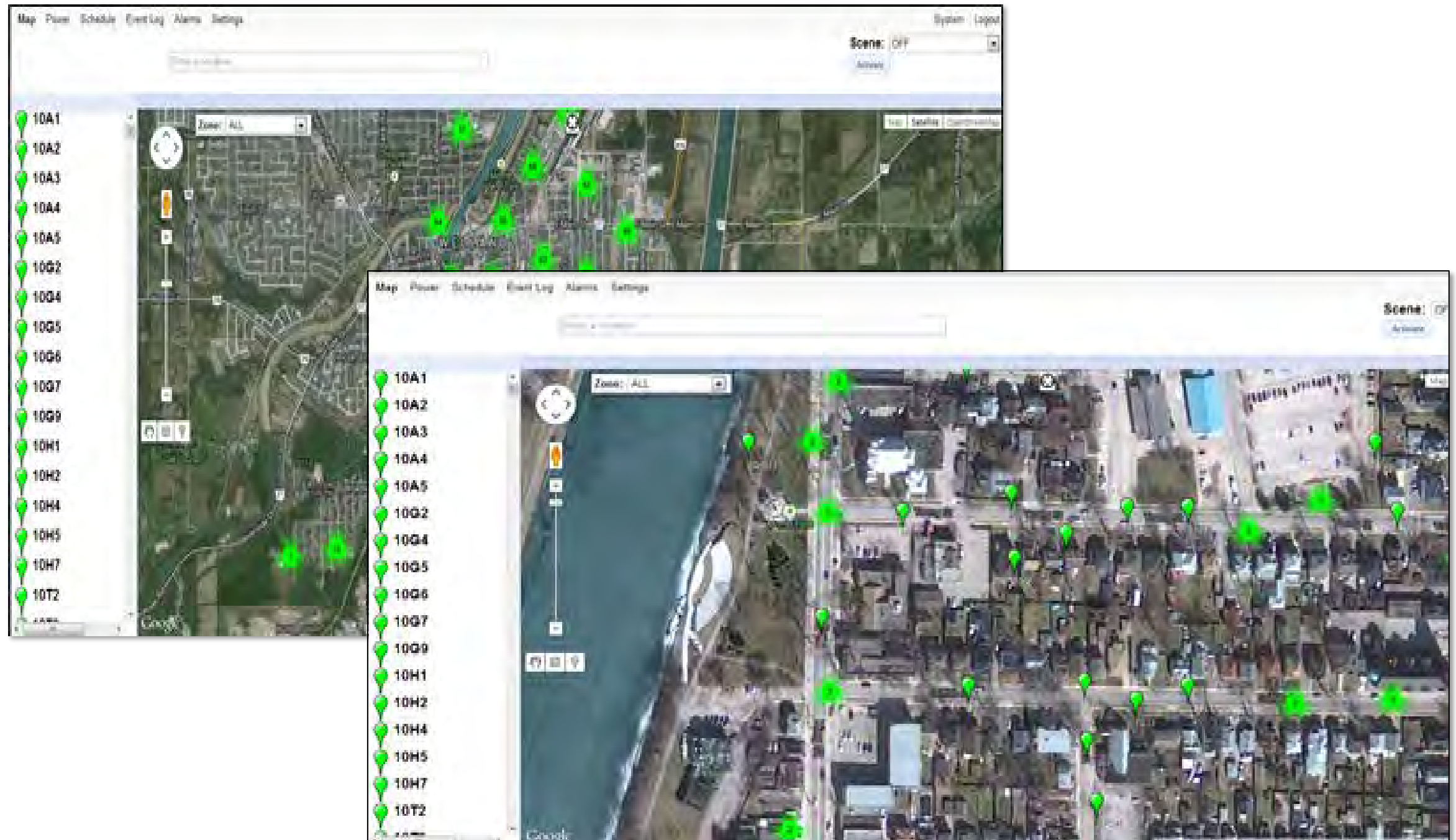
Manufacturing Plants



Municipalities



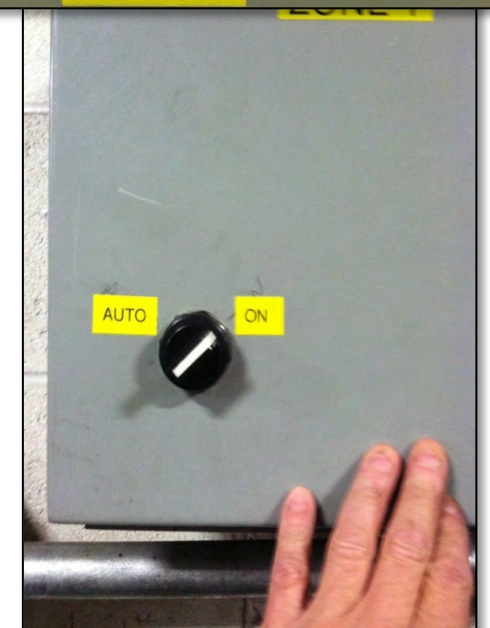
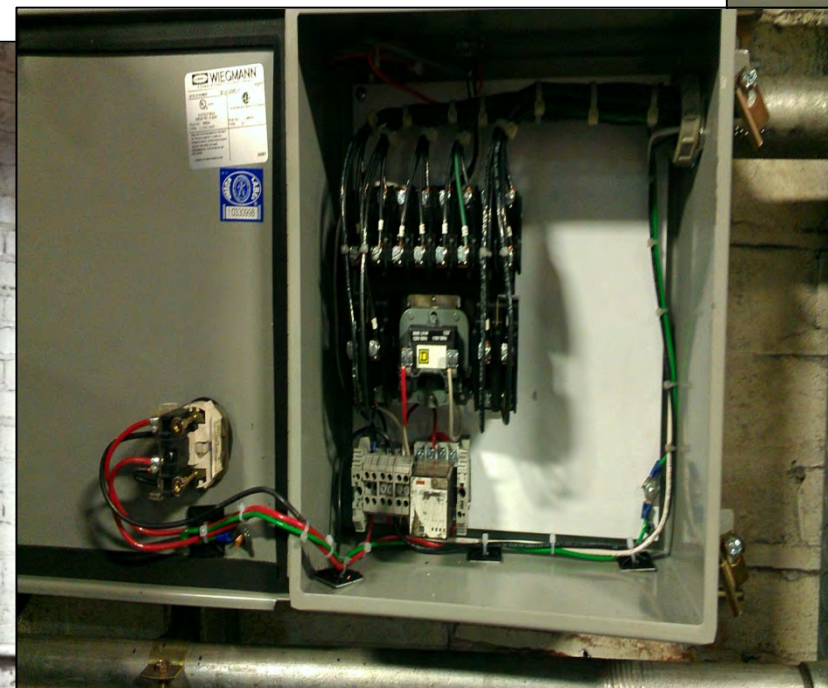
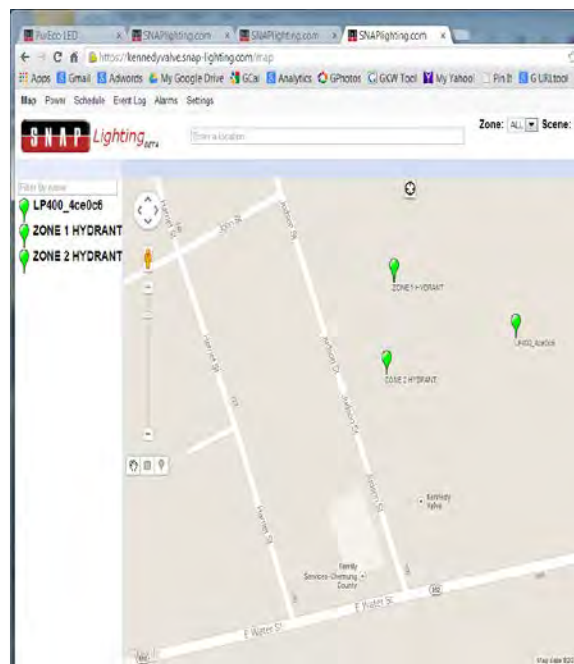
Municipalities – Zoom In



Controlling Contact Relays

"It will save us tens of thousands (\$\$\$)

- annually."* – Facilities Mgr
- Use the Switch Relay to control Contact Relays
- Control the Relay that controls the





ToggLED

TOGGLED®

Better Light. Made Right.™



LED Lighting Trends

An  Altair Company

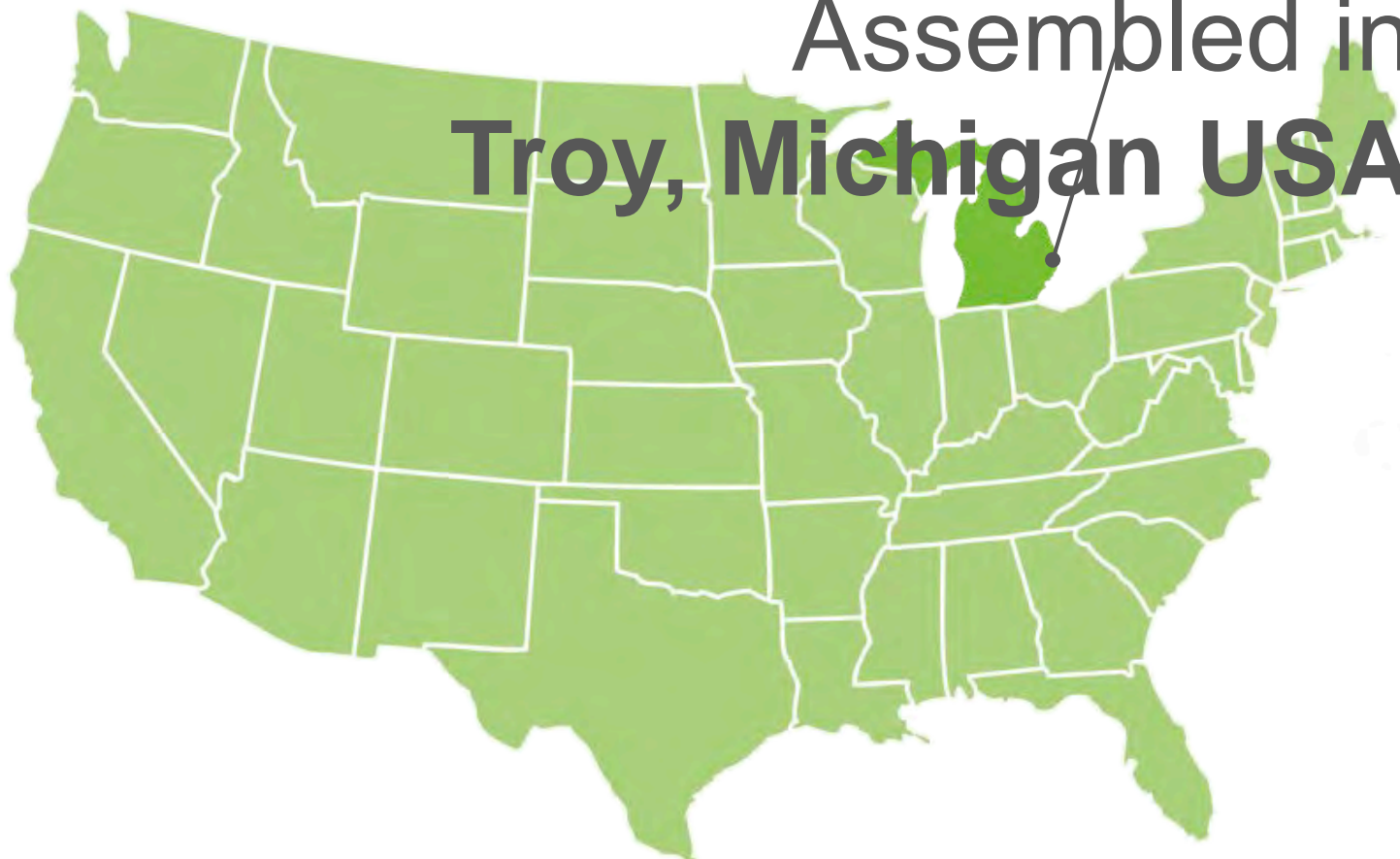
TOGGLED®



Focused on
**Next-generation
solid-state lighting
technology**

Designed and
Assembled in

Troy, Michigan USA



An  Altair company

Intellectual Property

62

PATENTS ISSUED

30⁺

PATENTS PENDING

35⁺

LICENSEES TO THE
PATENT PORTFOLIO

Our Products



Clear



Diffuse



Wide beam angle



Market Growth Factors

- Increased interest by the channels in pushing LEDs to consumers
- Declining price points
- LEDs provide the best lighting solution.



Residential Surpasses Commercial

- Overall LED is 2% penetrated as of Q1 2015. Once new technology penetration hits 5% -10% market penetration accelerates.
- Rapid growth of LED adoption expected to jump market penetration to 35% - 40% in 2016

LED Market Trends

- The US LED lighting market is anticipated to grow 25% per year through 2019.
- The North American LED lighting market at \$4.8 billion in 2012 is anticipated to go to \$42 billion by 2019.



Video

Monroe Schools and DTE Project



WattStopper

WattStopper Wireless Networks

An open wireless platform for connecting, communicating, and controlling the commercial building and unconditioned spaces from the electrical infrastructure experts.

Legrand Building Control Systems

AIC wireless control networks

Built inside the Tridium Niagara Framework

- Supported by over 15,000 trained integrators and service providers.
- Internet Protocol technology; Browser Interface
- Wireless control system for
 - HVAC Controls
 - Lighting
 - Outdoor lighting
 - Garage Lighting
 - High Bay
 - Electrical, Gas and Water Monitoring.
- Control Engine with Trending and Alarms
- 802.15.4 Radio supporting IPV6



Tridium Open JACE 6-E



BULIT®

- Basic Utility Light Intelligent Transceiver
- Photocell replacement, Twist Lock
- On board CT for current and voltage monitoring



A Twist lock
/277/480 VAC

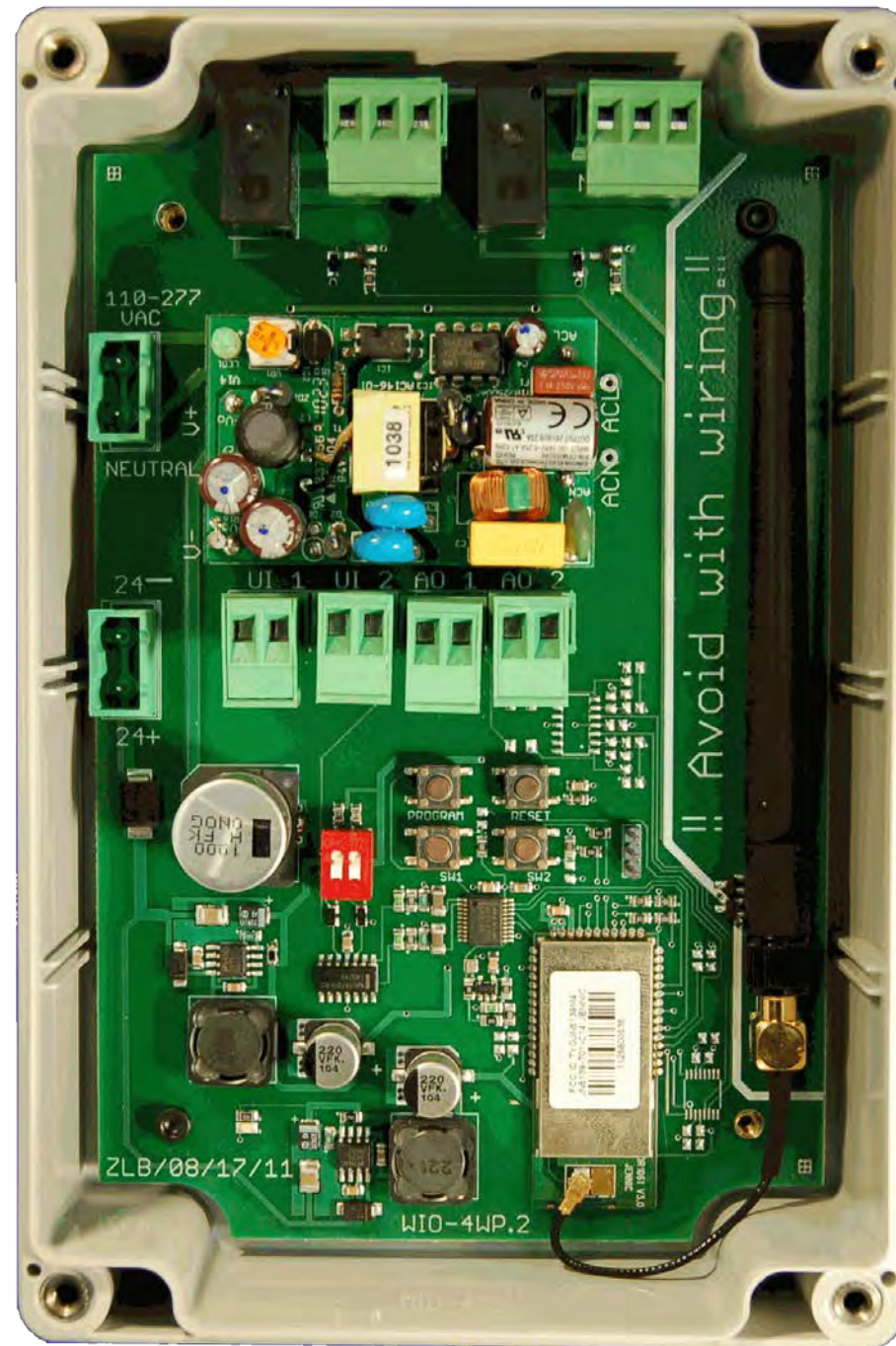
ability

* Q4 2014

- 0-10V Dimming* with ANSI C136.41

WIO-6WP

Digital
Outputs 2
Analog
Outputs 2
Universal
Inputs 2



Lighting:

Individual fixture or zone based controls

- Flexible deployment based upon ROI or control needs.
- Twist lock, remote mount, or fixture integrated solutions.
- Remote inputs for Sensors / Switches
- Occupancy Sensors, Photocells and overrides



Dashboards:

WattStopper®
Wireless



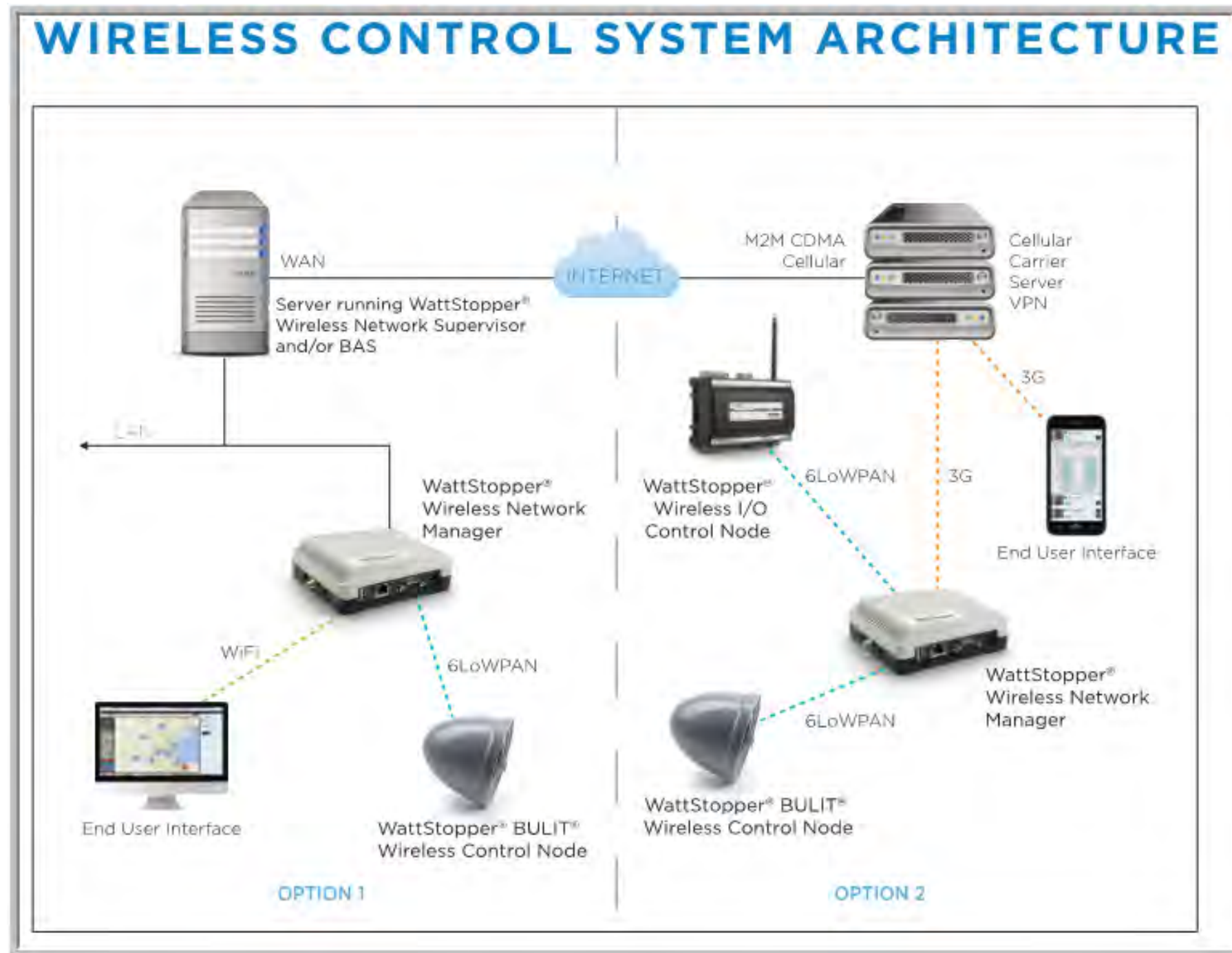
Front End



Mobility



Dashboards:



Dashboards:



Dashboards:



Dashboards:

Product Design: Extensibility (WattStopper)

Benefits:

- Programmable Dimming

- Intrusion / Security Alert

- Full Brightness

- Text Message

- Permanent Power Recording

- Real-Time, Onsite Control

WattStopper Wireless Networks

An open wireless platform for connecting, communicating, and controlling the commercial building and unconditioned spaces from the electrical infrastructure experts.

Legrand Building Control Systems



Sean McCoy
Outreach Manager



What we hope to accomplish:

- **Provide updated Overview of the Program**
 - New for 2015
 - New mid-year LED measures
 - New, Continuing & Expiring offers
 - About incentives
 - LED Lighting Opportunities
 - How to get started
- **Provide answers to your questions**

2015 Mid-Program Changes



DTE Energy[®]
Know Your Own Power[®]

New for 2015



For 2015:

- **Facility Caps** have been eliminated for both Natural Gas and Electric projects.
- **Project Caps** have been increased for both Natural Gas and Electric projects.
- **Customer Caps** have been increased for both Natural Gas and Electric projects.

2014 Caps

Cap Level	Electricity	Natural Gas
Facility	\$750,000	\$200,000
Project	\$200,000	\$100,000
Customer	\$750,000	\$200,000

2015 Caps

Cap Level	Electricity	Natural Gas
Project	\$250,000	\$200,000
Customer	\$1,000,000	\$300,000



For 2015:

- Custom Incentives have been increased for Natural Gas projects.

Custom Incentives	2014	2015
Electric	\$0.07/kWh	\$0.07/kWh
Natural Gas	\$3.50/Mcf	→ \$4/Mcf

2015 Program Notice



DTE Energy
Know Your Own Power®

Important for 2015:

- The 2015 Program Year **ends Nov. 30.**
- This means:
 - No Reservations extend beyond Nov. 30.
 - Final Applications **must** be submitted within 60 days of project completion or Nov. 30, whichever comes first.
 - Incomplete Final Applications face cancellation.
 - Any Application submitted after Nov. 30 will be canceled.

Reservation Application Date

Expected Completion Date**

**Project funds will only be reserved for 90 days from date of Reservation and no Reservation will extend beyond Nov. 30, 2015.

Final Application Date

Actual Completion Date***

***Application must be submitted within 60 days of completion date or by Nov. 30, 2015, whichever comes first.



New LED Measures (effective March 1, 2015)



New measures

ELECTRIC - LIGHTING

- **Interior combined occupancy & daylight sensors**
 - ≤500 watts = **\$20/sensor**
 - >500 watts = **\$50/sensor**
- **LED candelabra** – **\$5/lamp**
- **LED globe** – **\$6/lamp**
- **LED A-line replacing CFL A-line** – **\$0.75/lamp**
- **LED PAR/BR/R replacing CFL PAR/BR/R** – **\$1/lamp**
- **LED recessed can reflectors replacing CFL can** – **\$2/lamp**
- **Interior stairwell lighting controls** – **\$0.30/watt controlled**
- **Exterior dimming timer controls** – **\$0.06/watt controlled**



New Offers


DTE Energy®
Know Your Own Power®

Custom 20% Bonus offer

- A 20% bonus on gas and electric* custom applications.
 - Deadline for Reservation Application: **Aug. 31**
 - Deadline for Final Application: **Oct. 31**
- This fact sheet can be downloaded at: dtetradeally.com.

**Only electric projects in which the equipment will operate during peak hours are eligible. Other conditions apply.*

ENERGY EFFICIENCY PROGRAM FOR BUSINESS



DTE Energy®
Know Your Own Power™

2015 Custom Incentive Special

Get a 20% bonus on gas and electric projects

Apply now!

For a limited time, our Energy Efficiency Program for Business is offering a 20% bonus on all natural gas and electric^{*} **Custom** projects.

Reservation Applications are **required** for this special offer and must be submitted by **Aug. 31** — and before work begins. Work must be completed and a Final Application submitted by **Oct. 31**.

About this limited-time offer

We are offering a 20% incentive bonus on the following:

- All natural gas Custom projects;
- Only electric Custom projects in which the equipment involved will be in operation during peak hours in the month of July (*See the check box at right, which is located on the custom incentive pages.*)

How to apply

To apply for the special offer:


- Download the most recent version of the 2015 Program Application and complete all customer and project information.
- Complete the Custom worksheet(s) starting on Page 29 — then follow these steps:
 - On Page 6 (below), identify that portion of the subtotal (D1) that are custom incentives and multiply the figure by 20% (.20).
 - Manually enter that dollar value below.
 - Manually enter the following bonus code:
2015 Custom 20% Bonus.

The Application will automatically add the bonus to your base incentives.

Important note:

More than one bonus offer **cannot** be requested on the same measures offered in this custom special — such as the LED 20% Bonus. The customer must choose the bonus that best meets his/her needs.

This offer **may** be combined on the same application with the **Multi-Measure, Michigan Saves** financing and the **20% High Bay** bonuses (as long as the High Bay and Custom measures are not the same).



Will the "After Retrofit" specific piece of equipment listed here be in operation during the hours of 3-6 p.m. on Monday-Thursday in the month of July?
☐ Yes ☐ No
NOTE: This checkbox applies only to electric custom measures

Page 6

Lights				
Fans				
Air Conditioning				
Boilers				
Compressed Air				
Pumps				
AC Water & Cooling				
Chillers				
Process Heat				
Electric Process Equipment				
Cooling Towers				
Exhaust Fans				
Other Electric Measures				
Subtotal				
2015 Multi-Measure Discount				
2015 High Bay Measure Discount				
2015 LED Measure Discount				
2015 Other Measure Discount				
2015 Custom Incentives				
Total Available Offsets - Costs				
Offset Electrical Offset - Costs				
Offset HVAC Offset - Costs				
Offset Industrial Offset - Costs				

Contact Us

e-mail: [saveenergy@dteenergy.com](mailto:savenew@dteenergy.com)
phone: **866.796.0512** (press option 3 and mention Custom bonus 2015)
web: dteenergy.com/savenew

fax: **877.607.0744**
mail: **DTE Energy Efficiency Program for Business**
P.O. Box 11289
Detroit, Michigan 48211

^{*NOTE: Program based on availability of funding and may end at any time.}

2015 New Program Offers



DTE Energy
Know Your Own Power®

High Bay 20% Bonus offer

- A 20% bonus on specific high bay lighting measures.*
 - Deadline for Reservation Application: **Aug. 31**
 - Deadline for Final Application: **Oct. 31**
- This fact sheet can be downloaded at: dtetradeally.com.

**Other conditions apply.*

ENERGY EFFICIENCY PROGRAM FOR BUSINESS

2015 High Bay Lighting Special
Get a 20% bonus on specific measures

Apply now!
For a limited time, our Energy Efficiency Program for Business is offering a 20% bonus for **High-Bay Lighting** projects involving certain Prescriptive measures.

Reservation Applications are **required** for this special offer and must be submitted by **Aug. 31** — and before work begins. Work must be completed and a Final Application submitted by **Oct. 31**.

About this limited-time offer
We are offering a 20% incentive bonus on certain **prescriptive** measures (see table at right). All other Program terms and conditions still apply.

How to apply
To apply for the special offer:

- Download the most recent version of the 2015 Program Application and complete all customer and project information.
- Complete the worksheet on Page 8 for the measures being installed (see reference numbers at right to find the qualifying measures) — then follow these steps:
 1. On Page 6 (below), take the subtotal of incentives for those measures (D1) and multiply the figure by 20% (.20).
 2. Manually enter that dollar value below.
 3. Manually enter the following bonus code:
2015 High-Bay 20% Bonus.

The Application will automatically add the bonus to your base incentives.

Important note:
More than one bonus offer **cannot** be requested on the same measures offered in this high-bay special — such as the LED 20% Bonus. The customer must choose the bonus that best meets his/her needs.

This offer **may** be combined with the **Multi-Measure, Michigan-Made, Michigan Saves** financing and the **20% Custom** bonuses.

Contact Us
e-mail: saveenergy@dteenergy.com
phone: 866.796.0512 (press option 3 and mention Custom bonus 2015)
web: dteenergy.com/savenow
fax: 877.607.0744
mail: DTE Energy Efficiency Program for Business
P.O. Box 11289
Detroit, Michigan 48211

*NOTE: Program based on availability of funding and may end at any time. June 2015

Prescriptive measures that qualify for the bonus*

LED Lighting Measure	Reference numbers
• Interior HID to Fluorescent Fixtures	8-1 — 8-8
• Pulse Start Metal Halide	8-9 — 8-12
• Interior LED or Induction High Bay	8-13 — 8-15

Use the reference numbers to find these measures on Page 8 of the Program Application.

Page 6

1

2

3

(2015 High-Bay 20% Bonus (x .01 x .20))



Continuing Offers



Agriculture measures

- A special package of measures and incentives designed for Michigan's agricultural and dairy farmers and commercial greenhouse owners.
- Incentives are available for upgrades in areas of irrigation systems, refrigeration, dairy equipment, grain dryers, greenhouse equipment and fans and pumps.
- Use this special application.



2015 Continuing Program Offers



DTE Energy
Know Your Own Power®

Michigan-Made bonus

- Receive a **15% bonus** for any installed equipment that is 50% manufactured and/or assembled in Michigan (excluding packaging).
- The Michigan-Made fact sheet and manufacturer's affidavit can be downloaded at: dtetradeally.com.

ENERGY EFFICIENCY PROGRAM FOR BUSINESS

2015 Michigan-Made Incentive Bonus
Install products manufactured/assembled in the state: get a 15% bonus

DTE Energy's *Michigan-Made* bonus is designed to reward customers who use Michigan-made products in their energy-efficiency projects — while also helping boost our state's economy.

What's eligible
Business customers who install *Michigan-Made* products at their locations in 2015, will qualify for a 15% bonus on each eligible measure installed.

Most Prescriptive measures are eligible for this offer if they meet the following conditions:

- The purchased product(s) must have been at least 50% manufactured and/or assembled in Michigan (exclusive of packaging and installation).
IMPORTANT NOTE: The installation of a product is not considered "assembly."
- An affidavit is provided by the manufacturer of each product installed, attesting to the product/measure meeting the *Michigan-made* criteria. (Affidavits are available from participating manufacturers.)
- You must attach the affidavit to the Application. (If the Application is filed electronically, the affidavit(s) should be attached to the email submission.)
- You must attach the manufacturer's spec sheet, showing the product and where it is manufactured/assembled. (If the Application is filed electronically, the specification sheet(s) should be attached to the email submission.)

How to apply
To receive a *Michigan-Made* bonus in addition to base incentives:

- Download and complete the latest version of the 2015 Program Application from our website: dteenergy.com/savenow.
- Find a list of *Michigan-Made* manufacturers on our website.
- Check the *Michigan-Made* box for each incentive that meets the requirements (above).
- The interactive PDF Application will calculate the *Michigan-Made* bonus automatically.
- Complete your project and submit your Final Application by **Nov. 30, 2015**.
(Applications submitted after Nov. 30, 2015, will be canceled.)

Contact Us
We are available to help you understand the incentive requirements and available resources for projects under the Energy Efficiency Program for Business.*
Call to check your eligibility and learn how to make DTE Energy's Program work for you.

email: saveenergy@dteenergy.com
phone: 866.796.0512 (press option 3 and mention the 2015 Michigan-Made bonus)
web: dteenergy.com/savenow
fax: 877.607.0744
mail: DTE Energy's Energy Efficiency Program for Business
P.O. Box 11289
Detroit, Michigan 48211

PURE MICHIGAN
Business Connect


*Program based on availability of funding and may end at any time.



Multi-Measure bonus

- Receive a **20% bonus** on multiple categories submitted on the same Application.
 - No single category can be more than 75% of the Application.
 - **Ex:** you install a new furnace and also install insulation – and neither incentive is more than 75% of the total.
 - The PDF Application automatically calculates the percentages and enters the incentives.
- This fact sheet can be downloaded at: dtetradeally.com.
- Food Service/Health-Fitness customers: Get another 10% bonus!

ENERGY EFFICIENCY PROGRAM FOR BUSINESS



2015 Multi-Measure Incentive Bonus

Install more than one category of measures and receive a 20% bonus

DTE Energy's **Multi-Measure** bonus is designed to promote the installation of energy-efficiency measures from more than one category per application, thereby further reducing energy consumption and saving business customers even more money.

How it works
Under this program, if no single category of measures is more than 75% of the total value of the Application, the customer receives a **20% bonus** on the entire Application.

What qualifies for the bonus
To be considered for the **Multi-Measure** bonus, projects must involve measures from at least two of the following categories that appear in the **Energy Efficiency Program for Business Application**:

ELECTRIC	GAS
<input type="checkbox"/> Lighting	<input type="checkbox"/> Hot Water & Laundry
<input type="checkbox"/> HVAC	<input type="checkbox"/> HVAC
<input type="checkbox"/> Food Service/refrigeration	<input type="checkbox"/> Food Service
<input type="checkbox"/> Process Electric	<input type="checkbox"/> Process Gas
<input type="checkbox"/> Miscellaneous	<input type="checkbox"/> Boiler/furnace tune up
	<input type="checkbox"/> Insulation

NOTE: Custom projects are also eligible, based on these same categories.

How to apply
To receive a **Multi-Measure** bonus in addition to base incentives:

- Download and complete the latest version of the 2015 Program Application from our website: dteenergy.com/savenow.
- The interactive PDF Application will calculate the **Multi-Measure** bonus automatically.
- Submit your Application and complete your project by **Nov. 30, 2015**.
(Applications submitted after Nov. 30, 2015, will be canceled.)

Contact Us
We are available to help you understand the incentive requirements and available resources for projects under the **Energy Efficiency Program for Business**.
Call to check your eligibility and learn how to make DTE Energy's Program work for you.

email: saveenergy@dteenergy.com
phone: 866.796.0512 (press option 3 and mention the 2015 Multi-Measure bonus)
web: dteenergy.com/savenow
fax: 877.607.0744
mail: DTE Energy's Energy Efficiency Program for Business
P.O. Box 11289
Detroit, Michigan 48211

* Program based on availability of funding and may end at any time.

Project Example

1. A customer enters measures under Lighting category (prescriptive and/or custom) that would receive a \$10,000 DTE Energy incentive.
2. The customer adds a measure(s) from a second category, such as HVAC-Gas (prescriptive/custom), to the same Application, for a \$4,000 incentive.
3. The total of the Application is \$14,000 — and the largest category (Lighting) represents only 71.4% of the total.
4. The customer receives a 20% bonus based on \$14,000 in total incentives: or an **additional \$2,800!**

Total incentives **before** bonus: \$14,000
Total incentives **after** bonus: \$16,800

2015 Continuing Program Offers



DTE Energy
Know Your Own Power®

0% Financing from Michigan Saves

- Get 0% financing for up to \$50,000 on projects submitted for incentives through our Program.
- For more information and to apply, download this fact/worksheet at:
dtetradeally.com

ENERGY EFFICIENCY PROGRAM FOR BUSINESS

**DTE Energy**
Know Your Own Power®

Get 0% financing on your Michigan Saves loan

Apply for energy efficiency incentives through DTE Energy and get a 0% interest rate on your project

DTE Energy — in partnership with **Michigan Saves** — is offering 0% financing on up to \$50,000 for an energy efficiency project that receives prescriptive measure incentives through its **Energy Efficiency Program for Business**. Simply indicate below that you've applied for the loan through **Michigan Saves** and attach this form to your incentives Application.

To qualify for a loan through **Michigan Saves**, you must use a **Michigan Saves**-authorized contractor. To find one, visit michigansaves.org.

How to apply for incentives and the special loan rate

1. Is your project pre-approved for financing through Michigan Saves?
YES: Then complete this worksheet and include it with your **Reservation Application** for incentives through DTE's **Energy Efficiency Program for Business**.
NO: Then contact **Michigan Saves**, find an authorized **Michigan Saves** contractor and get pre-approved for a loan.
2. Download the latest version of our Application and submit it as your **Reservation Application**.
3. Once **Michigan Saves** approves financing and you have a **Reservation Letter** from DTE, you have 90 days — or until **Nov. 30, 2015**, whichever is first — to complete the project.
4. DTE pays the incentive after the **Final Application** has been submitted within 60 days of completion of the project.

Important Notes

- If the project listed on your Application to **Michigan Saves** involves applying for incentives from another utility in addition to applying for incentives from DTE Energy, you **must** indicate that below.
- The \$50,000 loan limit applies to the entire project; it will not double if you receive incentives from two utilities.

☐ Yes, my project involves applying for incentives with another utility named below. By signing my name at the bottom of this form, I hereby authorize DTE Energy and/or its designees to discuss with the other utility both of my applications. I understand that my account information will not be exchanged.

Other utility's name: _____

Total incentives requested from the other utility: \$ _____

Customer Information

Name of Customer's Business	Michigan Saves Loan Application Date		
Name of Business Contact Person	Michigan Saves Loan Amount: \$ _____		
Contact Phone #	Contact Email		
Installation Address	City	State	ZIP
Account Holder's Signature	Date		

NOTE: The information above **must** match the information on the Reservation Application in order to be processed. Only prescriptive measures qualify for this offer. Attach this document to your Reservation Application in order to qualify for the 0% financing offered through **Michigan Saves**.

**FINANCING**

Who is Michigan Saves?

Michigan Saves is a non-profit organization dedicated to making energy improvements easier for all Michigan energy consumers by offering affordable financing and other incentives available through grants and partnerships with private sector lenders.

Why should I consider Michigan Saves?

Easy: Time is money in a small business. That's why we have someone to walk you through the process so you spend less energy on a hassle-free credit approval and more energy on your business.

Affordable: We understand the margins on your business are never as big as they need to be. That's why we work hard to make sure the return on your energy investment begins to pay off as fast as possible. In some cases, the return on your investment can be as soon as one year.

Smart: Replacing old, expensive equipment is an investment in your business that will lower operating costs and utility bills.

To get started, find a **Michigan Saves**-authorized contractor at michigansaves.org



Building Operator Certification Program

- **Tuition reimbursement:**
 - Gas or Electric Certification: \$650
 - Combined Gas/Electric: \$950
- Only customers with facilities larger than 50,000 square feet are eligible.
- Building professional must attend, pass and become certified in Level I or Level II certification course.
- The worksheet is available for download at: dtetradeally.com.
(Other conditions apply; see worksheet for details)

Energy Efficiency Program for Business



2015 Building Operator Certification Program

Reimbursement Guidelines and Application

DTE Energy – in partnership with the Michigan Energy Office, Consumers Energy and the Lansing Board of Water and Light – offers tuition reimbursement for Building Operator Certification training through its Energy Efficiency Program for Business. Only DTE customers with facilities larger than 50,000 square feet are eligible to participate in the tuition reimbursement program.

To be reimbursed through this program, a building professional must attend, pass and become certified in the Level I or Level II certification course administered by the Midwest Energy Efficiency Alliance (MEEA).

For terms and conditions of the reimbursement program, see below.



Building Operator Certification® (BOC) is a nationally recognized training and certification program focusing on energy efficient building operations and preventative maintenance procedures. Facilities with BOC graduates are proven to save energy, have lower energy bills, and offer an improved comfort for occupants. More than 11,000 professionals have earned BOC credentials through the program.

The Level I BOC training includes nearly 74 hours of classroom and project work (7.4 CEUs) in building systems operation and maintenance. The Level II BOC training includes nearly 60 hours of classroom and project work (6.1 CEUs) in building systems operation and maintenance. To become certified, participants must pass an exam at the end of each training day and complete three assigned projects.

Terms and Conditions

As an eligible customer of DTE Energy, I agree to allow participation by my company in the Building Operator Certification (BOC) Training program. The program requires that a representative of my company attend, pass and become certified in the Level I or Level II certification course as administered by the Midwest Energy Efficiency Alliance (MEEA).

I understand that I am responsible to pay MEEA in full for all costs associated with this training program. The training consists of courses that should be attended in person by the attendee. In addition to the coursework, the attendee is required to complete projects as assigned by the instructor. All courses and projects must be completed successfully in order to receive a passing grade and achieve final certification.

I understand that I must register for the program with the MEEA separately from this agreement. Registration information may be found on the MEEA website at www.boccentral.org.

A customer may have no more than five employees attend per course, no more than one employee per facility, and DTE Energy must be the electric and/or natural gas provider for the facility. The amount of the rebate, if any, will be determined by the type of service that DTE Energy provides to the facility. Upon receipt of final certification for each attendee, the approved reimbursement in the amounts listed on the reverse side of this form will be paid by DTE Energy to the customer. Customer understands and agrees that the payment of rebate funds is dependent on the availability of program funds and the compliance by customer with all requirements.

I certify that the information in this agreement is true and accurate. By signing this application (on the reverse side), I am applying to receive a partial reimbursement of tuition costs in the amounts listed on the reverse side. I consent to DTE Energy receiving a copy of this signed agreement and the data contained on it to verify eligibility and process payments. DTE Energy will send notification of approval or denial of rebate to the attendee.

Upon meeting the requirements for completion of the training and submitting proof of final certification, reimbursement checks will be sent from DTE Energy based on the availability of program funds and compliance with all requirements.

Any expenses incurred by the participating company or its attendee(s) in conjunction with the program will not be reimbursed by DTE Energy. DTE Energy reserves the right to cancel the reimbursement program for any reason at any time.

By signing the reverse side of this form, you agree to all terms and conditions of this program as listed above.

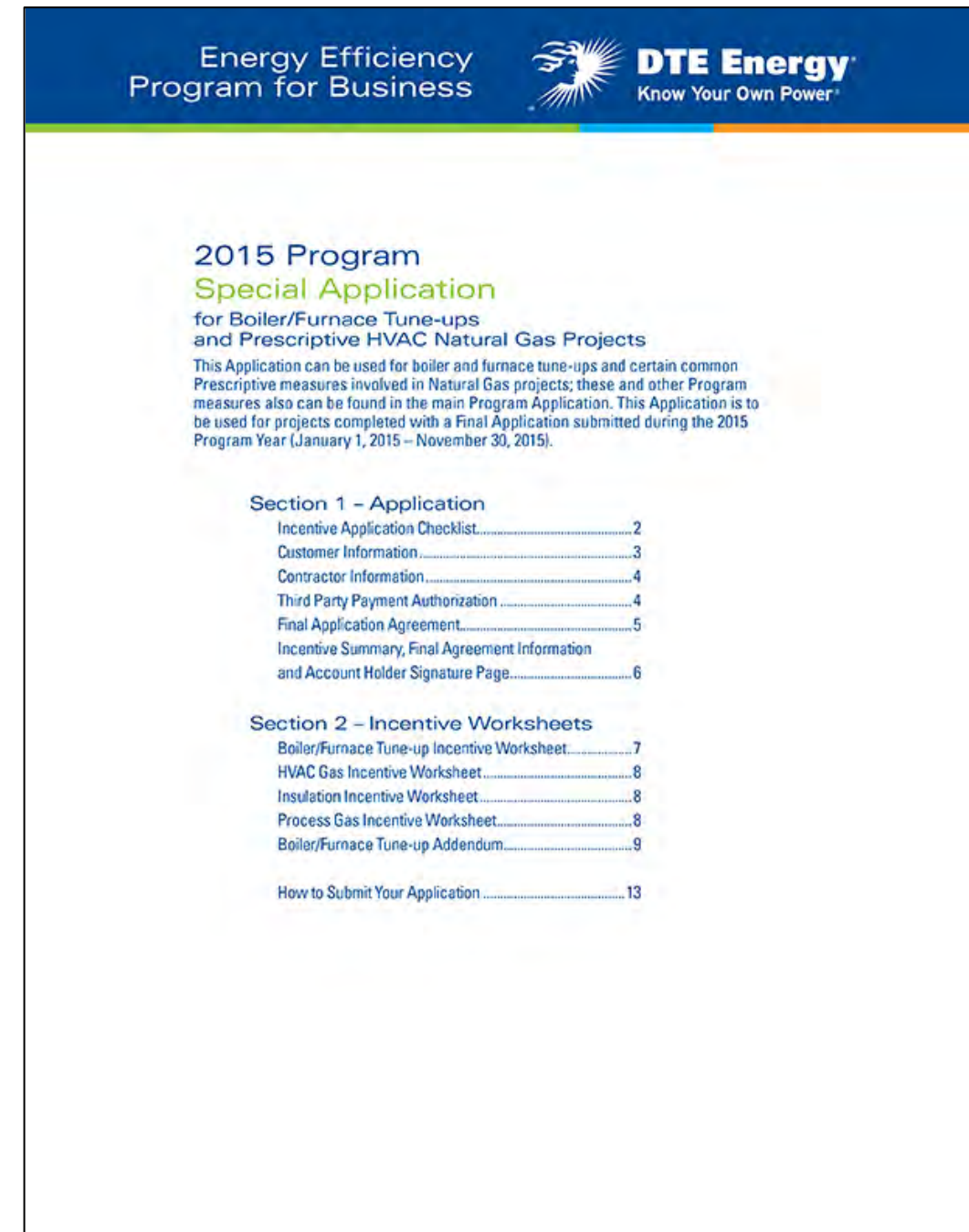


Gas-only App

Only certain common **prescriptive** measures* are included:

- **Boiler/Furnace Tune-up** *(w/addendum)*
 - Space Heating Boiler
 - Process Boiler
 - Domestic Hot Water
 - Furnace/RTU
- **HVAC**
 - Boilers & Furnaces
 - Infrared Heaters
 - HVAC Controls
- **Insulation**
- **Process**

Available for download at: dtetradeally.com.





Expiring Offers

Door Gasket bonus for Restaurants

- Get double the incentive – from \$2.50 to \$5 per linear foot – on gaskets installed by restaurant owners.
 - Gaskets must be installed on walk-in coolers and freezers (minimum door height ≥ 79 ")
 - Must be installed in restaurants served by DTE Electric.
 - Final Applications must be submitted by **June 30.**
- This fact sheet can be downloaded at: **dtetradeally.com**.

ENERGY EFFICIENCY PROGRAM FOR BUSINESS

DTE Energy
Know Your Own Power®

2015 Walk-in Door Gasket Bonus for Restaurants

Restaurant owners: *double your incentive on door gaskets for coolers and freezers*

Keeping food fresh — and keeping energy costs down — are constant struggles for today's restaurateur. But the good news is that restaurant owners can control and even reduce costs by installing simple energy efficiency measures — such as new door gaskets on their coolers and freezers.

Which is where this offer comes in: For a limited time, DTE Energy is doubling the incentive — from \$2.50 to \$5 per linear foot — on gaskets installed on walk-in coolers and freezers (minimum door height ≥ 79") used in restaurants served by DTE Electric.

To qualify, Final Applications must be submitted by June 30, 2015.

Restaurant electrical use

Restaurant operations are extremely energy-intensive, with the bulk of demand coming from the kitchen — in both cooking and refrigeration.

According to ENERGY STAR®, a typical restaurant spends \$3.99 per square foot annually on energy. At right is a look at typical restaurant electricity usage.*

Category	Percentage
Refrigeration	23%
Lighting	23%
Cooking	37%
Ventilation	8%
Office equipment	5%
Other	4%

*Based on industry averages reported by U.S. Energy Information Administration.

How to Apply

- Download the latest version of the 2015 Program Application.
- Complete the information on your Application (Pages 2-3).
- On Page 6 — on the first line under "Other Special Offers":
 - Enter: **2015 Door gasket bonus:**
 - Enter: **number of linear feet**
 - Multiply: **that number by \$5**
 - Enter: **the result at the far right.**
- Submit your Final Application within 60 days of project completion — but no later than June 30, 2015.

Page 6		1	2	3	4
Insurance					
Process Gas					
Boiler/Furnace Time-Ups					
Food Service - Gas					
Subtotals					
20% Multi-Measure Bonus					
15% Michigan-Made Bonus					
Incentive Subtotal					
Other Special Offers					
Other Special Offer - Code:	2015 Door gasket bonus:		lin. ft. x \$5 =		
Other Special Offer - Code:					
Other Special Offer - Code:					
Total Incentives Requested					

Contact us today!

We are available to help you understand the incentive requirements and available resources for these and other energy-efficiency projects. Call to check your eligibility and learn how to make DTE Energy's Energy Efficiency Program for Business work for you.

email: saveenergy@dteenergy.com
phone: 866.796.0512 (press option 3)
web: dteenergy.com/savenow

fax: 877.607.0744
mail: DTE Energy's Energy Efficiency Program for Business
P.O. Box 11289
Detroit, Michigan 48211

*Offer based on availability of funding and may end at any time.

1/28/15

Food Service Multi-Measure – additional 10% bonus

- Get an additional **10% bonus** on Multi-Measure projects submitted by those who own restaurants, grocery and convenience stores.
- This is in addition to the **20% Multi-Measure bonus***
- Use this special application.
 - Reservations or Final Applications must be submitted by **June 30**.

**To qualify, all measures must be submitted on the same Application – and no single category can be more than 75% of the Application.*

ENERGY EFFICIENCY PROGRAM FOR BUSINESS



Special offer for the Food Service industry

A limited time offer: get additional 10% bonus on Multi-Measure projects

For a limited time, DTE Energy's Energy Efficiency Program for Business is offering an **additional 10% bonus** on projects submitted by DTE food service business customers who qualify for the 20% Multi-Measure Bonus.*

This offer is available to customers who own and operate restaurants and grocery and convenience stores in DTE's service territory.

Your most common electric and gas energy-saving upgrade measures are available through this offer.

To qualify for the 20% Multi-Measure bonus, your project must include measures from more than one category (such as lighting and HVAC), in which no single category represents more than 75% of total incentives.

A special Application has been created for this offer that contains the specific measures and that will also automatically calculate the additional bonus. (See below).

Reservation or Final Applications must be submitted by June 30, 2015.

Work must be completed within 90 days of a reservation; and a Final Application must be submitted within 60 days of project completion. For more information about this offer, contact our office.



How to apply

To receive the 10% bonus:

- Download the 2015 Special Bonus Application for Restaurants and Grocery Stores.
- Complete all relevant worksheets.
- On Page 7, the interactive Application automatically will calculate your Multi-Measure bonus (A).
- The Application will then automatically calculate the additional 10% bonus and add it to the total (B).



Contact us today!

We are available to help you understand the incentive requirements and available resources for these and other energy-efficiency projects. Call to check your eligibility and learn how to make DTE Energy's Energy Efficiency Program for Business work for you.

email: saveenergy@dteenergy.com fax: 877.607.0744

phone: 866.796.0512 (press option 3) mail: DTE Energy's Energy Efficiency Program for Business

web: dteenergy.com/saveenergy P.O. Box 11289

Detroit, Michigan 48211

*Offer based on availability of funding and may end at any time.


3/1/2015

Health/Fitness Multi-Measure – additional 10% bonus

- Get an additional **10% bonus** on Multi-Measure projects submitted by those who own health clubs and fitness centers.
- This is in addition to the **20% Multi-Measure bonus***
- Use this special application.
 - Reservations or Final Applications must be submitted by **June 30**.

**To qualify, all measures must be submitted on the same Application – and no single category can be more than 75% of the Application.*

ENERGY EFFICIENCY PROGRAM FOR BUSINESS



DTE Energy
Know Your Own Power®

Special offer for Health, Fitness Clubs

A limited time offer: get additional 10% bonus on Multi-Measure projects

For a limited time, DTE Energy's Energy Efficiency Program for Business is offering an **additional 10% bonus** on projects submitted by DTE health club and fitness center business customers who qualify for the 20% Multi-Measure Bonus.*

This offer is available to customers who own and operate health clubs and fitness centers in DTE's service territory.

Your most common electric and gas energy-saving upgrade measures are available through this offer.

To qualify for the 20% Multi-Measure bonus, your project must include measures from more than one category (such as lighting and HVAC), in which no single category represents more than 75% of total incentives.

A special Application has been created for this offer that contains the specific measures and that will also automatically calculate the additional bonus. (See below).


Reservation or Final Applications must be submitted by June 30, 2015.

Work must be completed within 90 days of a reservation; and a Final Application must be submitted within 60 days of project completion. For more information, contact our office.

How to apply

To receive the 10% bonus:

- Download the 2015 Special Bonus Application for Health Clubs and Fitness Centers.
- Complete all relevant worksheets.
- On Page 7, the interactive Application automatically will calculate your Multi-Measure bonus (**A**).
- The Application will then automatically calculate the additional 10% bonus and add it to the total (**B**).



Energy Conservation Measures Worksheet	HVAC System Worksheet	Transmission Worksheet	
Lighting			
HWH - Electric			
Mech. Electric			
Process Electric			
Pool/Gymnasium - Electric			
HVAC - Gas			
Hot Water & Laundry			
Insulation			
Process Gas			
Boiler/Furnace Tune Up(s)			
Subtotals			
20% Multi-Measure Bonus			A
10% Michigan Made Bonus			
Total Incentive (\$ Amount)			B
Other Special Offer - Code:			
Other Special Offer - Code:			
Other Special Offer - Code:			
Special Incentive Worksheet			

*Offer based on availability of funding and may end at any time.

Contact us today!

We are available to help you understand the incentive requirements and available resources for these and other energy-efficiency projects. Call to check your eligibility and learn how to make DTE Energy's Energy Efficiency Program for Business work for you.

email: saveenergy@dteenergy.com

fax: 877.607.0744

phone: 866.796.0512 (press option 3)

mail: DTE Energy's Energy Efficiency Program for Business
P.O. Box 11289
Detroit, Michigan 48211


web: dteenergy.com/saveenow

*Offer based on availability of funding and may end at any time.
3/15/2015



LED Lighting Special: 20% bonus

- We've increased incentive rates on certain prescriptive LED measures by 20%.
 - Interior Linear LED
 - Interior LED/Induction High Bay
 - Exterior Garage HID to LED/Induction retrofit (annual operating hours = 8,760)
- Reservation Application is required, and must be submitted by **June 30**.
- Work must be completed and Final Application submitted by **Aug. 28**.
- This fact sheet can be downloaded at: dtetradeally.com.

ENERGY EFFICIENCY PROGRAM FOR BUSINESS  **DTE Energy**
Know Your Own Power®

2015 LED Lighting Special

Take advantage of this limited-time, 20% bonus

We've increased our incentives!
For a limited time, DTE Energy's Energy Efficiency Program for Business has increased the incentive rates for **LED Lighting** by 20% — for certain Prescriptive measures.

Reservation Applications are **required** for this special offer and must be submitted by **June 30** — and before work begins.

Work must be completed and a Final Application submitted between March 1 and Aug. 28, 2015.

About this limited-time offer
The features of this limited-time offer are:

- Prescriptive incentives have been increased by 20% for the LED lighting measures listed at right (follow the reference numbers to find the measures on the Program Application).
- All other Program terms and conditions still apply.

How to apply
To apply for the special incentives offered:

- Download the most recent version of the 2015 Program Application and complete all customer and project information.
- Complete the worksheets for the measures being installed (see reference numbers at right to find the qualifying measures).
- On Page 6, take the subtotal of incentives for those measures (D1) and multiply the figure by 20% (.20).
- Manually enter that dollar value below.
- Manually enter the bonus code: **2015 LED Bonus**.
- The Application will automatically add the bonus to your basic incentives.

Measures that qualify for the 20% LED bonus*

LED Lighting Measure	Reference numbers
Interior Linear LED	7-25 — 7-30
Interior LED/Induction High Bay	8-13 — 8-15
Exterior Garage HID to LED/Induction Retrofit (annual operating hours equal to 8,760)	8-19 — 8-21

* Use the reference numbers to find these measures in the Program Application. The first number is the page, the second number is the measure.

Page 6

Contact us today!
We are available to help you understand the incentive requirements and available resources for these and other energy-efficiency projects. Call to check your eligibility and learn how to make DTE Energy's Energy Efficiency Program for Business work for you.

email: saveenergy@dteenergy.com fax: **877.607.0744**
phone: **866.796.0512** (press option 3) mail: **DTE Energy's Energy Efficiency Program for Business**
web: dteenergy.com/savenow P.O. Box 11289
Detroit, Michigan 48211

*Offer based on availability of funding and may end at any time.



Program overview



Since 2009:

- Nearly **\$102 million** in cash rebates has been paid to Michigan business customers:
 - Electric: **\$87 million**
 - Gas: **\$15 million**
- More than **32,000 projects** have been completed.
- And our customers have realized savings of:
 - **1,837 GWh** in electricity.
 - **4.7 million Mcf** in natural gas.
 - **\$220 million** in total energy costs.

...and those numbers continue to grow in 2015



The impact of saving energy

- *Our customers have realized savings of:*
 - **1,837 GWh** in electricity.
 - That translates into:
1,296,304 tons of CO₂ equivalent
 - **4.7 million Mcf** in natural gas.
 - That translates into:
274,689 tons of CO₂ equivalent



For a customer to receive incentives

- Qualified measures must be installed at facilities served by DTE Energy.
- Projects must involve a **capital investment** that results in an improvement in energy efficiency of a system or building.
- The equipment installed must be new and meet the specifications spelled out in the Catalog.
- For each site, there must be at least one meter that is on an eligible rate schedule.
- You must be in good standing with DTE Energy and **not** be a Residential or Multifamily customer.



These do not qualify for an incentive

- Customers who self-direct (and have opted out of the program)
- Load shifting/demand limiting projects.
- Renewable energy projects.
- Power quality improvements.
- Fuel switching projects.
- On-site electricity generation.
- Changes in operational and/or maintenance practices or simple control modifications that do **NOT** involve capital costs.



Our Program timeline is simple:

Reservation Application



Application Review (may require pre-inspection)



Reservation Letter issued (Proceed with project)



Install Measures

(Project must start within 30 days and be completed within 90 days of approval or end of Program year, whichever comes first.)



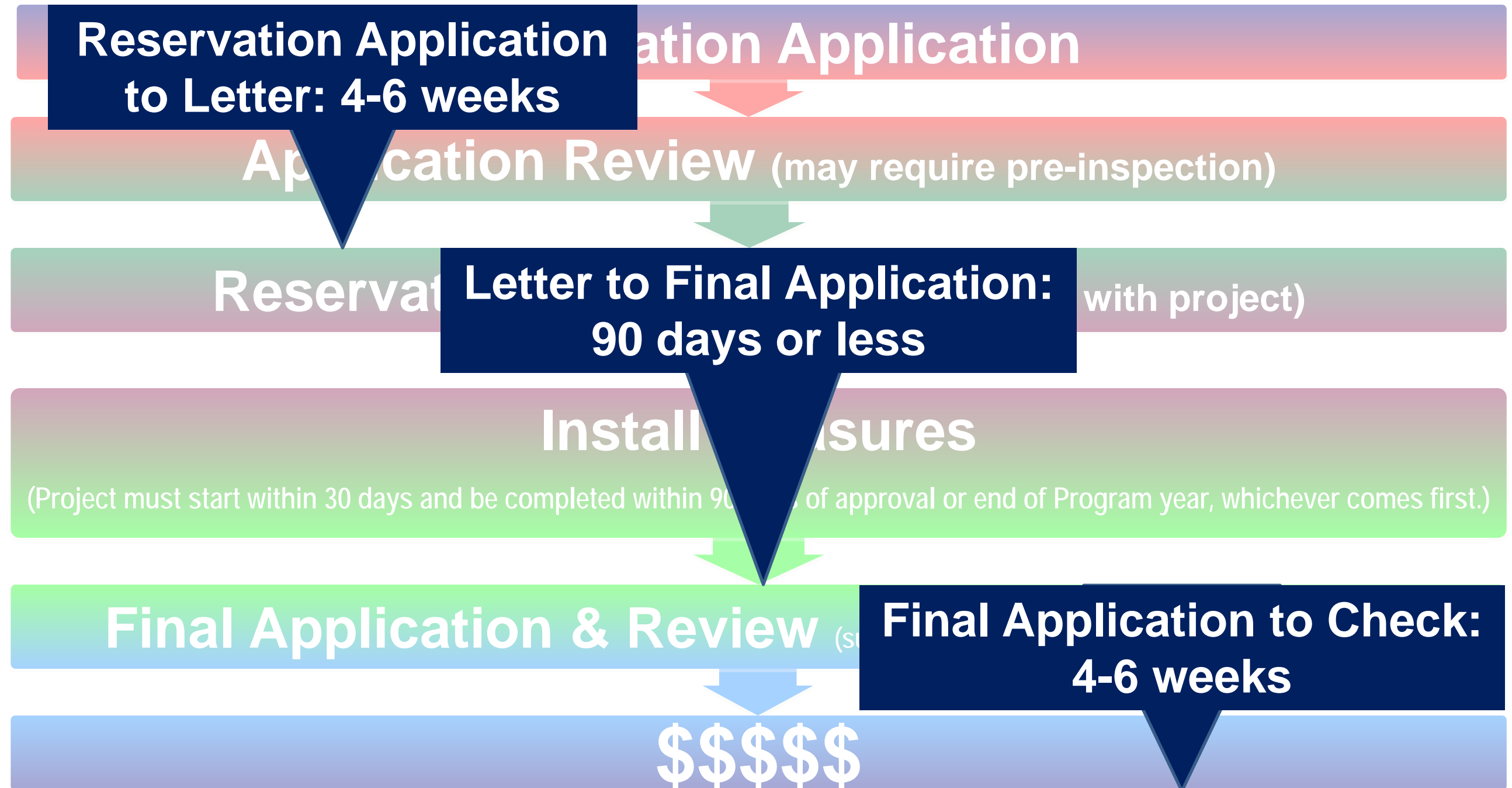
Final Application & Review (submit within 60 days; may require post-inspection)



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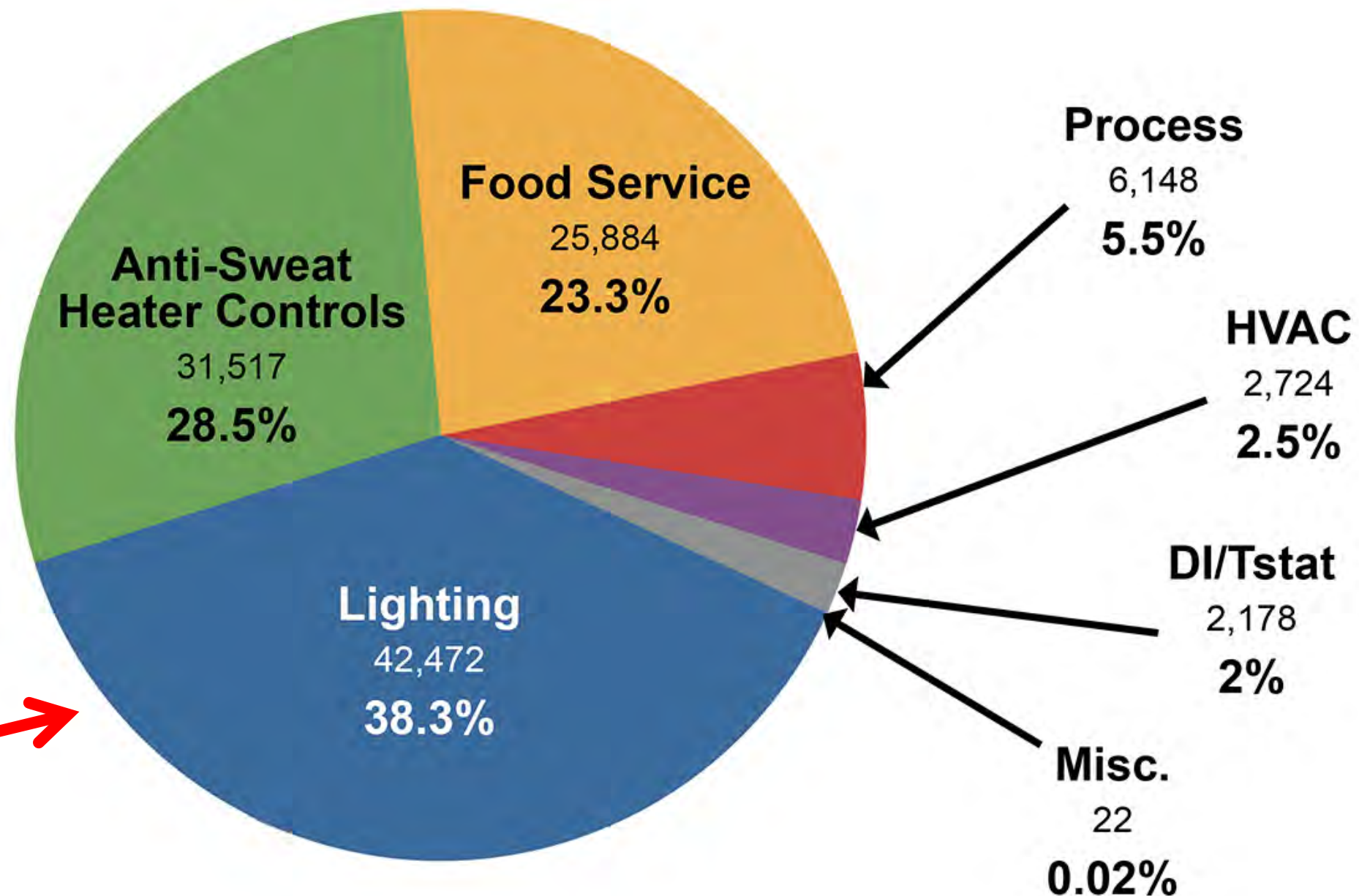


Our Program timeline is simple:



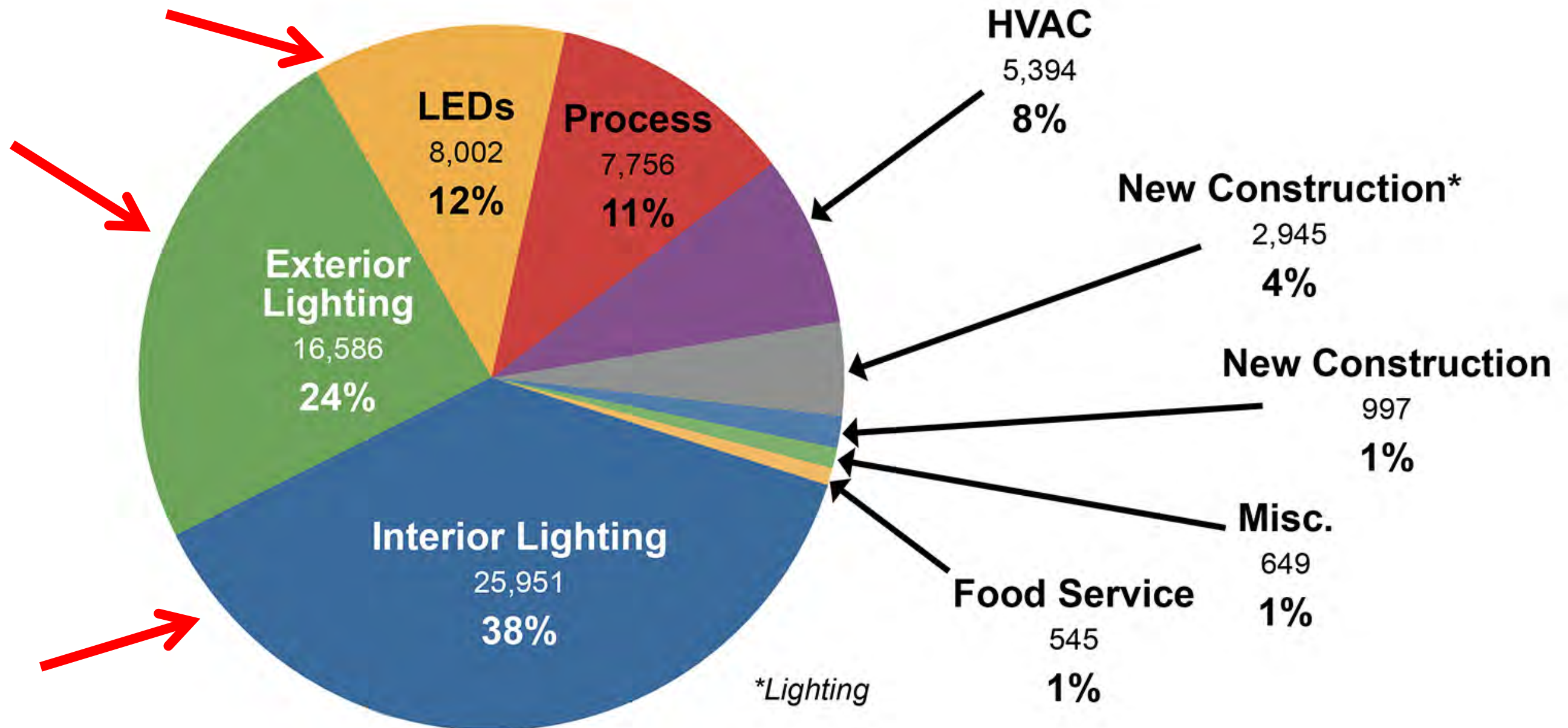


2014 Participation by Technology: Prescriptive Electric (MWh)



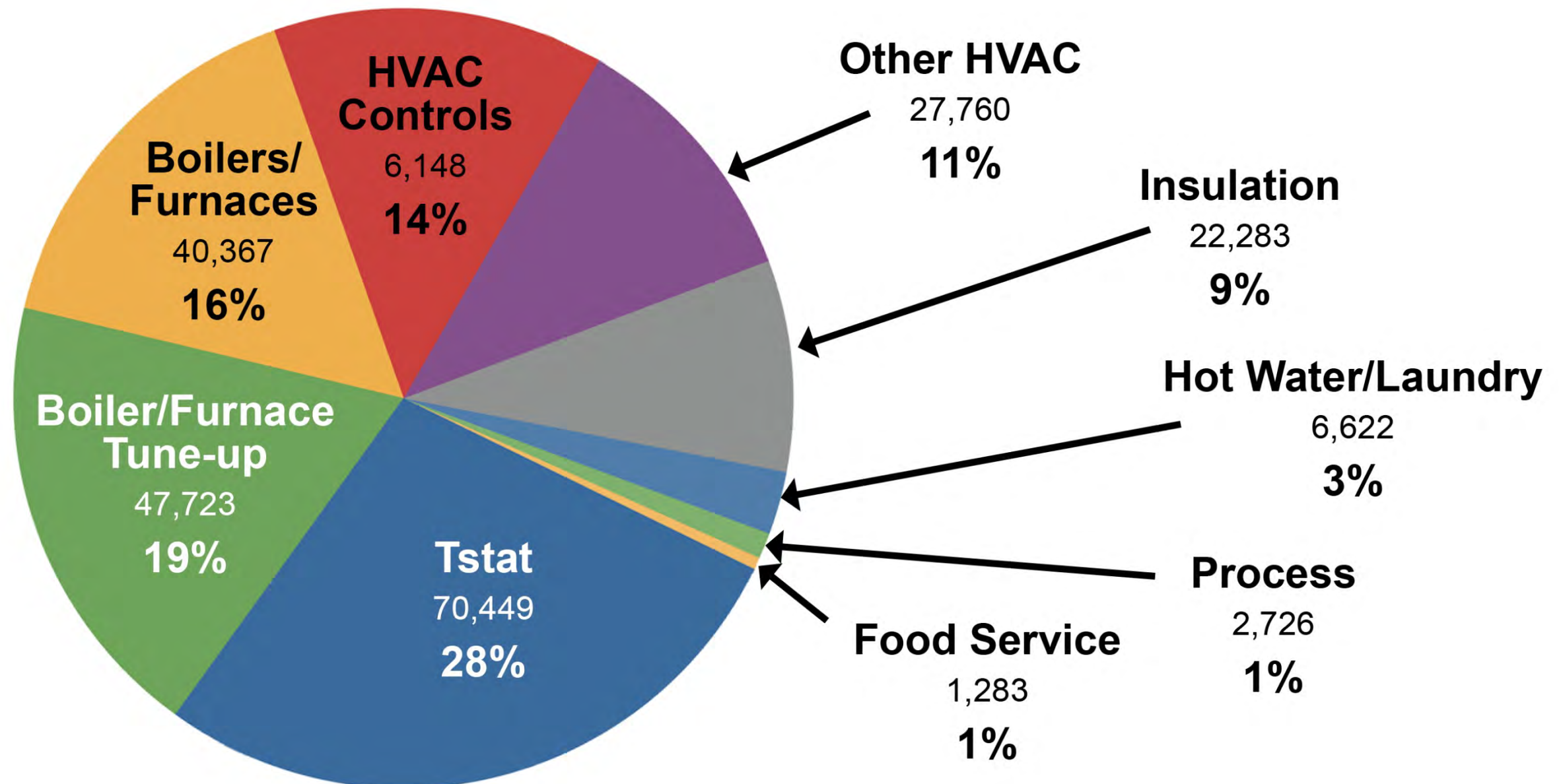


2014 Participation by Technology: Custom Electric (MWh)



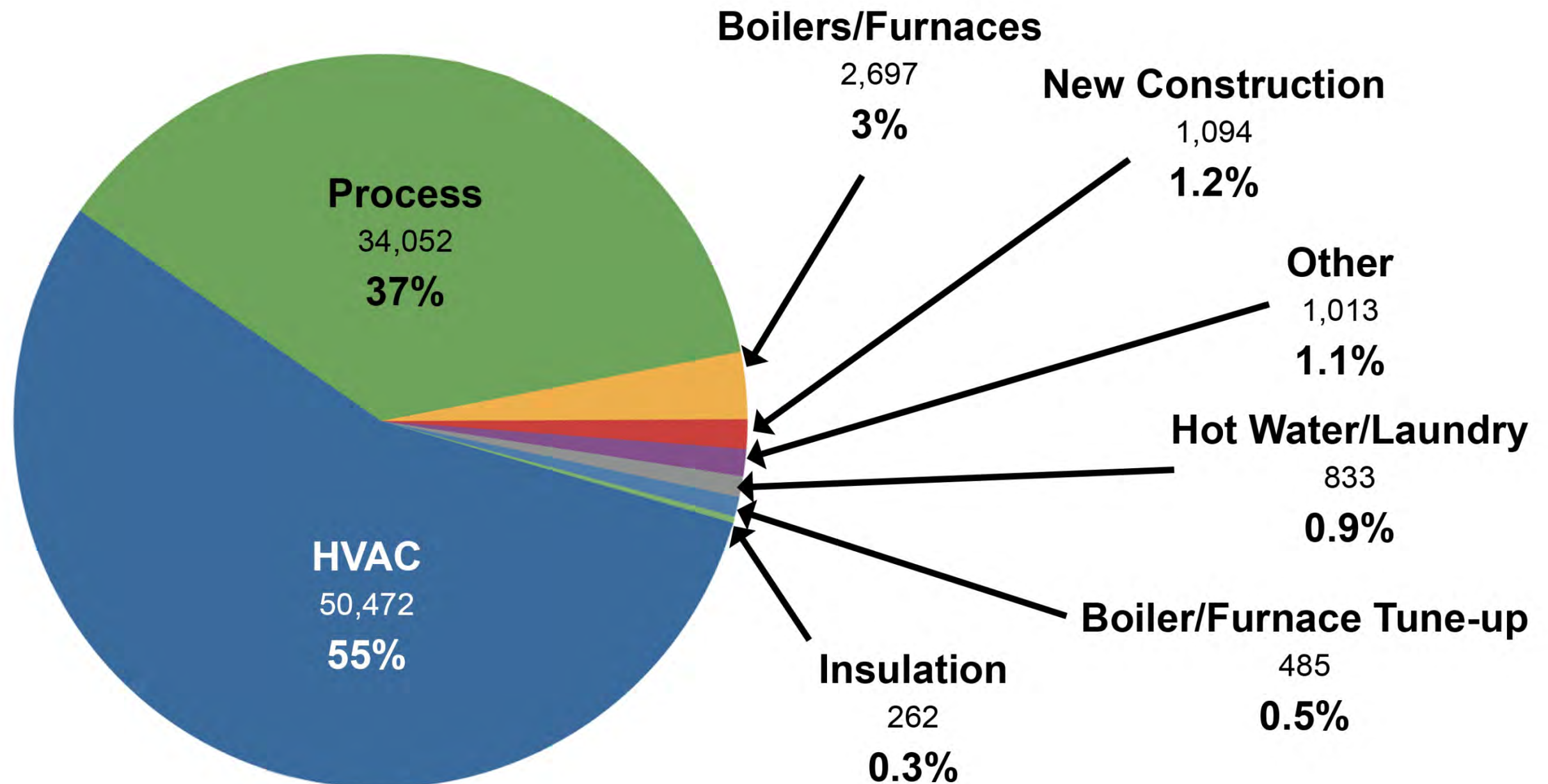


2014 Participation by Technology: Prescriptive Natural Gas (Mcf)





2014 Participation by Technology: Custom Natural Gas (Mcf)





About Incentives



There are three types of projects

Prescriptive

- **Predetermined** measures and incentives for the installation of various energy efficient improvements.
- Incentives typically average 20% to 50% of the incremental cost.

Custom

- **Capital investment** projects that increase energy efficiency and are **NOT** eligible for a Prescriptive Incentive may qualify as a Custom Measure.
- Custom Incentives are determined on a case-by-case basis and are paid per unit energy saved (ex: \$0.07/kWh and/or \$4/Mcf).

New Construction Major Renovation

- **New facilities/major renovations** of existing facilities or change of use projects.
- Adding load.



About Reservations

Reservation Applications set aside funds for your project to ensure availability when your project is completed and you submit your Final Application. Here are our guidelines:

Prescriptive

- Reservation Applications are not required for most Prescriptive projects, **BUT** they are **highly recommended**.
- A Reservation Application **is required** for certain measures: check the Application for details.

Custom

- A Reservation Application **is required** for all Custom projects.

New Construction Major Renovation

- A Reservation Application **is encouraged** for all New Construction and Major Renovation projects.
- **NOTE:** **No Reservation will extend beyond Nov. 30, 2015.**

If you submit a Reservation Application, do **NOT** start your project until you receive a **Reservation Letter!***



Prescriptive



Prescriptive - Electric

- **Pre-determined** measures with specific energy savings and cash rebates:

2015 Prescriptive Electric Measures

Lighting

Central Lighting Controls
Compact Fluorescent Screw-in Lamps
Compact Fluorescent Reflector Flood Lamps
Compact Fluorescent Fixtures
Daylight Sensor Controls
Delamping
Exit Sign Conversion
Exterior Lighting Bi-level Control w/Override
Exterior Linear Fluorescent replacing High-Intensity Discharge (HID)
Exterior CFL replacing HID
Garage/Exterior High-Intensity Discharge (HID) Conversion
High Performance (HP) Linear Fluorescents
Interior High-Intensity Discharge (HID) to Fluorescent Fixture
LED Lamps
LED or Induction Interior High Bay
LED Traffic Signals
LED Refrigerated Door Case Lighting
Low Wattage (LW) Linear Fluorescents
Occupancy Sensors for LED Refrigerated Door Case Lighting
Occupancy Sensors
Pulse Start Metal Halide
Switching Controls for Multilevel Lighting
Tubular Skylights (Light Tubes)

HVAC

Air-Cooled Chillers/Water-Cooled Chillers
Air Source Heat Pumps
Chilled Water Reset - Air Cooled/Water Cooled
Chilled Water Reset with Pump on/off Control
Closed Loop Heat Pumps
Cool Roof
Economizer
Ground Source Heat Pump
High Performance Glazing
Hotel Guestroom Energy Management System (Air Conditioning)
Packaged Terminal Air Conditioner & Heat Pump
Programmable Thermostat (Air Conditioning)
Room Air Conditioners
Setback/Setup Controls (Air Conditioning)
Unitary and Split Air Conditioning Systems
Variable Frequency Drive - HVAC Fan/Pump
Window Film

Miscellaneous Electric

High Efficiency Clothes Washer
Intelligent Surge Protector
PC Network Energy Management Controls


Process Electric

Barrel Wraps for Injection Molders & Extruders
Compressed Air Engineered Nozzle

Compressed Air Pressure Flow Controller
Compressed Air Audits with Leak Repair
Cycling Compressed Air Dryers
Electronically Commutated Plug Fans
High Efficiency Process Pumps
Industrial 3-Phase High Frequency Battery Charger
Insulated Pellet Dryer Ducts
Tank Insulation
Variable Frequency Drive for Process Pumping
VSD Air Compressor

Food Service & Refrigeration


Anti-Sweat Heater Controls
Beverage Vending Machine Controllers
Door Gaskets on Coolers and Freezers
ECM Motor for Refrigerator Cases, Freezers and Coolers
Energy Efficient Ice Machines
Efficient Refrigeration Condenser
ENERGY STAR® Commercial Solid Door Refrigerators
ENERGY STAR® Commercial Solid Door Freezers
ENERGY STAR® Steam Cookers
ENERGY STAR® Holding Cabinets
Evaporator Fan Motor Controls
Floating Head Pressure Controls
LED Refrigerated Door Case Lighting
Occupancy Sensors for LED Refrigerated Door Case Lighting
Refrigeration Savings due to Lighting Wattage Reduction
Strip Curtains on Walk-in Cooler and Freezer Doors
Vertical Night Covers

**DTE Energy**
Know Your Own Power®

USE LESS.
SAVE MORE.

**ENERGY EFFICIENCY
PROGRAM FOR BUSINESS**

**2015
Prescriptive
Electric Measures**



Ask us how DTE Energy can help you reduce
your business' electric costs year after year!



Prescriptive



Prescriptive – Natural Gas

- **Pre-determined** measures with specific energy savings and cash rebates:

2015 Prescriptive Natural Gas Measures

HVAC

- Boiler Modulating Burner Control
- Boiler Water Reset Control
- Chilled Water Reset
- Chilled Water Reset with Pump on/off Control
- Demand Controlled Ventilation
- Destratification Fans
- High Efficiency Furnace
- Hotel Guestroom Energy Management Control
- HVAC Occupancy Sensor for Large Office Buildings
- Infrared Heaters
- Programmable Thermostat
- Setback/Setup Controls
- Space Heating Boilers
- Steam Traps
- Variable Frequency Drive on Secondary Chilled Water Pump

Hot Water and Laundry

- Domestic Hot Water Heating System
- Dry Cleaning Boiler Descale (Kettle/Tube-Type)
- Gas Water Heater
- Gas Water Heater – Tankless
- High Efficiency Clothes Washer
- High Efficiency Pool Heater (Gas Heat)
- Ozone Laundry System

Insulation

- Domestic Hot Water Pipe Wrap
- Greenhouse Heat Curtain
- Greenhouse Infrared Film
- Pipe Wrap – Steam and Hot Water Boiler
- Pool Covers
- Roof Insulation (Flat/Attic)
- Truck Loading Dock Seals
- Truck Loading Dock Leveler Ramp Air Pit Seals
- Wall Insulation

Process Gas

- Air Compressor Exhaust Heat Recovery
- Furnace Tube Inserts
- High Efficiency Process Boiler (Water/Steam)
- Tank Insulation

Boiler/Furnace Tune-up

- Boiler Tune Up
- Domestic Hot Water Boiler Tune-up
- Furnace/RTU Tune-up
- Process Boiler Tune-up

Food Service

- Commercial Kitchen Ventilation Hood
- ENERGY STAR® Convection Ovens
- ENERGY STAR® Fryers
- ENERGY STAR® Griddles
- ENERGY STAR® Steam Cookers
- Large Vat Fryers
- Night Covers (vertical)
- Ovens
- Pre-Rinse Sprayers (Gas Water Heat)

ENERGY EFFICIENCY PROGRAM FOR BUSINESS

2015 Prescriptive Natural Gas Measures

Ask us how DTE Energy can help you reduce your business' natural gas costs year after year!



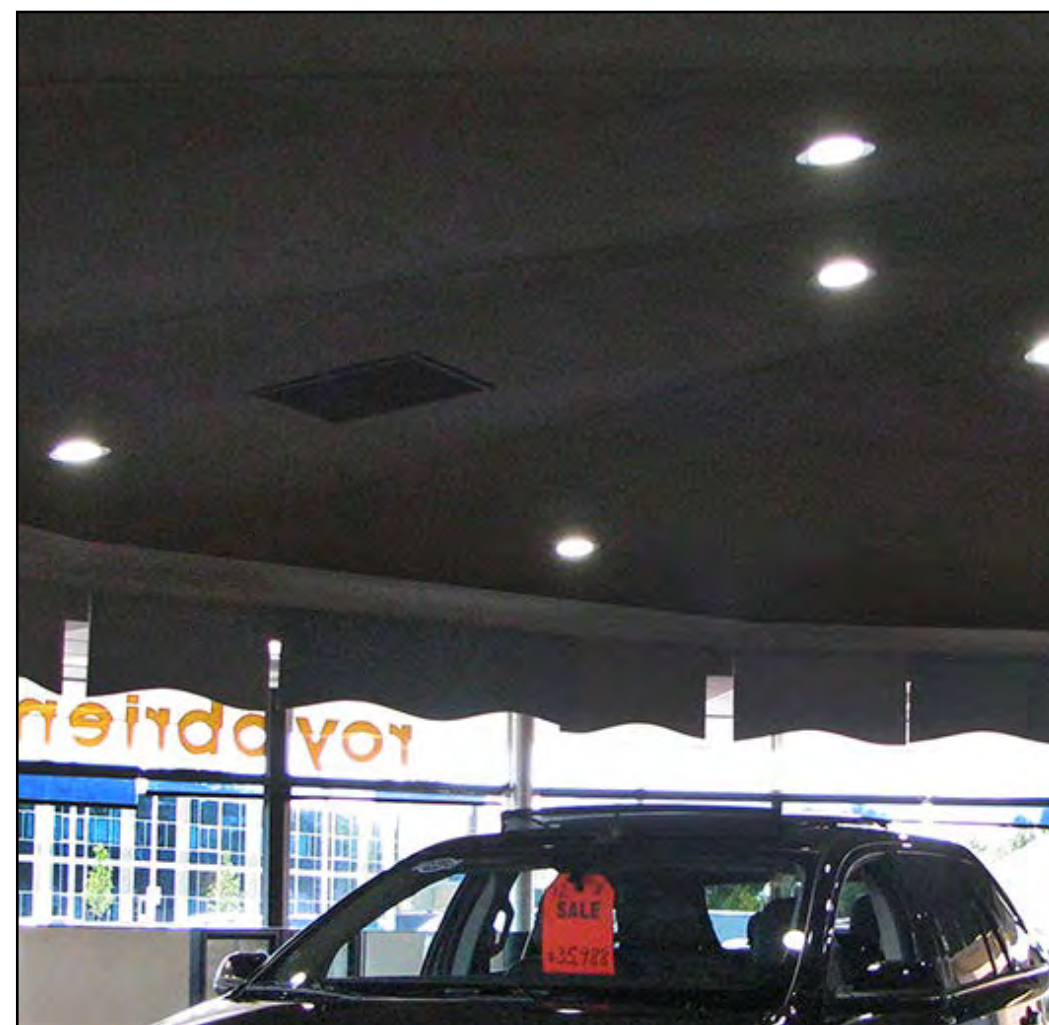
Prescriptive



Electric project example

Auto Dealership: Lighting

- Total project cost.....\$102,216
- Total rebate.....\$23,434
- Project cost after rebate.....\$78,782
- Total electric savings/yr.....\$30,820
- Simple payback.....**2.6 years**





Custom



Custom

- Measures that do not fall within any specific prescriptive program.
- Energy savings and cash rebates are calculated on a case-by-case basis.
- Can be combined with prescriptive measures.
- **NOTE:** for a complete review of custom project criteria, see the Application.





Custom



Electric project example

Data Center: Humidifier changeout

- Total project cost.....\$497,959
- Total rebate.....\$130,000
- Project cost after rebate.....\$367,959
- Total kWh saved/yr.....1,627,000
- Simple payback.....**2.8 years**





New Construction Major Renovation



New Construction/Major Renovation:

- New facilities/major renovations of existing facilities/change of use.
- Adding load.
- Incentives are offered in three areas:
 - **Systems Approach:**
 - Pre-determined measures designed to optimize efficiency of individual systems.
 - **LEED Whole Building Approach:**
 - Based on LEED certification.
 - Three levels of incentives based on certification.
 - **LEED Design Review Assistance:**
 - \$1,500 for LEED project review/registration.





About **LED Lighting Opportunities**



Savings possibilities

Lighting Measures

Exterior HID to LED

Savings

up to 75%

Source

U.S. DOE

Interior HID upgrades

25%-50%

Industry study

LED recessed lights/lamps

up to 75%

U.S. DOE

Occupancy sensors

15% to 35%

Industry study

LED exit signs

up to 85%

ENERGY STAR[®]

LED door case lighting w/sensors

up to 75%

Industry study



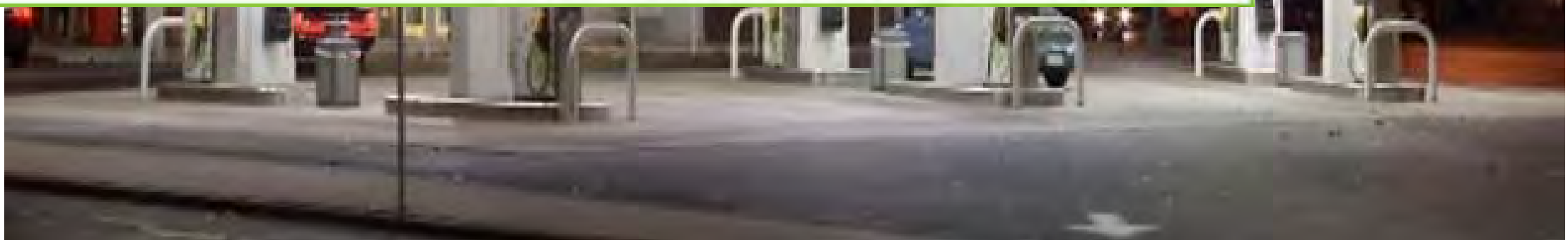
Savings possibilities

Actual Case Study

Energy-Saving Lighting Projects

Original Technology	New Technology	Project Cost	Program Incentives	kWh Savings	Annual Energy Savings
400-watt HID wallpacks	50-watt LEDs	\$106,667	\$22,906	286,504	89%*
1,000-watt flood lights	200-watt LEDs				81.5%*
100-watt HID dome	18-watt LEDs	\$1,200	\$442	5,520	82%*
Total		\$107,867	\$23,348	292,024	84%†

**First-year savings as reported by the company; †average annual savings*





Savings possibilities

Actual Case Study

Energy-Saving Lighting Projects

PROJECT

SAVINGS*

Incandescent/fluorescent to LED

3.2 million kWh

HID to I-5 fluorescent for warehouse

4 million kWh

**First-year savings as reported by the company*





How to get started



About Program funding

DTE Energy

Residential Business About Us

My Account Billing/Payment Save Energy Start/Stop Service Problems/Safety Products/Programs Contact Us

How To Participate

Prescriptive and Custom Incentives:

1. Verify your eligibility. See the Energy Efficiency Program for Business [Policies and Procedures Manual](#)*
2. Submit a Reservation Application to reserve funding. (This is required for all custom and De-lamping measures and highly recommended for the rest of the Prescriptive measures.)
 - o [Review the guidelines](#) (slide show) for completing the Energy Efficiency Program for Business application
 - Download the [2014 Catalog](#)
 - Download the [2014 Application](#)
3. Install your equipment or systems within 90 days of reservation confirmation.
4. Submit the required documentation of project completion, costs and energy savings within 60 days of project completion.
5. Submit your Final Application. Final Applications must be received within 60 days after project completion or by November 30 of each program year, whichever comes first.
6. DTE Energy's Energy Efficiency Program for Business Staff will review your final project documentation. Incentive payments will typically be sent within 4 to 6 weeks from the time that all the documentation is received and the field inspection is complete.

New Construction and Major Renovation Program:

1. To determine if your project qualifies, please contact DTE Energy's Energy Efficiency Program for Business Staff before you start your design at 866.796.0512.
2. Download the [New Construction Application](#)* for details on the program and application forms.
3. Full details of the program can be found in the [New Construction Policies and Procedures Manual](#)*

Questions? Please contact us:

Contact the Energy Efficiency Program for Business at 866.796.0512.
or
PO Box 11289

2015 Rebate Program Status
Available funds paid as of June 1, 2015

Electric Installations

Paid 23%

Active 50%

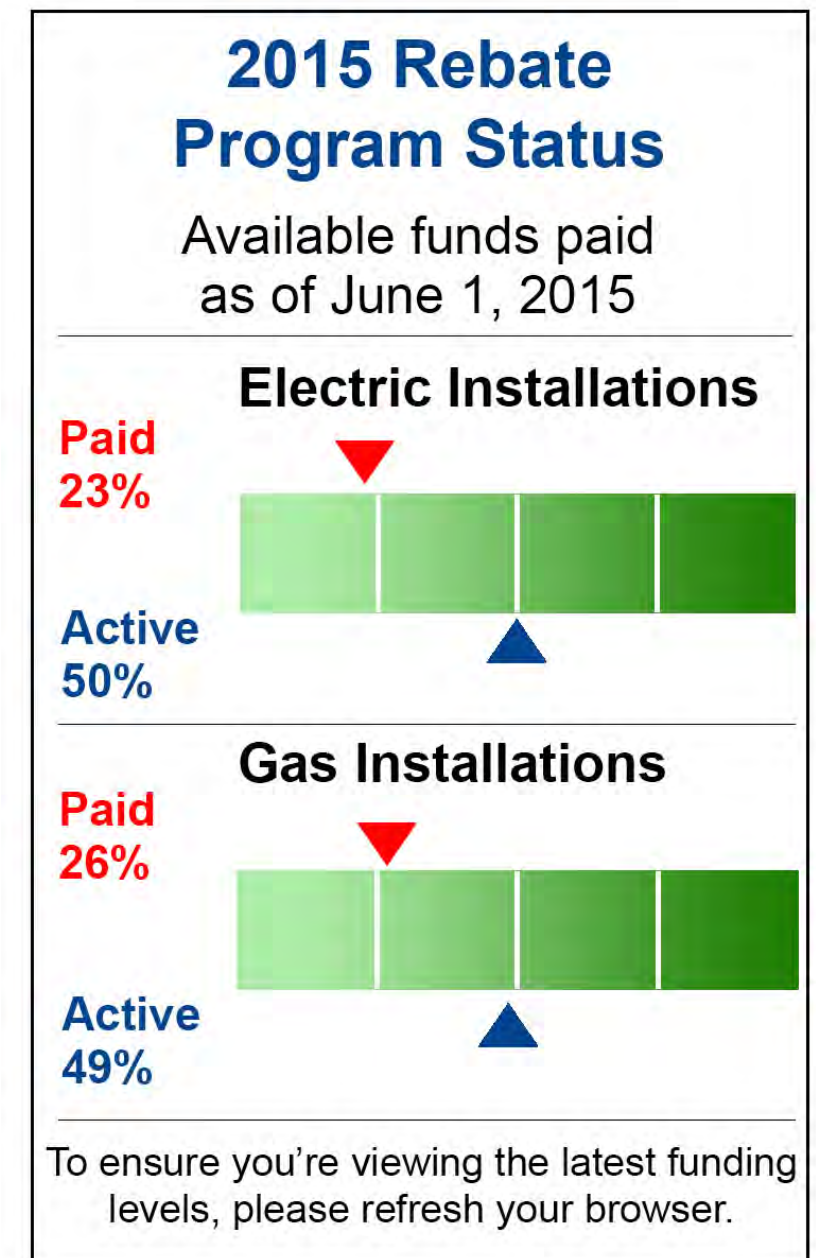
Gas Installations

Paid 26%

Active 49%

To ensure you're viewing the latest funding levels, please refresh your browser.

These funding gauges provide real-time information on the Program's progress throughout the year. This is especially important as the Program Year winds down and funding becomes limited.



2015 Program Catalog & Application



DTE Energy
Know Your Own Power®

To find the gauges – and download an electronic Catalog and Application

1) visit: dteenergy.com/savenow

Then select:

2) “[Participate Now](#)”

The screenshot shows the DTE Energy website interface. At the top, there is a navigation bar with links for Residential, Business, and About Us. Below this is a horizontal menu with buttons for My Account, Billing/Payment, Save Energy, Start/Stop Service, Problems/Safety, Products/Programs, and Contact Us. A large banner for 'Energy Efficient lighting options for your business.' is visible. On the left, a sidebar lists various services and programs. A red arrow points from the text 'Participate Now' to a button labeled 'Participate Now' in the bottom right section of the page, which is also circled in red. The button is located under the heading 'New incentives for 2015 Check out our new catalog and application'.

**Requires Acrobat Reader*

2015 Program Catalog & Application



DTE Energy
Know Your Own Power®

To find the gauges – and download an electronic Catalog and Application

1) visit: dteenergy.com/savenow

Then select:

2) “Participate Now”

3) Select and download:

- 2015 Catalog
- 2015 Application

4) The New Construction Application is below

DTE Energy

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Residential Business About Us

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Incentives and Offers

- Multifamily Program
- Free Thermostat
- Express Program
- Incentives
- ENERGY STAR Lighting
- Michigan Made
- Measure
- Building Operator Cert
- Small Businesses
- Energy Tips
- Business Energy Analyzer
- EO Credits
- Energy Efficiency Events
- Lighting Advisor
- Find a Contractor
- Become a Contractor
- Case Studies-Fact Sheets
- Financing
- Self Directed Options
- Interactive Business

How To Participate

Prescriptive and Custom Incentives:

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 - Download the [2015 Application](#)
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4. Submit the required documentation of project completion, costs and energy savings within 60 days of project completion.
5. Submit your Final Application. Final Applications must be received within 60 days after project completion or by November 30 of each program year, whichever comes first.
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3. Full details of the program can be found in the [New Construction Policies and Procedures Manual*](#).

Questions? Please contact us:

Contact the Energy Efficiency Program for Business at 866.796.0512.

USE LESS. SAVE MORE.

2015 Rebate Program Status

Paid 0% Active 17%

Electric Installations

Available funds paid as of Dec. 15, 2014

2015 Rebate Program Status

Paid 0% Active 20%

Gas Installations

Available funds paid as of Dec. 15, 2014



Alternate Resource



dtetradeally.com

Get:

- Announcements
- Up-to-date funding gauges
- All Program documents:
 - Applications
 - Forms
 - Addenda

Energy Efficiency Program for Business



[Home](#)[Events/Registration](#)[Marketing Materials](#)[Videos](#)

Applications and Worksheets

- 2015 Program Catalog
- 2015 Program Application
- 2015 Program P-P
- 2015 Gas-only Application
- 2015 New Construction App
- 2015 LEED Design Review Assistance App
- 2015 Michigan Saves Financing Worksheet
- 2014-15 Gas multi-year Application
- 2015 Agriculture Application
- 2015 LED 20% Bonus fact sheet

Special Offers expire the end of June

These special offers will expire June 30:

Multi-Measure 10% bonus-bonus for food service
Restaurant, grocery store and convenience store owners can now get an **additional 10% bonus** on applications that qualify for our 20% **Multi-Measure bonus-bonus**. To qualify for the 10% bonus offer — on top of the 20% Multi-Measure bonus — a project must include more than one category of energy efficient measures being submitted for incentives on the same application (for example: lighting and HVAC). And no single category can be worth more than 75% of all incentives requested. Reservation or Final Applications must be submitted by **June 30**. The Application can be downloaded at left.

Multi-Measure 10% bonus-bonus for health/fitness centers
Health club and fitness center owners can now get an **additional 10% bonus** on applications that qualify for our 20% **Multi-Measure bonus**. To qualify for the 10% bonus offer — on top of the 20% Multi-Measure bonus — a project must include more than one category of energy efficient measures being submitted for incentives on the same application (for example: lighting and HVAC). And no single category can be worth more than 75% of all incentives requested. Reservation or Final Applications must be submitted by **June 30**. The Application can be downloaded at left.

LED 20% bonus
Customers can apply for certain prescriptive and custom LED measures and qualify for a 20% incentive bonus on their project. Eligible prescriptive and custom measures are describe in our fact sheet, which can be downloaded from the list at left.

Trade Ally Portal

To receive your login and password, call or email your Program Outreach contact.

2015 Rebate Program Status

Available funds paid as of June 1, 2015

	Electric Installations	Gas Installations
Paid	23%	26%
Active	50%	49%

To ensure you're viewing the latest funding levels, please refresh your browser.

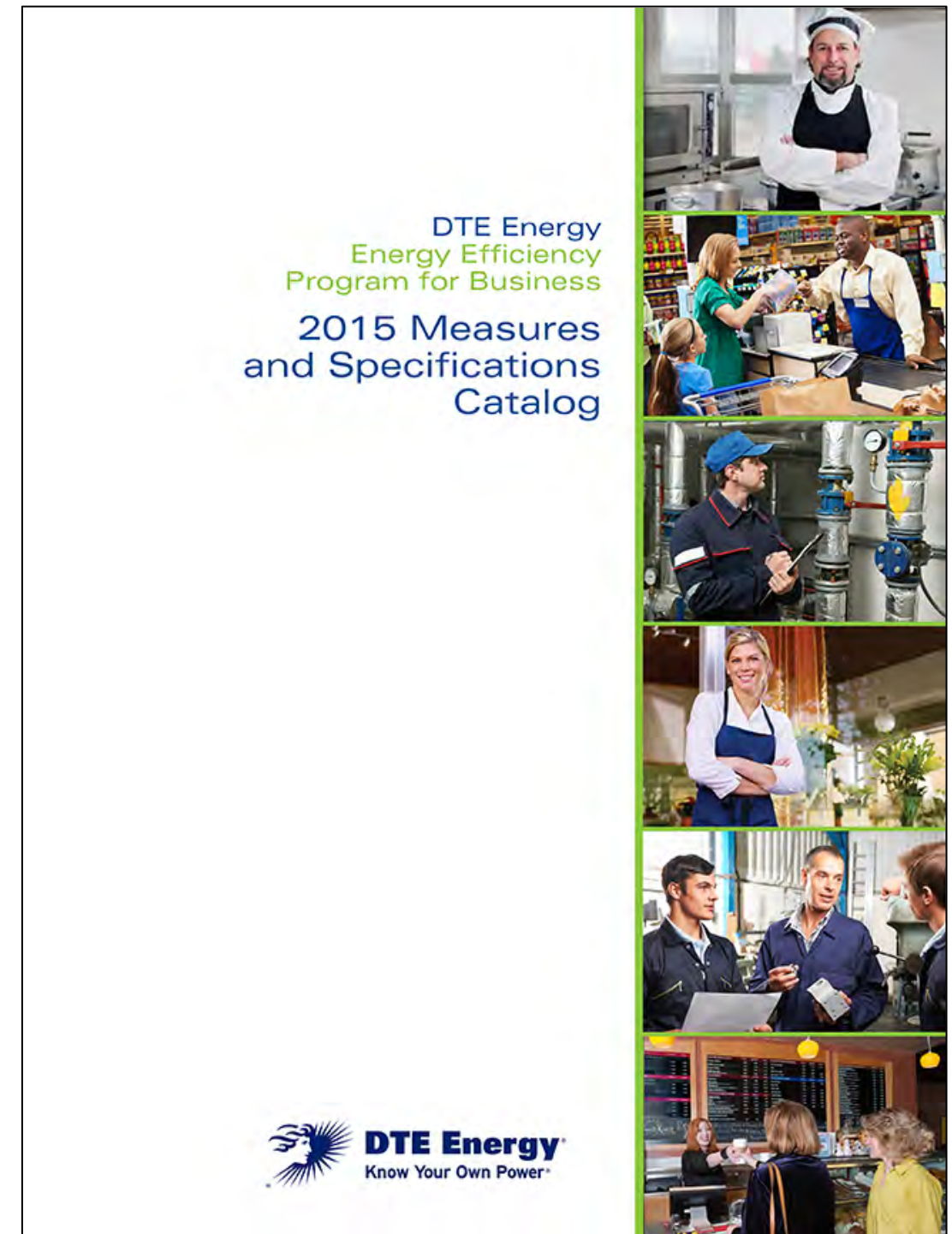


About our **Catalog and Application**



About our Catalog

- It includes specifications and details for every **Prescriptive** incentive measure.
- It includes specifications and details on how to submit a **Custom** project.
- Use it as a desktop reference for all your projects.



2015 Program Catalog



DTE Energy
Know Your Own Power®

There are five electric measure categories:

- Lighting
- Miscellaneous
- Process
- Food Service/Refrigeration
- HVAC

There are 76 measure areas

- Each area lists specific types of measures within that section

The Application matches the measure sequence of the Catalog

List of Eligible Prescriptive Electric Measures

Lighting

Central Lighting Controls	11
Compact Fluorescent Screw-in Lamps (CFL)	7
(CFL) Reflector Flood Lamps	7
Compact Fluorescent Fixtures	7
Daylight Sensor Controls	11
Delamping	12
Exit Signs Retrofit	11
Exterior Lighting Bi-level Control w/Override	11
Exterior Linear Fluorescent replacing HID	10
Exterior CFL replacing HID	10
Garage/Exterior High-Intensity Discharge (HID) Conversion	10
High Performance (HP) Linear Fluorescents	8
Interior High-Intensity Discharge (HID) to Fluorescent Fixture	10
LED Interior Linear	9
LED Lamps	7
LED or Induction Interior High Bay	10
LED Traffic Signals	11
LED Refrigerated Door Case Lighting	12
Low Wattage (LW) Linear Fluorescents	9
Occupancy Sensors for LED Refrigerated Door Case Lighting	12
Occupancy Sensor	11
Pulse Start Metal Halide	10
Switching Controls for Multilevel Lighting	11
Tubular Skylights (Light Tubes)	12

HVAC Electric

Air-Cooled Chiller	16
Air Source Heat Pumps	13
Chilled Water Reset – Air Cooled	15
Chilled Water Reset – Water Cooled	15
Chilled Water Reset with Pump on/off Control	14
Closed Loop Heat Pumps	13
Cool Roof	15
Economizer	15
Ground Source Heat Pump	14
High Performance Glazing	15
Hotel Guestroom Energy Management System (Air Conditioning)	14
HVAC Occupancy Sensor, Large Office Building	14
Packaged Terminal Air Conditioner & Heat Pump	13
Programmable Thermostat (Air Conditioning)	14
Room Air Conditioners	13
Setback-Setup Controls (Air Conditioning)	14
Unitary and Split Air Conditioning Systems	13
Variable Frequency Drive – HVAC Fan/Pump	15
Water-Cooled Chiller	16
Window Film	15

Miscellaneous Electric

High Efficiency Clothes Washer	18
Intelligent Surge Protector	18
PC Network Energy Management Controls	18

Process Electric

Barrel Wraps for Injection Molders & Extruder	20
Compressed Air Pressure Flow Controller	19
Compressed Air Audit with Leak Repair	19
Compressed Air Cycling Dryer	19
Electronically Commutated Plug Fans	20
Engineered Nozzle	19
High Efficiency Pumps	19
Industrial 3 Phase HF Battery Chargers	20
Insulation for Pellet Dryer Ducts	20
Tank Insulation	20
VFD for Process Fans	19
VSD Air Compressor	19

Food Service & Refrigeration Electric

Anti-Sweat Heater Controls	21
Beverage Vending Machines	21
Door Gaskets on Coolers and Freezers	22
ECM Motor for Refrigerator Cases, Freezers and Coolers	22
Energy Efficient Ice Machines	22
Efficient Refrigeration Condenser	22
ENERGY STAR® Commercial Solid Door Refrigerators	21
ENERGY STAR® Commercial Solid Door Freezers	21
ENERGY STAR® Steam Cookers	21
ENERGY STAR® Holding Cabinets	21
Evaporator Fan Motor Controls	22
Floating Head Pressure Controls	21
LED Refrigerated Door Case Lighting	22
Occupancy Sensors for LED Refrigerated Door Case Lighting	22
Refrigeration Savings due to Lighting Wattage Reduction	22
Strip Curtains on Walk-in Cooler and Freezer Doors	22
Vertical Night Covers	22

MM: Denotes measures that also appear in the Gas section of the Program, which means they qualify for the Multi-Measure Bonus. To receive the bonus, submit both the Electric and Gas measure on the same Application.



There are six natural gas measure categories:

- HVAC
- Insulation
- Process
- Hot Water & Laundry
- Boiler/Furnace Tune-up
- Food Service

There are 48 measure areas

- Each area lists specific types of measures within that section

The Application matches the measure sequence of the Catalog

List of Eligible Prescriptive Gas Measures

HVAC Gas

Boiler Modulating Burner Control	24
Boiler Water Reset Control	24
Chilled Water Reset	24
Chilled Water Reset with Pump on/off Control	25
Demand Controlled Ventilation	25
Destratification Fans	25
High Efficiency Furnace	24
Hotel Guestroom Energy Management Control	25
HVAC Occupancy Sensor, Large Office Building	25
Infrared Heaters	24
Programmable Thermostat	25
Setback-Setup Controls	25
Space Heating Boilers	24
Steam Traps	24
Variable Frequency Drive on Secondary Chilled Water Pump	24

Hot Water and Laundry

Domestic Hot Water Heating System	26
Dry Cleaning Boiler Descaling (Kettle/Tube-Type)	26
Gas Storage Water Heater	26
Gas Water Heater – Tankless	26
High Efficiency Clothes Washer	26
High Efficiency Pool Heater (Gas Heat)	26
Ozone Laundry System	26

Insulation

Domestic Hot Water Pipe Wrap	27
Greenhouse Heat Curtain	27
Greenhouse Infrared Film	27
Pipe Wrap – Steam and Hot Water Boiler	27
Pool Covers	27
Roof Insulation (Flat/Attic)	27
Truck Loading Dock Seals	27
Truck Loading Dock Leveler Ramp Air Pit Seals	27
Wall Insulation	27

Process Gas

Air Compressor Exhaust Heat Recovery	28
Furnace Tube Inserts	28
High Efficiency Process Boiler (Water/Steam)	28
Tank Insulation	28

Boiler/Furnace Tune-up

Boiler Tune Up	29
Domestic Hot Water Boiler Tune-Up	29
Process Boiler Tune-up	29
Furnace/RTU Tune-up	29

Food Service Gas

Commercial Kitchen Ventilation Hood	30
ENERGY STAR® Convection Ovens	30
ENERGY STAR® Fryers	30
ENERGY STAR® Griddles	30
ENERGY STAR® Steam Cookers	30
Fryers	30
Night Covers (vertical)	30
Ovens	30
Pre-Rinse Sprayers (Gas Water Heat)	30

MM: Denotes measures that also appear in the Electric section of the Program, which means they qualify for the Multi-Measure Bonus. To receive the bonus, submit both the Electric and Gas measure on the same Application.

2015 Program Catalog



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Food Service Electric & Refrigeration Specifications

All Final Applications MUST include manufacturers' equipment specification sheets

ENERGY STAR® Refrigerators and Freezers:

Equipment Type	Unit
Commercial Solid Door Refrigerators	Refrigerator
Commercial Solid Door Freezers	Freezer

ENERGY STAR® Commercial Solid Door Refrigerators:
Incentives are available for replacement units that are ENERGY STAR® listed. Cases with remote refrigeration systems are not eligible. Incentive is per refrigerator.

ENERGY STAR® Commercial Solid Door Freezers:
Incentives are available for replacement units that are ENERGY STAR® listed. Cases with remote refrigeration systems are not eligible. Incentive is per freezer.

ENERGY STAR® Steam Cookers and Hot Holding Cabinets:

Equipment Type	Unit
Steam Cookers	Cooker
Hot Holding Cabinets	Cabinet

ENERGY STAR® Steam Cookers (Electric):
Incentives are available for replacement electric steamers that are ENERGY STAR® listed with a Cooking Energy Efficiency of 50% for all size units. Used or rebuilt equipment is not eligible. Incentive is per cooker.

ENERGY STAR® Hot Holding Cabinets:
Incentives are available for replacement units that are ENERGY STAR® listed and consume <40 watt per cubic foot. Cook-and-hold equipment is not eligible. Used or rebuilt equipment is not eligible. Incentive is per cabinet.

Controls:

Equipment Type	Unit
Beverage Vending Machine Controllers	Controller
Anti-Sweat Heater Controls	Door
Floating Head Pressure Controls	Ton

Beverage Vending Machine Controllers:
Incentives are available for retrofitting existing vending machines with beverage vending machine controllers. The controller must include a passive infrared occupancy sensor to turn off fluorescent lights and other vending machine systems when the surrounding area is unoccupied for 15 minutes or longer. Incentive is per controller.

Anti-Sweat Heater Controls:
Incentives are available for anti-sweat heater controls. Eligible control devices that sense the relative humidity in the air outside of the display case and reduces or turns off the glass door (if applicable) and frame anti-sweat heaters at low-humidity conditions. Technologies that can turn off anti-sweat heaters based on sensing condensation on the inner glass pane are also eligible. Incentive is per total number of doors controlled.

Floating Head Pressure Controls:
Incentives are available for installing automatic controls to lower condensing pressure at lower ambient temperatures in multiplex refrigeration systems. Controls installed must vary head pressure to adjust condensing temperatures in relation to outdoor air temperature. The controls must replace existing constant pressure or manually controlled systems to achieve lowered head pressure in order to maintain a minimum saturated condensing temperature of 70°F, or a 20°F variance below design head pressure during mild weather conditions. Incentive is per ton of refrigeration.

Food Service - Electric

dreenergy.com/savenow 21 V1:10/01/14

Controls

Equipment Type	Unit
Beverage Vending Machine Controllers	Controller
Anti-Sweat Heater Controls	Door
Floating Head Pressure Controls	Ton

Beverage Vending Machine Controllers

Incentives are available for retrofitting existing vending machines with beverage vending machine controllers. The controller must include a passive infrared occupancy sensor to turn off fluorescent lights and other vending machine systems when the surrounding area is unoccupied for 15 minutes or longer. Incentive is per controller.

Anti-Sweat Heater Controls

Incentives are available for anti-sweat heater controls. Eligible control devices that sense the relative humidity in the air outside of the display case and reduces or turns off the glass door (if applicable) and frame anti-sweat heaters at low-humidity conditions. Technologies that can turn off anti-sweat heaters based on sensing condensation on the inner glass pane are also eligible. Incentive is per total number of doors controlled.

Floating Head Pressure Controls

Incentives are available for installing automatic controls to lower condensing pressure at lower ambient temperatures in multiplex refrigeration systems. Controls installed must vary head pressure to adjust condensing temperatures in relation to outdoor air temperature. The controls must replace existing constant pressure or manually controlled systems to achieve lowered head pressure in order to maintain a minimum saturated condensing temperature of 70°F, or a 20°F variance below design head pressure during mild weather conditions. Incentive is per ton of refrigeration.

**Food Service
- Electric**

**Specifications
are detailed for every
prescriptive measure
offered under the 2015 Program.**




About our Application

Use it as a:

- **Reservation** Application
- and a
- **Final** Application

NOTE: Funds **must** be reserved for all custom projects and for certain prescriptive measures.

We **encourage** you to submit a Reservation Application for all **prescriptive** projects.

Energy Efficiency Program for Business	
 DTE Energy Know Your Own Power®	
2015 Program Application	
This Application is to be used for projects completed with a Final Application submitted during the 2015 Program Year (Jan. 1, 2015 - Nov. 30, 2015).	
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For New Construction and Major Renovation projects, download our NC/MR Applications at dteenergy.com/savenow If you have questions about other projects and the appropriate Application to submit, contact us at 866-796-0512 (press option 3) or email us at savenow@dteenergy.com	
V1:10/01/14	


2015 Program Application



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The following items are required to successfully complete your Reservation and Final Applications and receive incentive funding:

- Application Checklist
- Customer Information Sheet
- Prescriptive and/or Custom Incentive Worksheets
- Final Application Agreement
- Supporting Information, including invoices and product specifications


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Prescriptive and Custom Incentive Application Checklist

This form **MUST** be included with any Reservation and/or Final Application.
 If this is a New Construction or Major Renovation project, please use that Application, which can be found online at: dteenergy.com/savenow.

Checklist

Submittal Date _____ Application Number (if known) _____

Is this a revised Application? ☐ yes ☐ no

Mail, fax or email completed forms and required documentation with itemized invoices to:

DTE Energy's Energy Efficiency Program For Business
 P.O. Box 11289
 Detroit MI 48211
Fax: 877.607.0744
Phone: 866.796.0512
Email: saveenergy@dteenergy.com
Web: dteenergy.com/savenow

Reservation Application
Fill out this side when reserving incentives

Required Attachment

☐ Customer Information3
☐ Contractor Information4
☐ W9 Tax Information Form (customer)3
☐ Michigan-Made Affidavit(s) (if applicable)

Incentives Worksheets

☐ Lighting7
☐ HVAC – Electric10
☐ Miscellaneous Electric17
☐ Process Electric18
☐ Food Service – Electric20
☐ HVAC – Gas22
☐ Hot Water & Laundry23
☐ Insulation24
☐ Process Gas24
☐ Boiler/Furnace Tune-up25
☐ Food Service – Gas26
☐ Custom29
☐ Boiler/Furnace Tune-up Addendum32

Reservation Application Date _____

Expected Completion Date** _____

**Project funds will only be reserved for 90 days from date of Reservation and no Reservation will extend beyond Nov. 30, 2015.

Final Application
Fill out this side when project is completed

Required Attachments

☐ Customer Information3
☐ Contractor Information4
☐ W9 Tax Information Form (if different than customer)4
☐ 3rd Party Payment Authorization*4
☐ Signed Final Application Agreement5
☐ Manufacturers' Specifications
☐ Itemized Invoices
☐ Michigan-Made Affidavit(s) (if applicable)

Incentives Worksheets

☐ Lighting7
☐ HVAC – Electric10
☐ Miscellaneous Electric17
☐ Process Electric18
☐ Food Service – Electric20
☐ HVAC – Gas22
☐ Hot Water & Laundry23
☐ Insulation24
☐ Process Gas24
☐ Boiler/Furnace Tune-up25
☐ Food Service – Gas26
☐ Custom29
☐ Boiler/Furnace Tune-up Addendum32

Final Application Date _____

Actual Completion Date*** _____

***Application must be submitted within 60 days of completion date or by Nov. 30, 2015, whichever comes first.

This interactive Application will automatically calculate all incentive totals on each worksheet – which you can then submit electronically to our office. You also can download this Application, print it out and complete it manually. You then can either mail or fax it to our office.

You must complete all applicable pages before sending or submitting this Application to our office.

Go To Page 36 For Submission Instructions

dteenergy.com/savenow
2
V1:10/01/14



Prescriptive Measure Worksheets:

- There are worksheets for each measure offered in this Application.
- Enter quantities.
- In the interactive PDF Application, calculations are made automatically.
- Check the **Michigan-Made** box(es) for measures that meet the bonus criteria.

Boiler/Furnace Tune-ups and Prescriptive HVAC Gas

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HVAC Gas Incentive Worksheet

Check the **Michigan-Made** box only if the piece of equipment is for a full unit replacement and not a retrofit for which you are seeking an incentive. Select the Michigan-Made bonus specifications and you can provide the manufacturer affidavit.

Boilers and Furnaces

Ref #	Equipment Type	Equipment Size MBH	Incentive	Unit	# of Units	Total Incentive
22-2	Boiler Water Reset Control Retrofit		\$0.50	Output MBH		
22-3	High Efficiency Furnace 95% Efficient		\$350.00	Furnace		
22-4	High Efficiency Furnace 92% Efficient		\$250.00	Furnace		
22-5	High Efficiency Boilers (Space Heating)		\$2.00	Output MBH		
22-6	Leaking Steam Trap Repair or Replacement		\$100.00	Trap		

Other HVAC

Ref #	Equipment Type	Incentive	Unit	# of Units	Total Incentive
22-7	Infrared Heaters	\$4.00	Output MBH		

HVAC Controls

Ref #	Equipment Type	Incentive	Unit	# of Units	Total Incentive
22-11	Programmable Thermostat (Gas Heat)	\$50.00	Thermostat		
22-13	Setback/Setup Controls (Gas Heat)	\$5.00	1,000 Sq. Ft.		
22-14	Demand Controlled Ventilation CO ₂ Sensor-based (50.13 per Sq. Ft.)	\$100.00	1,000 Sq. Ft.		

Select the HVAC system in operation at this project site (check one or more for assistance):

☐ AC with gas heat
☐ Air source heat pump
☐ CV reheat econ with Air Cooled Chiller
☐ CV reheat econ with Gas Engine Chiller
☐ CV reheat econ with Water Cooled Chiller
☐ CV reheat econ with Air Cooled Chiller

☐ CV reheat no econ with Gas Engine Chiller
☐ CV reheat no econ with Water Cooled Chiller
☐ Gas heat only
☐ Ground source heat pump
☐ MZS no econ with Air Cooled Chiller
☐ PTAC

☐ PTAC-HP
☐ Refrigeration
☐ VAV reheat econ with Air Cooled Chiller
☐ VAV reheat econ with Gas Engine Chiller
☐ VAV reheat econ with Water Cooled Chiller
☐ Water loop heat pump

Insulation Incentive Worksheet

Pipe Wrap

Ref #	Equipment Type	Incentive	Unit	# of Units	Total Incentive
24-1	Steam Boiler	\$5.00	Linear Foot		
24-2	Steam Boiler Condensate Return	\$2.00	Linear Foot		
24-3	Hot Water Boiler	\$3.00	Linear Foot		
24-4	Domestic Hot Water	\$1.00	Linear Foot		

Process Gas Incentive Worksheet

Process Gas

Ref #	Equipment Type	Incentive	Unit	# of Units	Total Incentive
24-21	Air Compressor Exhaust Heat Recovery (Reservation Application Required)	\$20.00	HP		

NOTE: Add or insert the measure reference number (left column) to all related specification sheets, invoices and other documentation.

Michigan-Made All Measures

Total HVAC – Gas Incentives

Total Insulation Incentives

Total Process Gas Incentives

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Custom Measure Worksheets:

- There are three custom pages in the Application; each can accept two custom items.
- Complete all relevant areas.
- Check the category of measure type.
- In the interactive PDF Application, calculations are made automatically.

IMPORTANT NOTE: Use the reference numbers in the left column to identify and mark all related invoices, specification sheets and other documents related to this measure and submitted with this Application.

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Custom Incentive Worksheet

IMPORTANT: If you fail to complete each section, check the appropriate category or enter all required information, the worksheet will not calculate your incentive and carry the value to Page 8.

Must be submitted BEFORE project begins.

See Instructions on Page 27. Complete every blank box for each item you submit. Please attach all equipment specifications to your Reservation Application before you submit for review.

Ref# 29-1 Location (building name, etc.) _____

Description				Description			
Before Retrofit				After Retrofit			
"Before" hours of operation calculation for this specific equipment:				"After" hours of operation calculation for this specific equipment:			
Hours/week:	Weeks/year:	Non-work days/year:		Hours/week:	Weeks/year:	Non-work days/year:	
Hours used per year (a)		kW (b)		Hours used per year (c)		kW (d)	
Service	Unit	Current Energy Cost (\$ per Unit)	Annual Savings* (Units/Year) (A)	Incentive Rate (\$ per Unit) (B)	Calculated Incentive (A x B)	Measure Cost	
Electric	kWh			\$0.07			
Natural Gas	Mcf			\$4.00			

* For Electric projects use the following formula: (a x b) - (c x d). For natural gas projects, you must enter your own calculated Annual Savings and provide documentation.

Ref# 29-2 Location (building name, etc.) _____

Description				Description			
Before Retrofit				After Retrofit			
"Before" hours of operation calculation for this specific equipment:				"After" hours of operation calculation for this specific equipment:			
Hours/week:	Weeks/year:	Non-work days/year:		Hours/week:	Weeks/year:	Non-work days/year:	
Hours used per year (a)		kW (b)		Hours used per year (c)		kW (d)	
Service	Unit	Current Energy Cost (\$ per Unit)	Annual Savings* (Units/Year) (A)	Incentive Rate (\$ per Unit) (B)	Calculated Incentive (A x B)	Measure Cost	
Electric	kWh			\$0.07			
Natural Gas	Mcf			\$4.00			

* For Electric projects use the following formula: (a x b) - (c x d). For natural gas projects, you must enter your own calculated Annual Savings and provide documentation.

Electric Simple Payback Period must be >1 to <18 years

Electric Aggregate Measure Cost = Aggregate Annual kWh Saved x Current Energy Cost

Gas Simple Payback Period must be >1 year

Gas Aggregate Measure Cost = Aggregate Annual Mcf Saved x Current Energy Cost

	Aggregate Measure Cost	Aggregate Annual Savings	Current Energy Cost	Simple Payback Period*	Total Calculated Incentive	Total Awarded Incentive**
Electric						
Natural Gas						
Total Measure Cost					Total Custom Incentive	

IMPORTANT NOTES:

* The Simple Payback Period must fall within the electric or gas parameters to qualify for an incentive (see formula above). If the Total Awarded Incentive for either electric or gas displays DNO (does not qualify), then the payback period fell outside of required parameters or the measure cost or energy savings were missing.

** Total Awarded Incentives for each utility are capped at no more than 50% of the Total Measure Cost. If one utility does not qualify for an incentive, the other utility is capped at no more than 50% of the Aggregate Measure Cost for that utility.

If you require assistance completing this section, contact our office.

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Submitting your Application



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Electronically submit your
Reservation Application and/or
your **Final** Application:

Automatically:

- Your email will be launched,
- our email address will be inserted,
- the subject line will be entered and
- your Application will be attached.

At that point, attach any other
supporting documentation.

Note: check the blue boxes to ensure that
your incentives have been entered correctly.

Boiler/Furnace Tune-ups
and Prescriptive HVAC Gas

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To submit your Reservation Application*

1. Complete the Application (Pages 2-4).
 - a. Ensure that you have completed the Reservation Application checklist (Page 2).
 - b. Ensure that you have completed the Customer information (Page 3).
 - c. Ensure that you have completed the Contractor and, if applicable, Third Party Payment information (Page 4).
2. Complete all relevant worksheets for your project.
BEFORE YOU SUBMIT: If the figure at right does not match the incentives you expected to request, please review your worksheets and the summary page (Page 6).
3. Print and mail your Reservation Application to:
DTE Energy's Energy Efficiency Program for Business
P.O. Box 11289
Detroit, MI 48211
or
Fax to: 877.607.0744
or
Submit electronically by clicking here: **SUBMIT**

* A Reservation Application may not be required for your project, but is strongly encouraged to set aside funds. Submission of a Reservation Application does not guarantee that funds will be available.

To submit your FINAL Application

1. Complete or confirm all information in on Pages 2-4.
2. Complete and have account holder sign Final Application (Page 5).
3. Complete or confirm all relevant worksheets for your project.
BEFORE YOU SUBMIT: If the figure at right does not match the incentives you expected to request, please review your worksheets and the summary page (Page 6).
4. Print and mail your FINAL Application to:
DTE Energy's Energy Efficiency Program for Business
P.O. Box 11289
Detroit, MI 48211
or
Fax to: 877.607.0744
or
Submit electronically by clicking here: **SUBMIT**


Mail, fax or email all manufacturers' specifications, detailed invoices and other supporting documents to our office. In your mailing, on your cover sheet or in your subject line, please include the customer name and project number; DTE-(year)(5-digit number). If you don't have a project number, make sure you enter your customer name.

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About your Final Application:

- Your **Final Application** must be submitted within 60 days of project completion , reservation end date or by Nov. 30, 2015 – whichever comes first.
- **Final Applications submitted after Nov. 30, 2015, will be canceled.**
- Failure to include all supporting documentation at the time of submission could result in cancellation of your Application.

Energy Efficiency Program for Business	
 DTE Energy Know Your Own Power®	
2015 Program Special Application for Boiler/Furnace Tune-ups and Prescriptive HVAC Natural Gas Projects	
<small>This Application can be used for boiler and furnace tune-ups and certain common Prescriptive measures involved in Natural Gas projects; these and other Program measures also can be found in the main Program Application. This Application is to be used for projects completed with a Final Application submitted during the 2015 Program Year (January 1, 2015 – November 30, 2015).</small>	
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In Summary

- New for 2015
- New mid-year LED measures
- New, Continuing & Expiring offers
- About incentives
- LED Lighting Opportunities
- How to get started



Thank you for joining us today!





**If you have questions,
please contact our office**

Email: saveenergy@dteenergy.com

Phone: **866-796-0512** (press option 3)

Fax: **877-607-0744**

Website: dteenergy.com/savenow

Website: dtetradeally.com



: www.linkedin.com/in/dteenergysaveenergy