

Case Studies: Restaurant Energy Efficiency

HOSTED BY:



DTE Energy[®]
Know Your Own Power[®]

JUNE 30, 2016



**Food Service
Technology Center**



fishnick.com

The Food Service Technology Center (FSTC) program is funded by California utility customers with public purpose program (PPP) funds and administered by the Pacific Gas and Electric Company under the auspices of the California Public Utilities Commission.

Promoting:

Energy Efficiency in Commercial Food Service



Hybrid Midstream Plan: Downstream Enhancements

GAS MEASURES				
	Unit	Estimated Energy Saved (CCF/yr)	Recommended Incentive \$	Est. Incremental Measure Cost \$
COOKING EQUIPMENT				
ENERGY STAR Steam Cookers 5 Pan	Cooker	1,900	\$1,500	\$3,500
ENERGY STAR Steam Cookers 6 Pan	Cooker	2,100	\$1,800	\$4,000
ENERGY STAR Convection Ovens	Oven	325	\$500	\$2,000
Combination Ovens	Oven	800	\$1,800	\$6,000
Rack Oven Single	Oven	1000	\$800	\$4,000
Rack Oven Double	Oven	2000	\$1,600	\$5,000
Large Vat Fryers	Fryer	600	\$600	\$2,000
ENERGY STAR Fryers	Fryer	500	\$500	\$1,500
ENERGY STAR Griddles	Griddle	100	\$400	\$2,500
WATER HEATERS				
Pre-Rinse Sprayers (Gas Water Heat)	Sprayer	variable	no change	N/A
CONTROLS				
CKV Hood with Demand Control	CFM Reduced	variable	\$0.50	N/A

Hybrid Midstream Plan: Downstream Enhancements

ELECTRIC MEASURES					
	Unit	Estimated Energy Saved (kWh/yr)	Current Incentive \$	Recommended Incentive \$	Estimated Incremental Measure Cost \$
COOKING EQUIPMENT					
Electric:					
ENERGY STAR Steam Cookers 3 Pan	Cooker	11,000	\$450	\$900	\$2,000
ENERGY STAR Steam Cookers 4 Pan	Cooker	13,000	\$600	\$1,200	\$2,500
ENERGY STAR Steam Cookers 5 Pan	Cooker	16,000	\$750	\$1,500	\$3,000
ENERGY STAR Steam Cookers 6 Pan	Cooker	18,000	\$900	\$1,800	\$3,500
ENERGY STAR Hot Holding Cabinets - Half Size	Cabinet	1100	\$300	no change	\$700
ENERGY STAR Hot Holding Cabinets - Three-quarter Size	Cabinet	1600	\$400	no change	\$1,500
ENERGY STAR Hot Holding Cabinets - Full Size	Cabinet	2200	\$600	no change	\$1,900
WATER HEATERS					
Pre-Rinse Sprayers (Electric Water Heat) < than 1.6 gpm	Sprayer	variable	\$30	no change	N/A
REFRIGERATION					
ENERGY STAR Commercial Solid Door Refrigerators < than 15 ft3	Refrigerator	400	\$75	no change	\$500
ENERGY STAR Commercial Solid Door Refrigerators 15 to 30 ft3	Refrigerator	700	\$100	no change	\$600
ENERGY STAR Commercial Solid Door Refrigerators 31 - 50 ft3	Refrigerator	1000	\$150	no change	\$700
ENERGY STAR Commercial Solid Door Refrigerators > than 50 ft3	Refrigerator	1400	\$200	no change	\$1,400
ENERGY STAR Commercial Solid Door Freezers < than 15 ft3	Freezer	600	\$75	no change	\$800
ENERGY STAR Commercial Solid Door Freezers 15 - 30 ft3	Freezer	1200	\$100	no change	\$1,000
ENERGY STAR Commercial Solid Door Freezers 31 - 50 ft3	Freezer	2100	\$150	no change	\$1,300
ENERGY STAR Commercial Solid Door Freezers > than 50 ft3	Freezer	3300	\$200	no change	\$1,700
ENERGY STAR Ice Machines < than 500 lbs	Machine	800	\$150	no change	\$600
ENERGY STAR Ice Machines - 500 to 1000 lbs	Machine	1300	\$250	no change	\$800
ENERGY STAR Ice Machines > than 1000 lbs	Machine	1600	\$500	no change	\$1,300

FOOD SERVICE TECHNOLOGY CENTER
PROMOTING ENERGY EFFICIENCY IN FOODSERVICE

1.800.398.3782

Enter search criteria

About Save Energy Save Water Design Equipment Testing Education Ventilation Publications

Food Service Technology Center
FSTC

Promoting energy efficiency and performance in commercial food service since 1987.

FSTC News:

Redesigned Website Launches
More information and better organization for the ultimate online resource for commercial kitchen energy efficiency.

FSTC Partners with Conserve
The National Restaurant Association's Conserve program offers solutions for sustainability.

10 Ways to Save Natural Gas
These tips will save you money without compromising the comfort, performance or productivity of your kitchen.

Educational Seminars
Go green! Learn about energy efficiency, saving water, sustainability, lighting, and more!

Equipment Rebates
It pays to be efficient! Take advantage of cash incentives on energy saving equipment.

Green Your Restaurant

Being Green is about sustaining the environment and sustaining your bottom line. The FSTC is partnering with NRA's Conserve to introduce the industry's first comprehensive green recognition program. [Learn More](#)

Events and Seminars | **Latest Publications**

Energy Efficiency for Foodservice with a 2010 Forecast f...
Jan 21st, 2010 - Downey, CA

Foodservice Refrigeration Chill-out
Jan 26th, 2010 - Tulare, CA

Food Service Refrigeration: Design and Operations, Tips ...
Jan 28th, 2010 - San Ramon, CA

[» more](#)

PG&E Foodservice Customers
Find local resources and third-party programs.

Energy Tips
From energy and water to refrigeration and lighting. No cost tips too!

Online Toolbox
Life-cycle cost calculators, rebate lists and design guides!

Codes and Standards
Find the latest regulations as they apply to the foodservice industry.

Video Corner

Richard Young explains why choosing energy-efficient appliances is a smart business decision.

[» Watch More](#)

FSTC Affiliates



fishnick.com

Download Today's Handouts:

www.fishnick.com/handouts/20160630



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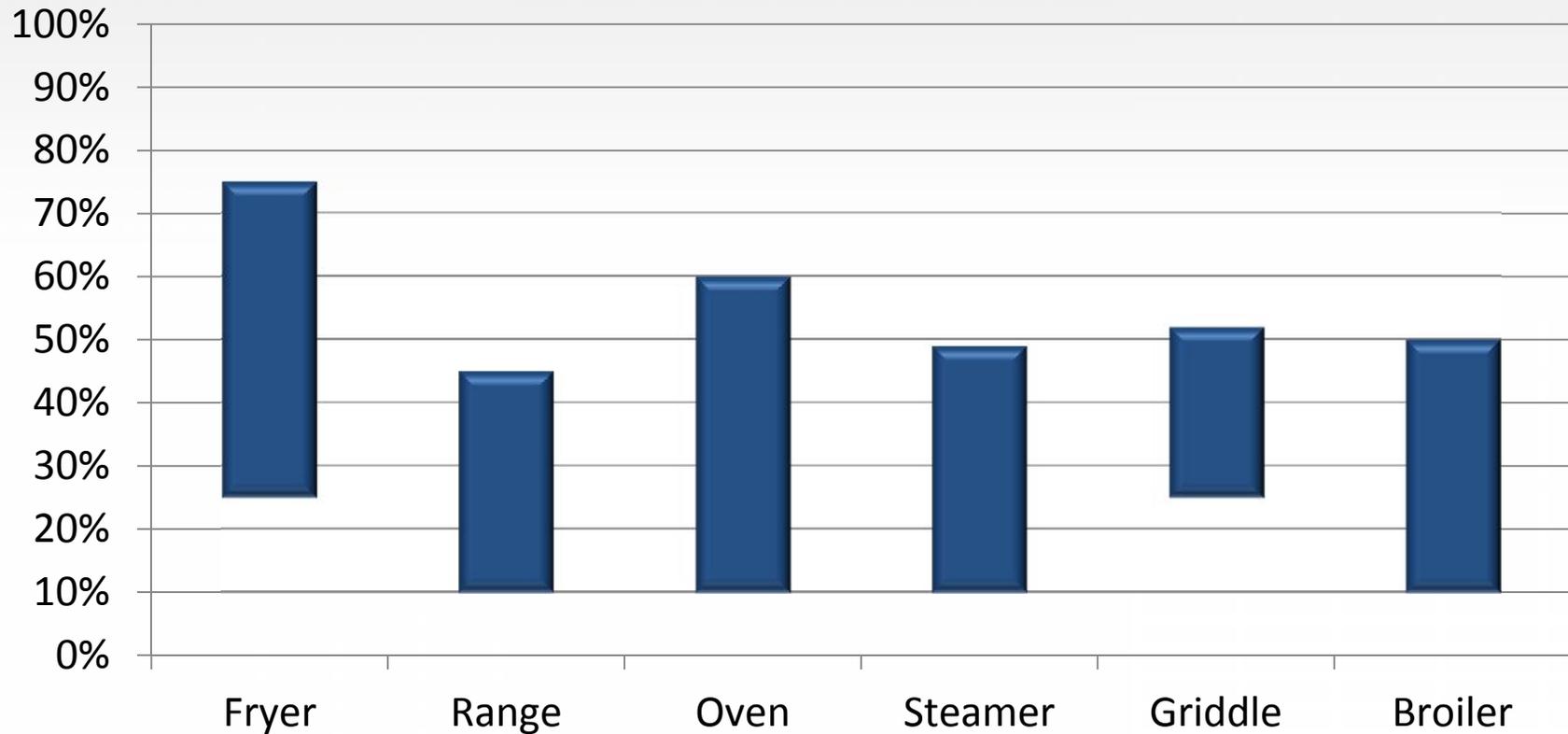
Today's Learning Goals

Learn

1. How restaurants are using energy efficient appliances to save energy
2. How to find energy efficient appliances
3. How to find DTE Energy's incentives for efficient appliances

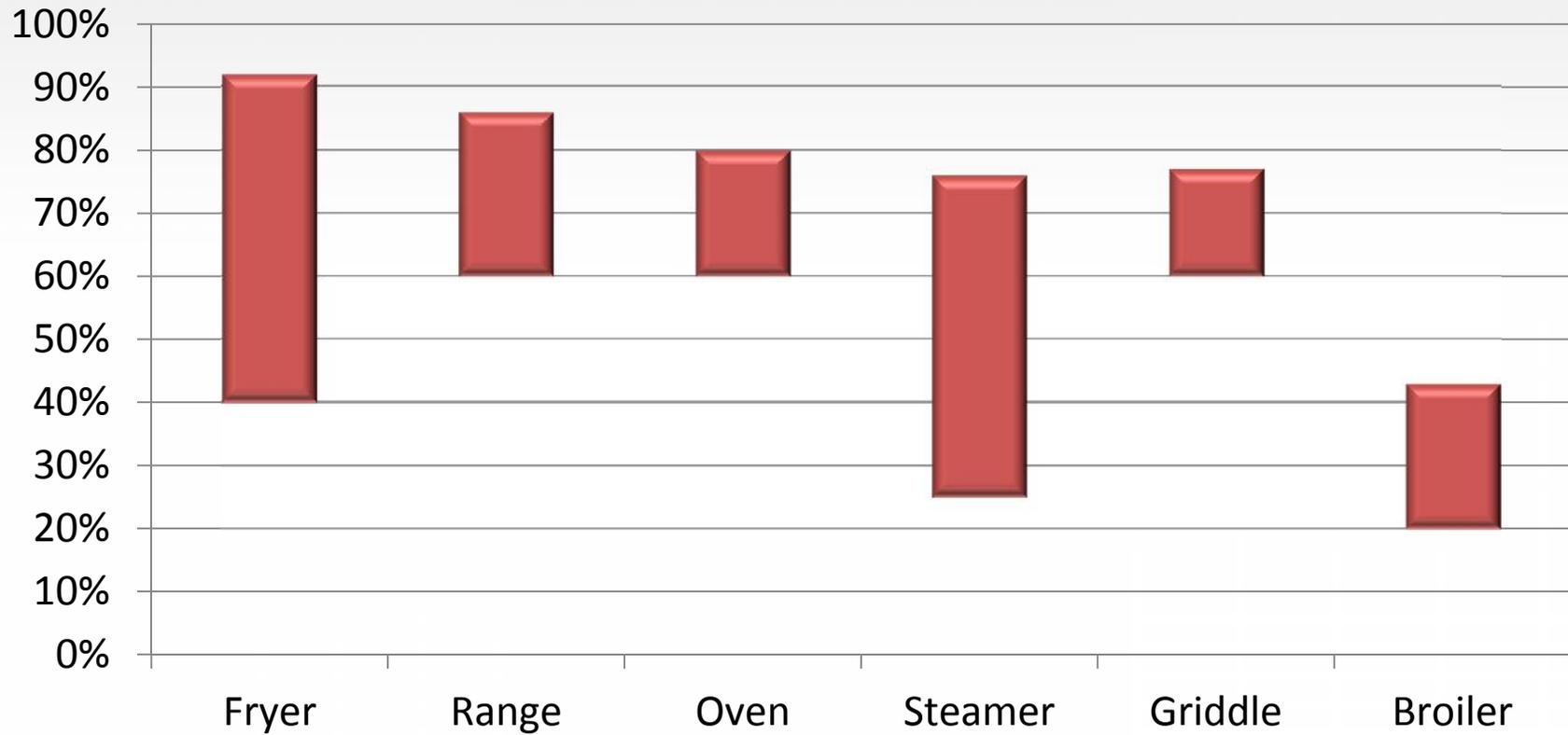
Huge Range in Efficiency!

■ Gas Appliances



Huge Range in Efficiency!

■ Electric Appliances



Comal Berkeley, CA



High Efficiency Gas Convection Oven

- **210 Therms/yr Savings**

\$85 Annual Energy Savings
\$500 DTE Energy Incentive

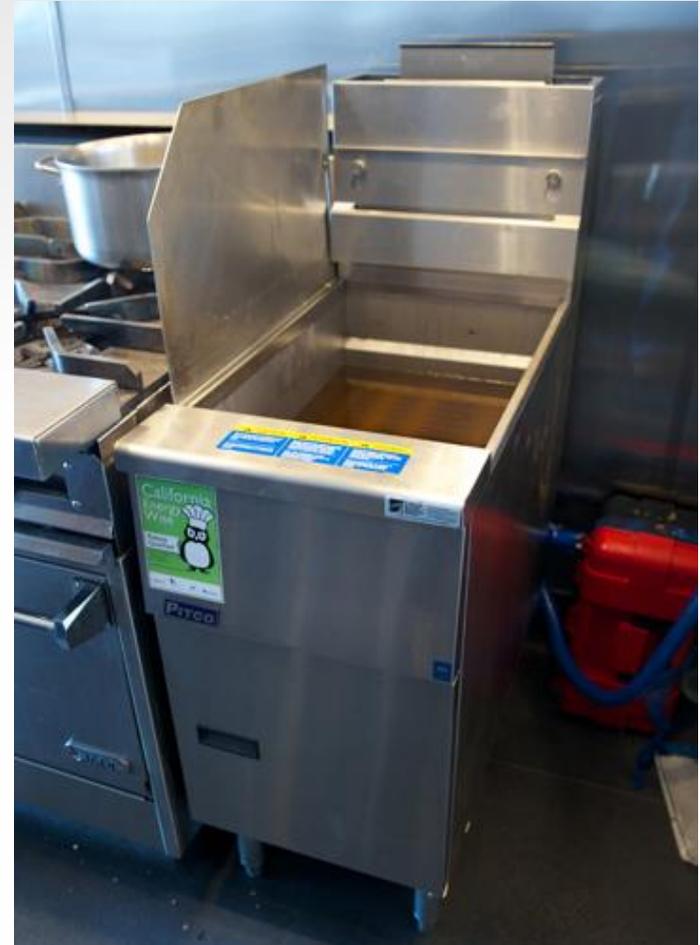


High Efficiency Gas Fryer

- **600 Therms per Year Savings**

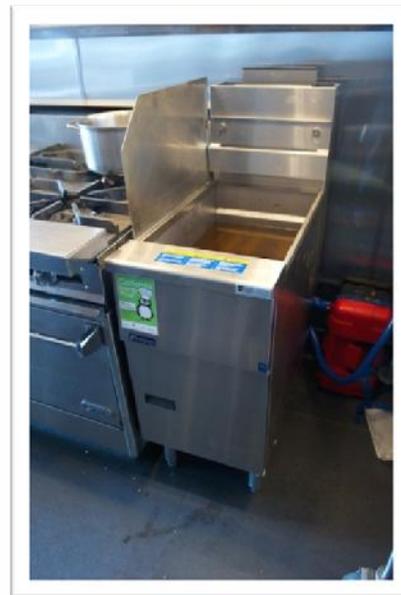
\$240 Annual Energy Savings

\$500 DTE Energy Incentive



- **Comal, Berkeley, CA**

Fryer - Measured Energy Use		
	OLD Fryer	NEW Pitco VF35 Fryer
Daily Energy Use (therms)	3.9	1.3
Annual Energy Use (therms)	1,422	821
Annual Energy Savings (therms)	-	601



High Efficiency Electric Connectionless Steam Cooker

- **14,100 kWh/year
Electricity Savings**
- **18,000 gal/year
Water Savings**

\$1,550 Annual Energy Savings

\$ 170 Annual Water Savings

\$ 900 DTE Energy Incentive



High Efficiency Ice Machine

- **2,450 kWh/year Savings**
- **13,140 gal/year Water Savings**

\$270 Energy Savings

\$120 per year Water Savings

\$150 DTE Energy Incentive



High Efficiency Refrigerators

- 4 Identical Refrigerators
- 3,170 kWh/year Savings

\$350 Annual Energy Savings

\$400 Total DTE Energy Incentive



High Efficiency Freezer

- **2,450 kWh/yr savings**

\$230/yr Energy Savings

\$300 DTE Energy Incentive



Commercial Kitchen Demand Ventilation Control Energy Management System

- 1,220 therms savings
- 1,870 kWh savings

\$690 Energy Savings

\$525 DTE Energy Incentive



Low Flow Pre-Rinse Spray Valve

- 290 Therms Savings
- 40,500 gal Water Savings
- \$115 Energy Savings
- \$380 Water Savings
- \$ 30 DTE Energy Incentive



Comal Energy Efficient Equipment Cost Savings

DTE Energy Incentives

• Ice Machine	\$150
• Refrigerators (4)	\$400
• Freezer	\$300
• Convection Oven	\$500
• Fryer	\$500
• Steamer	\$900
• Ventilation Control	\$525
• Low Flow Sprayer	\$ 30
• Grand Total	\$3,125

Energy & Water Savings

• Ice Machine	\$390
• Refrigerators (4)	\$350
• Freezer	\$230
• Convection Oven	\$ 85
• Fryer	\$240
• Steamer	\$1,720
• Ventilation Control	\$690
• Low Flow Sprayer	\$490
– Total Energy	\$3,530
– Total Water	\$ 670
• Grand Total	\$4,200



**Electronically Commutated Fan
Motors in Walk-in Freezer**



**LED Lighting
in the Kitchen,
Exhaust Hood,
Bar Area &
Dining Room**



**High Efficiency Water Heater with
Recirculation Pump & Timer**



**Strip Curtains
and Auto
Door Closer
on Walk-in
Cooler**



Reduce, Reuse, Recycle & Compost

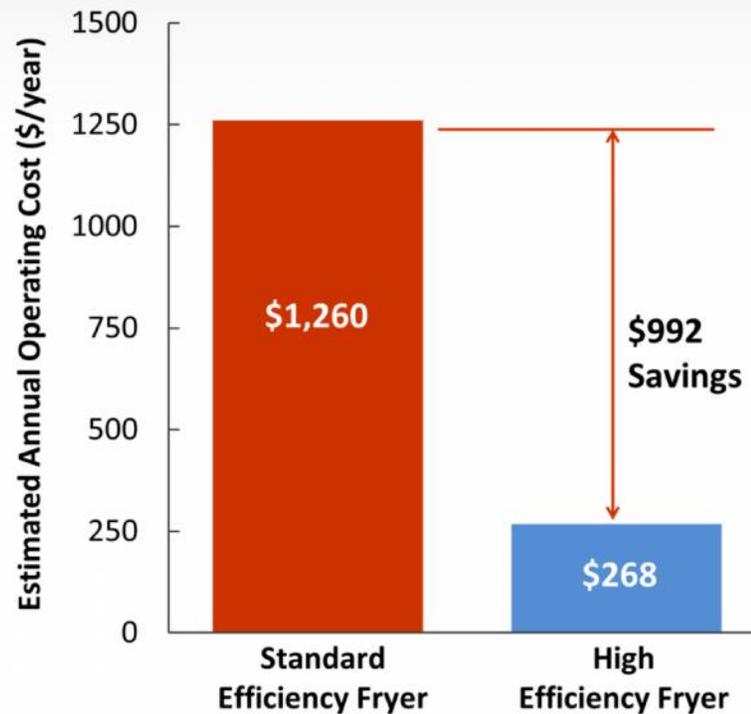
- Dishmachine exhaust hood interlocked with dishmachine
- Ice machines use time clocks for load-shifting
- Coffee machine turned off after hours
- Dining room lights turned off for non-service daylight hours
- Hot water recirculation pump uses time clock

Vic's All Star Kitchen Pleasanton



High Efficiency Fryer

- 7,410 kWh Energy Savings
- 315 Therms Energy Use
- \$992/year savings
- \$749 Utility Rebate



High Efficiency Fryer

- 7,410 kWh Energy Savings
- 315 Therms Energy Use

\$690/year savings

\$500 DTE Energy Incentive

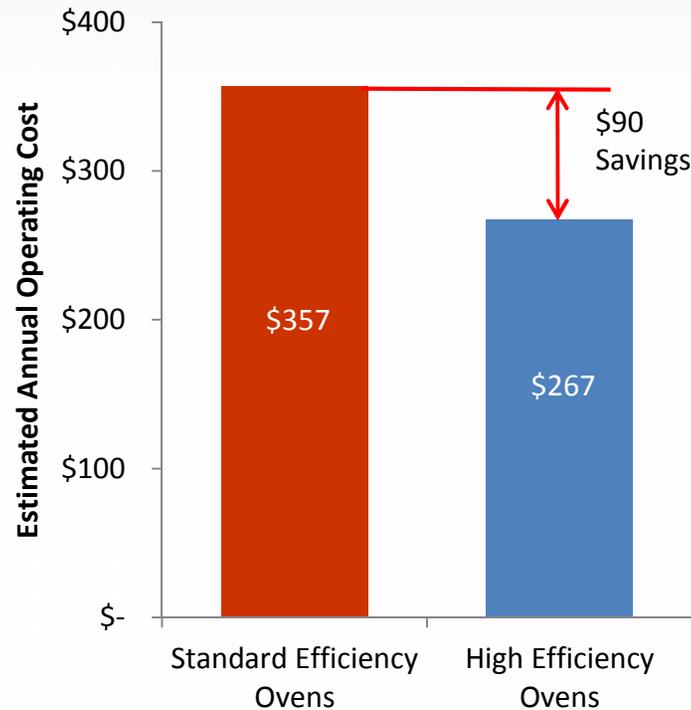


High Efficiency Convection Ovens

- 224 Therms per Year Savings

\$90/year Savings

\$1,000 DTE Energy Incentive



High Efficiency Griddle

- 849 Therms per Year Savings

\$340/year Savings

\$400 DTE Energy Incentive



- Vic's All Star Kitchen, Pleasanton, CA**

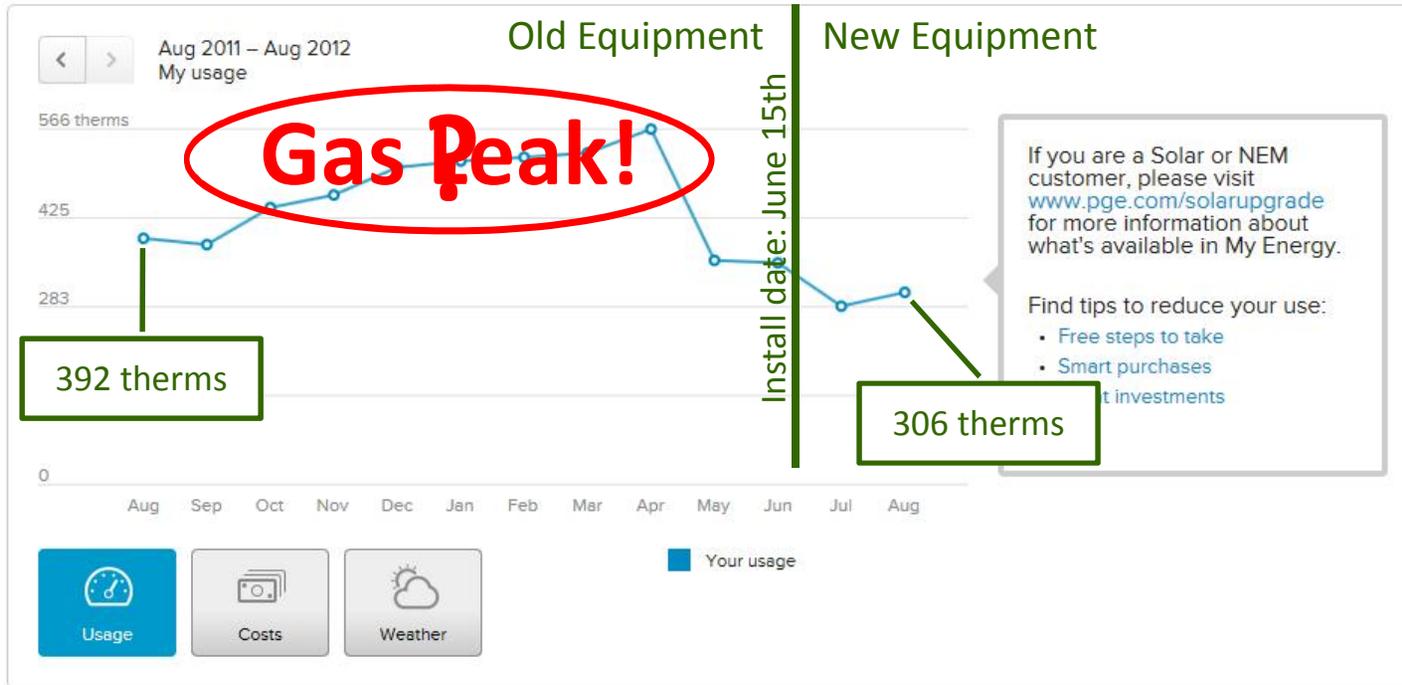
Original Lineup	New Lineup	Calculated Savings
Countertop Electric Fryer	Floor Natural Gas Fryer	7,410 kWh (315 therms)
36" Manual Griddle	72" Thermostatic Griddle	849 therms
48" Manual Griddle		
Conventional Oven (left)	Convection Oven (top)	112 therms
Conventional Oven (right)	Convection Oven (Bottom)	112 therms
Total Energy Savings		757 therms 7,410 kWh
Total Operating Cost Savings		\$1,120

*DTE Energy Utility Costs: \$0.40/therm & \$0.11/kWh



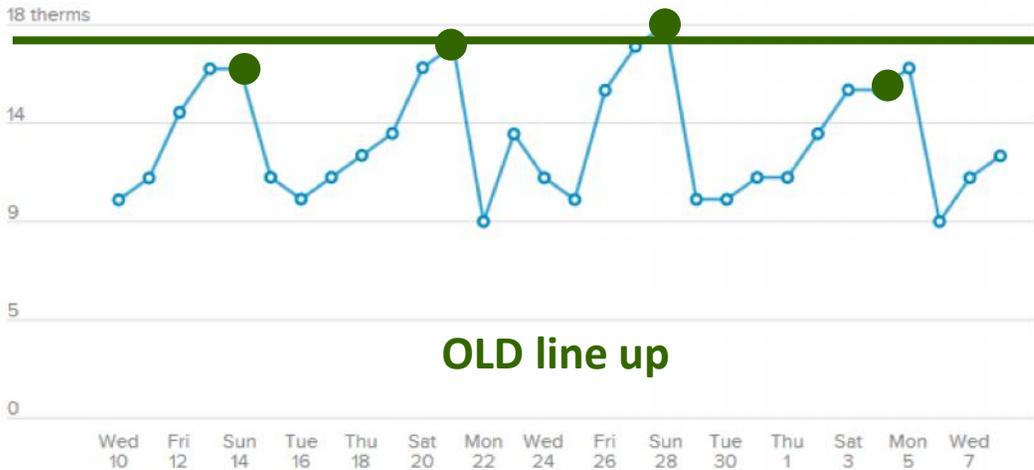
My Energy Use

Show my by year



Average Sunday
Natural Gas Use

Aug 10, 2011 – Sep 8, 2011
My usage

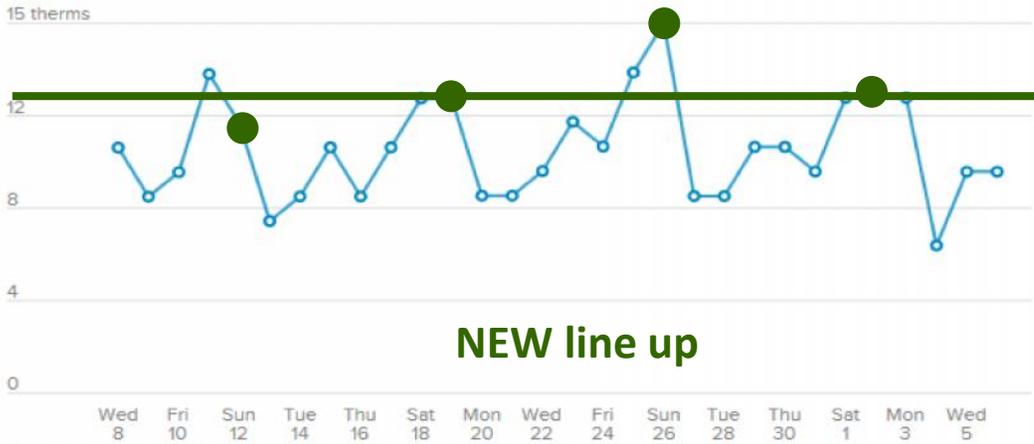


OLD line up

16.75 therms

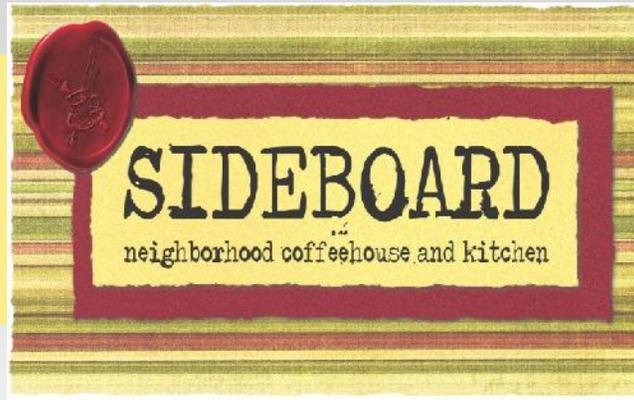
\$3.60
per
day savings

Aug 8, 2012 – Sep 6, 2012
My usage



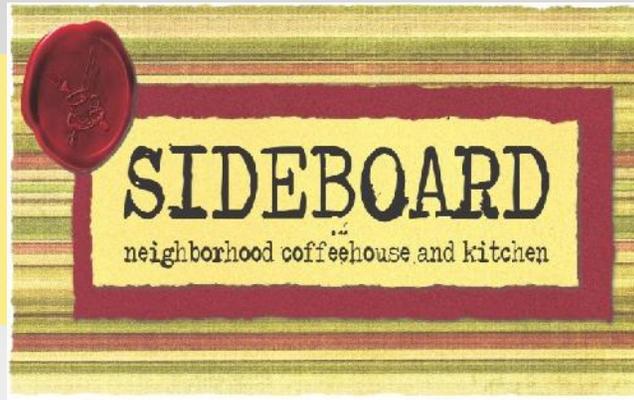
NEW line up

12.5 therms



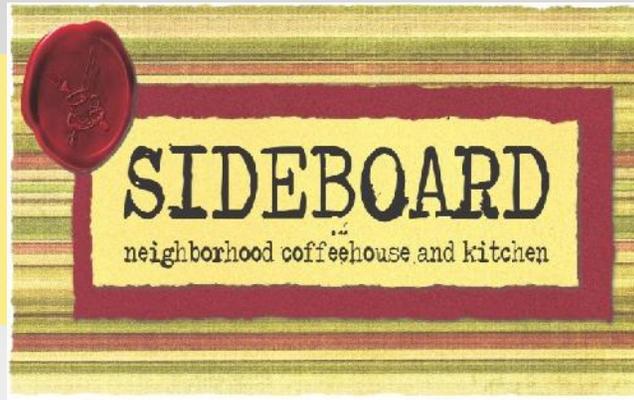
It started with a light bulb...

The FSTC recommended energy efficient lighting at Sideboard's original location in the Danville Hotel



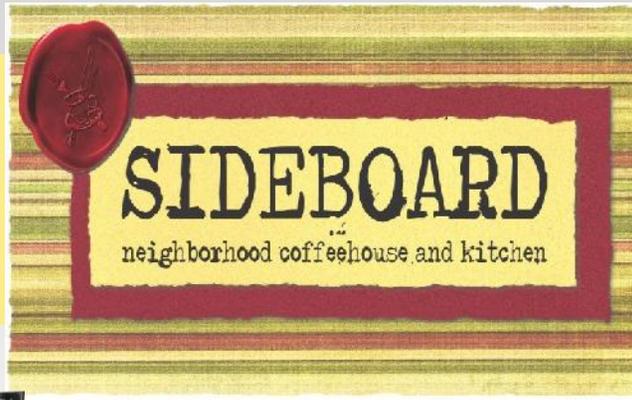
Followed by a Design Consultation...

When Sideboard was moving to a new location, the FSTC provided a suite of energy efficiency recommendations...



FSTC Recommendations...

- Efficient Fryers
- Efficient Convection Ovens
- LED Lighting
- Lidded Broiler

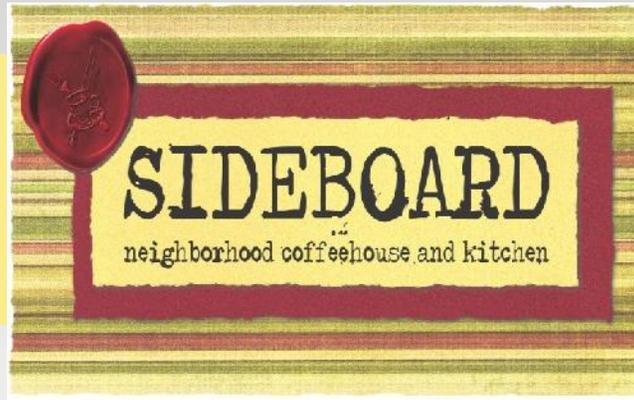


Energy Efficient Convection Ovens...

\$1,000 DTE

Energy Incentive

(\$500 per cavity)



Energy Efficient Fryers...

\$1,000 DTE

Energy Incentive

(\$500 per fryer)

- **True Burger, Oakland**

Ice Machine – Calculated Energy Use		
	Old Ice Machine	New Machine
Rate Capacity (lbs/ice/day)	210	410
Rated Energy Use (kWh/100 lb/ice)	10.3	5.73
Duty Cycle (%)	100	TBD
Annual Energy Use Savings (kWh)	-	3,340
Demand Reduction (kW)	-	1.0
Hours “off peak”	0	TBD



Fryer Replacement Case Study

Location: Chow, Danville

Measured Energy Use				
Hotline Location	Mainline Old Fryer (heavy use)	Mainline NEW Vulcan VK45 Fryer (heavy use)	Grill line Old Fryer (light use)	Grill line NEW Pitco VF35 Fryer (light use)
Daily Energy Use (therms)	3.6	1.3	2.8	1.6
Annual Energy Use (therms)	1,287	452	990	573
Annual Operating Cost Savings (\$)		\$180*		\$230*

*Operating cost savings based on a natural gas utility rate of \$0.40/therm.



Main line Fryer



Grill line Fryer

**Real Restaurants
Real Savings!**

**Buy Efficient
Get Incentives!**

dteenergy.com/savenow

Thanks!

**be
energy
wise**

**save energy, save money,
save the environment.**



fishnick.com

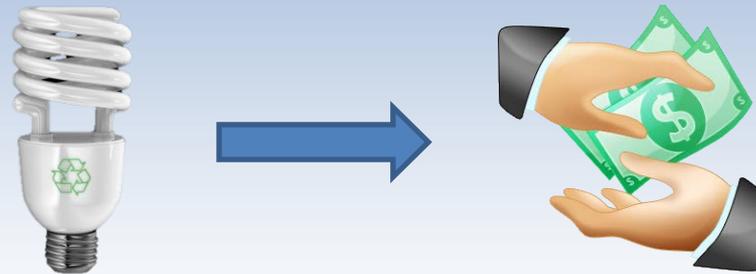
Oscar W. Larson Company

Energy Optimization In The Food Service
Environment



The Whole Facility Approach to Energy Management One Bite at a Time!!

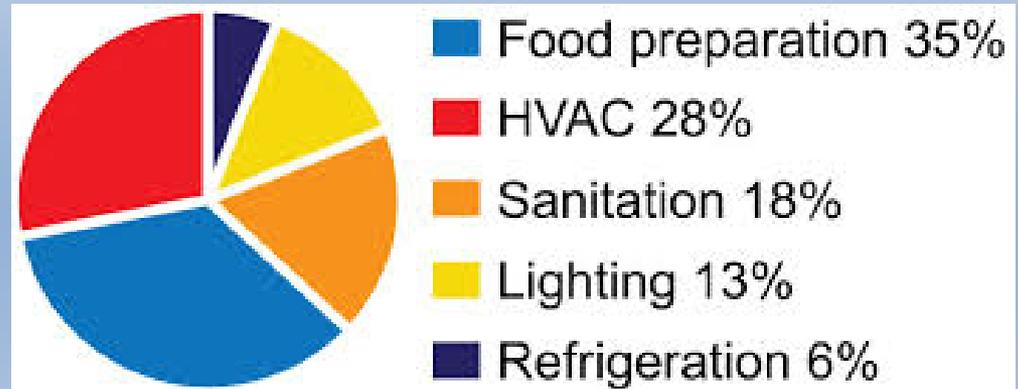
- We have been participating in local utility rebate programs since 2009 and have collectively secured millions of dollars in rebate money and over 18 gigawatts of annual energy savings for our customers.



Save Energy & Money! Make Your Site More Profitable!

Cut down on your maintenance costs as well as your utility bills by taking advantage of local utility rebate programs:

- DTE Energy
- Consumers Energy
- Efficiency United
- Energy Smart
- Lansing Board of Water & Light
- Michigan/Indiana Power



Restaurants use as much as 5x more energy per square foot than any other commercial building (Energy Star Guide for Restaurants 2012).

Brighten Your Parking Lot and Cut Back on Energy with New LED Area Lights

Benefits

Uses Less Wattage.

1000 watt HID fixture typically replaced by 225 watt LED fixture.
400 watt HID fixture typically replaced by 115 watt LED fixture.

Long Life and Warranty.

Most fixtures have a 20 yr expected life.

Warranty can be as long as 10 yrs.

Minimum of 5 yr warranty to participate in rebate program.

Maintenance savings over the life

Time of fixture.



Refresh Your Interior Image and Cut Back on Energy with New LED Lighting

Benefits

Uses Less Wattage.

220 watt fluorescent fixture typically replaced by 35 watt LED fixture.

100 watt incandescent fixture typically replaced by 18 watt LED fixture.

Dimmable/Color Changing.

Variable or 50% Dimming.

Some have color changing capabilities.

Long Life and Warranty.

Most fixtures have a 20 yr expected life.

Warranty can be as long as 10 yrs.

Minimum of 5 yr warranty to participate in rebate program.



Illuminate Your Signs with Energy Saving LED Lighting

Benefits

Uses Less Wattage.

Wattage can be reduced by as much as Half.

Multiple options depending on signage.

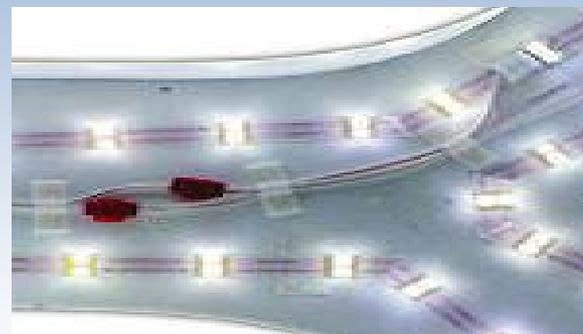
Long Life and Warranty.

Most have a 18-20 yr expected life.

Warranty are typically 5 yr for retrofit options but are dependent on manufacturer.

Maintenance Savings.

What are your signs costing you?



Heating/Air Conditioning & Refrigeration Equipment Upgrades

Benefits

Uses Less Energy

Designed to meet the new ASHRAE Standards

Warranted Equipment.

Some have 20 years on heat exchangers

Most have 5 years on compressors.

Maintenance Savings.

Consider service contracts with quarterly PM Schedules.



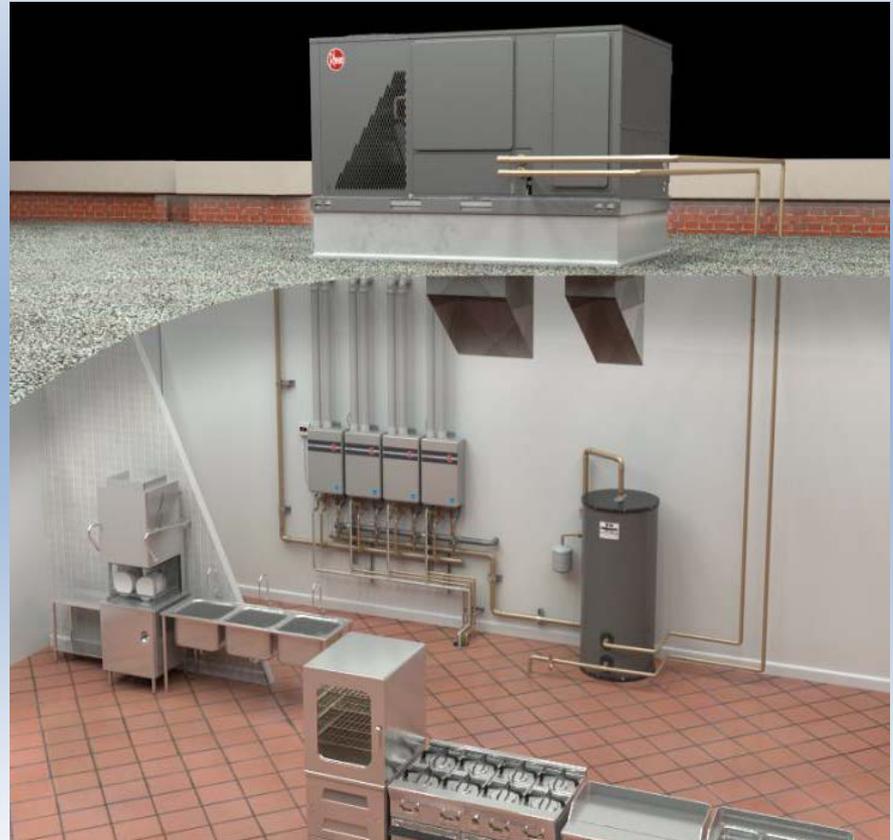
Hybrid Heating/Air Conditioning Equipment

RHEEM H2AC Rooftop Unit

How It Works

- 1 - Cold ground water enters the system at the thermal storage tank.
- 2 - When there is a call for cooling by the H2AC rooftop (B), the internal pump draws water from the storage tank (A) into the water cooled condenser capturing up to 150,000 btuh of waste heat
- 3 - “Free” hot water from the H2AC rooftop is sent to the thermal storage tank (A). This 115 gallon tank can be “charged” up to 120F regardless of hot water usage (peak, off peak, overnight, etc.)
- 4 – When there is a need for hot water at a fixture, preheated water not cold ground water flows from the storage tank (A) through the heaters (C) and is provided to the fixtures at the correct temperature

The energy savings is a result of the heaters only boosting the water temp 20F to 45F rather than the traditional 100F temp rise.



Reduce Walk-In Cooler Energy Consumption with the Installation of EC Motors

Benefits

What is an EC Motor.

Synchronous motors that are powered by a DC electric source via an integrated inverter/switching power supply, which produces an AC electric signal to drive the motor.

Uses Less Energy

Designed to meet the new ASHRAE Standards

Fan Cycling Control.

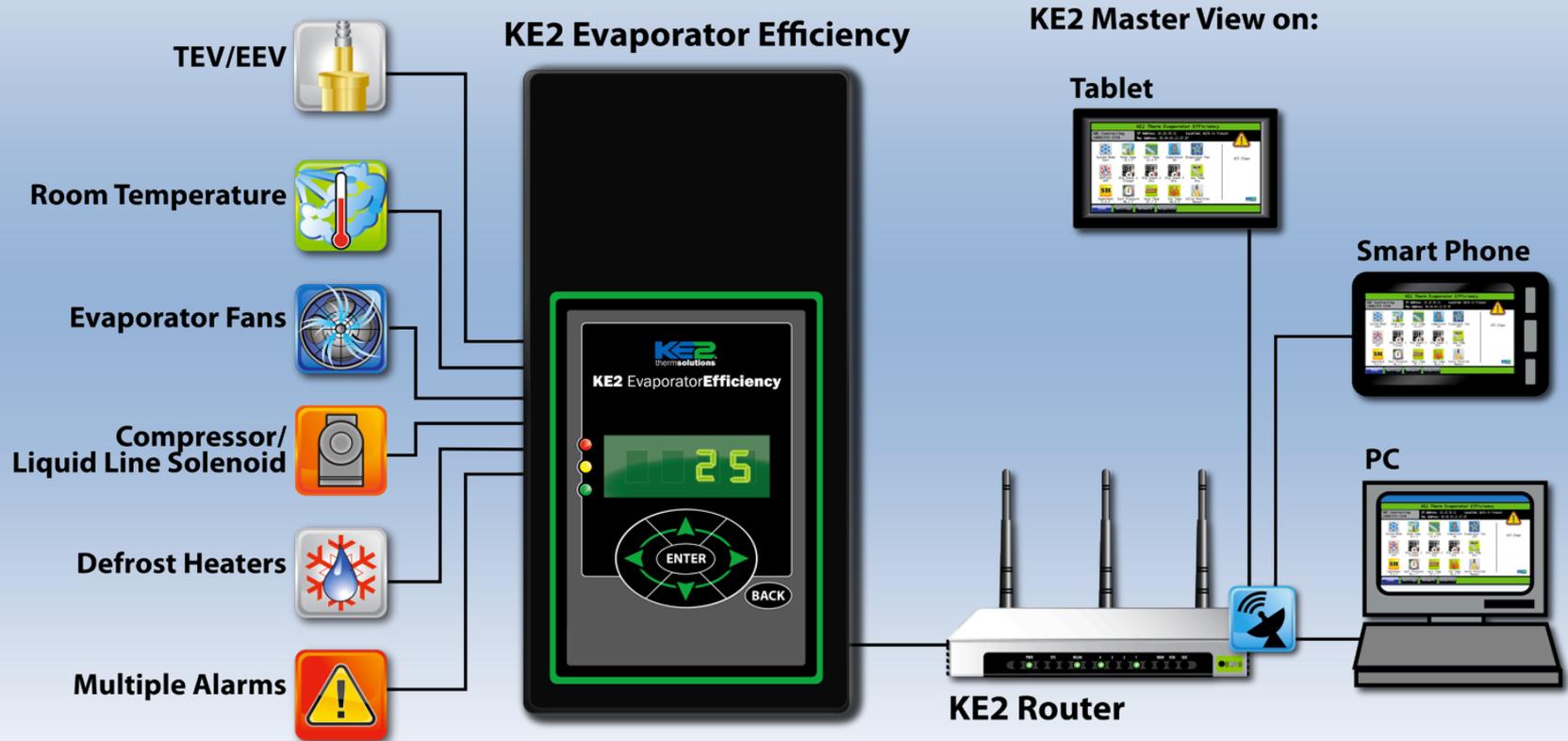
Can be used with fan cycling controls to maximize energy savings.



Install Controls to Further Monitor and Reduce Energy Consumption

Controls

Communicates



KE2 Efficiency Controller

Benefits

Allows you to see deficiencies.

Monitor equipment performance.

Track energy usage.

Maintain your food quality

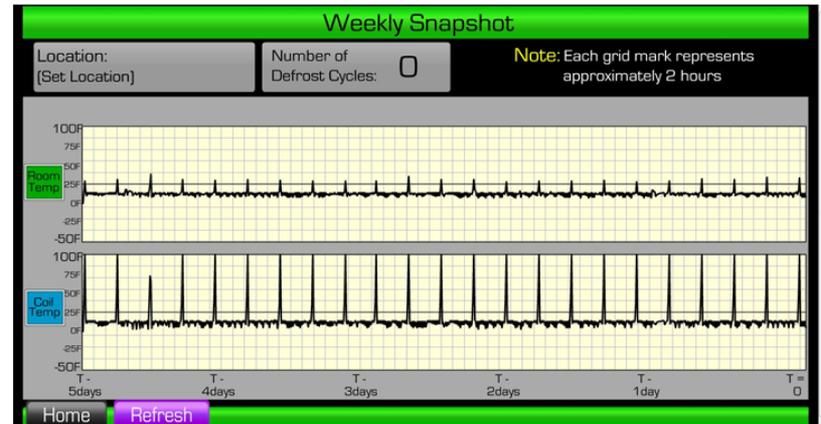
Local and remote alarming

notification capability.



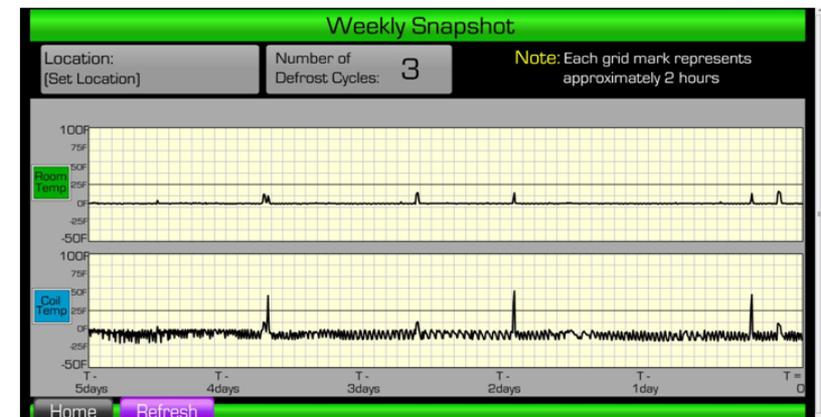
Case Study: Jan 4, 2012

New Cond. Unit Controlled by mechanical time clock / thermostat



Case Study: Feb 13, 2012

System Controlled by KE2 Evaporator Efficiency



Replace Your Prep Equipment With Energy Star Products

Benefits

Uses Less Energy

Designed to meet the new ASHRAE Standards

Warranted Equipment.

Consider manufactures warranty.

Maintenance Savings.

Consider repair vs replacement.



High Efficiency Water Heating

Benefits

Uses Less Energy

Designed to meet the new ASHRAE standards.

30-40% Savings over traditional water heaters.

Many Types.

Hybrid heat pump.

Direct vent.

On demand.



Basic Energy Management System

heating/cooling

lighting/signage



**energy management
solutions
for restaurants**

walk-in refrigerators/freezers

Complete Site Monitor and or Control

- **HVAC**

- Heating
- Cooling
- Destratification Fans
- Energy Management
- Variable Speed Drives
- Service Contracts



- **Refrigeration**

- Walk in Cooler/Freezers
- Stand Alone Case Units
- Under Counter Units
- Ice Machines
- Evaporator Efficiency
- EC Evaporator Fan Motors
- Motors

- **Food Prep**

- Exhaust Fans
- Hot Water
- Fryers
- Ovens
- Ranges
- Holding Cabinets

- **Electrical/Controls**

- Exterior Lights
- Signs
- Interior Lighting
- Service Contracts

Centralized Energy Management System

Targets the whole-building design:

- Reduced energy use by 20-30%
- Reduced maintenance and capital costs
- Reduced environmental impact
- Increased occupant comfort and health
- Increased employee productivity
- Local and remote alarming
- Remote access & control
- Power monitoring
 - Consumption forecasting



Bay City Restaurant

BAY C.C. TOTAL PROJECT SAVINGS

- Removed 89 HID Light Fixtures and Installed 58 LED Light Fixtures
- Replaced 9 Roof Top HVAC Units
- Replaced 10 Evaporator Fan Motors
- Retrofitted 11 Lighted Signs to LED

- Total Project Cost \$284,550.00
- Utility rebates \$23,996.00
- Yearly energy savings \$46,481.00.
- Monthly energy savings \$3,874.00
- Monthly Michigan Saves Financing Payment \$2,683.00
- This project is **cash positive** by **\$1,191.00 a month.**



DTE Energy[®]
Know Your Own Power[®]

2016

DTE Energy Efficiency Program for Business



DTE Energy[®]
Know Your Own Power[®]

Adam Constantino

Outreach Manager



Safety First

Exits

Restrooms

Other site features



Agenda

- Program Overview
- Commercial Kitchen Opportunities
- Special Offers
- Capuchin Soup Kitchen Energy Efficiency Makeover



DTE Energy[®]
Know Your Own Power[®]

Program Overview



Three types of program incentives

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.



DTE Energy[®]
Know Your Own Power[®]

Commercial Kitchen Opportunities

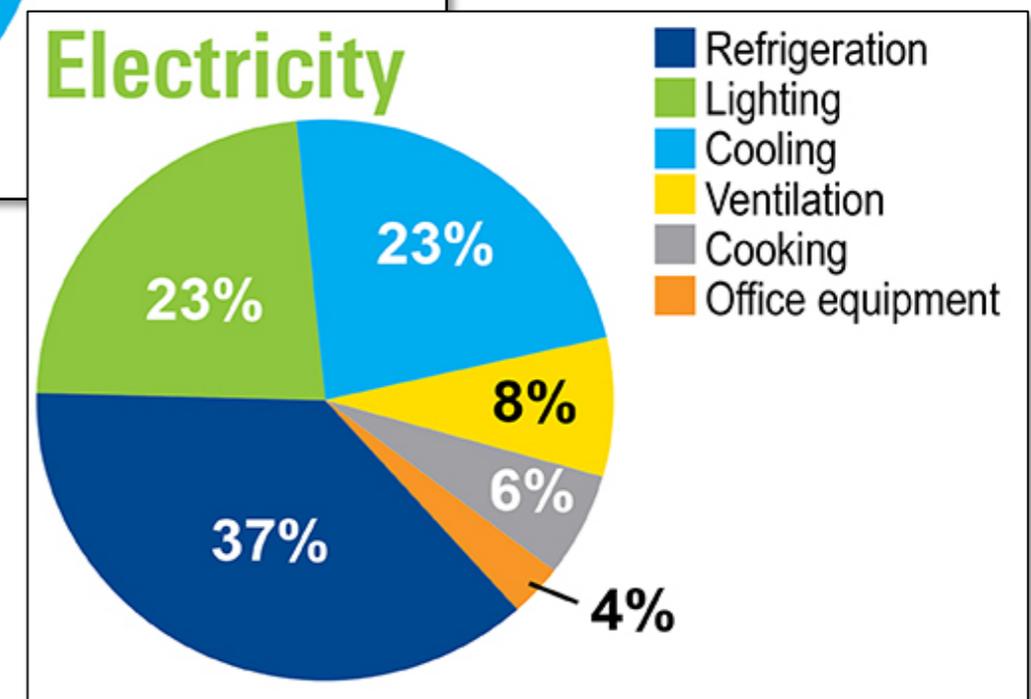
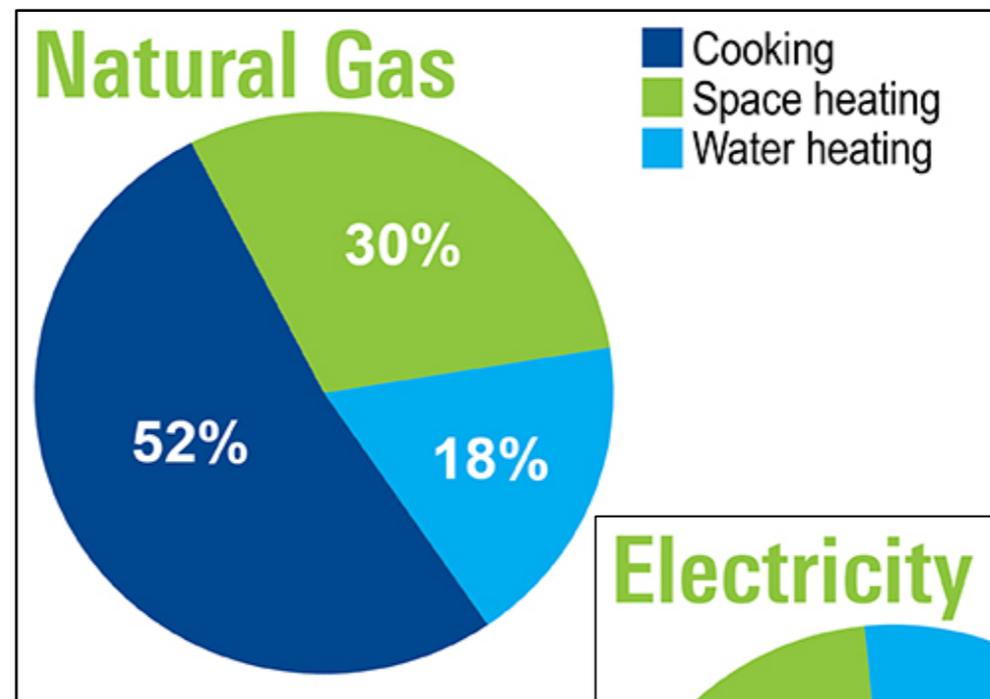


About Restaurant Energy Use

The bulk of energy demand in restaurant operations comes from the kitchen: cooking and refrigeration.

According to ENERGY STAR®, a typical restaurant spends \$3.99 per square foot a year on energy.

Here is a look at typical restaurant energy usage.*



*Usages are based on industry averages reported by U.S. Energy Information Administration.

Savings Possibilities

Electric Measures	Savings
Interior LED recessed lights/lamps	Up to 75%†
Ice machines	15% to 20%*
Refrigerators/freezers	Up to 35%*
Holding Cabinets	65%*

Natural Gas Measures	Savings
Steam cookers	Up to 50%*
Convection ovens	30% to 40%*
Fryers	30%*
Griddles	15%*

† U.S. DOE *ENERGY STAR®



Refrigerators and Freezers

Equipment Type	Size	Incentive
Refrigerators	< 15 cu ft	\$75.00
	15 – 30 cu ft	\$100.00
	31 – 50 cu ft	\$150.00
	> 50 cu ft	\$200.00
Equipment Type	Size	Incentive
Freezers	< 15 cu ft	\$75.00
	15 – 30 cu ft	\$100.00
	31 – 50 cu ft	\$150.00
	> 50 cu ft	\$200.00





Gas Fryers

Equipment Type	Incentive
ENERGY STAR [®] Fryers	\$500.00
Large Vat Fryer	\$600.00
ENERGY STAR [®] Griddles	\$400.00





Holding Cabinets

Equipment Type	Size	Incentive
Hot Holding Cabinets	Half Size	\$300.00
	Three Quarter Size	\$400.00
	Full Size	\$600.00





Ovens

Equipment Type	Incentive
ENERGY STAR [®] Convection Ovens	\$500.00
Combination Ovens	\$1,800.00
Rack Oven Single	\$800.00
Rack Oven Double	\$1,600.00





DTE Energy[®]
Know Your Own Power[®]

Special Offers



Michigan-Made bonus

- **15% bonus** for certain installed equipment that is 50% manufactured and/or assembled in Michigan (excluding packaging).
 - Some Prescriptive measures are not eligible.
 - Custom projects are not eligible.
 - Look for the check box on the Application next to qualified measures.

The Michigan-Made affidavit can be downloaded at:

dtetradeally.com

ENERGY EFFICIENCY PROGRAM FOR BUSINESS

 **DTE Energy**
Know Your Own Power®

FACT SHEET **2016 Michigan-Made Incentive Bonus**

Install products manufactured/assembled in the state and receive 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 2016, 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 specification 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 2016 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.
- The interactive PDF Application will calculate the *Michigan-Made* bonus automatically.
- Complete your project and submit your Final Application by Nov. 30, 2016. (Applications submitted after Nov. 30, 2016, may be cancelled.)



PURE MICHIGAN
Business Connect

Contact Us

phone: **866.796.0512** (press option 3) web: dteenergy.com/savenow
e-mail: saveenergy@dteenergy.com fax: **877.607.0744**

*Funds will be awarded on a first-come, first-served basis; program based on availability of funding and may end at any time; certain other conditions apply; contact our office for details

Effective: 10/1/2015



Multi-Measure bonus

- **20% bonus** on multiple categories submitted on the same Application – when no single category is more than 75% of the Application.
 - Our Catalog highlights measures (**MM**) that appear in both electric and gas that may qualify.

ENERGY EFFICIENCY PROGRAM FOR BUSINESS

FACT SHEET 2016 Multi-Measure Incentive Bonus

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

DTE Energy's *Multi-Measure* bonus is designed to promote the installation of energy-efficient 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:

<p>ELECTRIC</p> <ul style="list-style-type: none"> <input type="checkbox"/> Lighting <input type="checkbox"/> HVAC <input type="checkbox"/> Food Service/refrigeration <input type="checkbox"/> Process Electric <input type="checkbox"/> Miscellaneous 	<p>GAS</p> <ul style="list-style-type: none"> <input type="checkbox"/> Hot Water & Laundry <input type="checkbox"/> HVAC <input type="checkbox"/> Food Service <input type="checkbox"/> Process Gas <input type="checkbox"/> Boiler/furnace tune up <input type="checkbox"/> Insulation
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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 2016 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, 2016. (Applications submitted after Nov. 30, 2016, will be cancelled.)

Project Example

1. A customer enters measures under one category, such as lighting (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 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

Contact Us

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e-mail: saveenergy@dteenergy.com fax: **877.607.0744**

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Effective: 10/1/2015

This Fact Sheet can be downloaded at: dtetradeally.com



Financing from Michigan Saves

- **0% financing** on up to **\$50,000** for up to **36 months**
- **2.99% financing** on up to **\$150,000** for up to **60 months**
- **1.99% financing** on up to **\$150,000** for up to **60 months** for municipalities and K-12 schools

ENERGY EFFICIENCY PROGRAM FOR BUSINESS



FACT SHEET 2016 Michigan Saves Offer

Get special financing when you apply for DTE Energy incentives.

DTE Energy – in partnership with Michigan Saves – is offering special financing to commercial electric and natural gas customers for prescriptive and custom projects. Qualifying energy efficiency projects may be eligible for:

- **0% financing** on up to **\$50,000** for up to **36 months**
- **2.99% financing** on up to **\$150,000** for up to **60 months**
- **1.99% financing** on up to **\$150,000** for up to **60 months** for municipalities and K-12 schools.

How to apply

1. Download the latest version of the DTE Energy Efficiency Program for Business application and submit it as your reservation application.
2. Find an authorized **Michigan Saves** contractor to help you apply for **Michigan Saves** financing. To find a list of authorized contractors, visit michigansaves.org.
3. Once **Michigan Saves** approves financing, a confirmation email will be sent to the customer, contractor and DTE. Once DTE receives your **Michigan Saves** financing confirmation, an updated reservation letter will then be distributed. Please do not begin your project until you have received a reservation letter. You then have 90 days — or until Nov. 30, 2016, whichever is first — to complete the project.
4. A final application must be submitted to DTE within 60 days of completion of the project.

Important note

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 on your application.



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 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, with Michigan Saves financing, projects can be cash flow positive from day one.**

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

Contact Us

phone: **866.796.0512** (press option 3)

web: dteenergy.com/savenow

e-mail: saveenergy@dteenergy.com

fax: **313.664.1950**

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Effective: 11/1/2015

This Worksheet can be downloaded at: dtetradeally.com



Capuchin Soup Kitchen Energy Efficiency Makeover

Selection of Capuchin Soup Kitchen

- Energy Audits performed at several DTE Energy customer locations by DNV GL
- DTE Energy Customer (Electric and Gas)
- Food Service equipment focus
- Hours of Operation
- Overall condition/age of equipment
- Community impact





Electric Measures Overview

- **Category: Lighting**
 - Interior
 - Exterior



Electric Measures Overview

Location	Qty	Existing Equipment	New Equipment
Interior	162	84w Troffer Fixtures	CREE ZR24-35 W LED Fixtures
Interior	10	Light Switches	Occupancy Sensor OSS10_INW Wall Mount
Interior	10	Fluorescent Exit Signs	LED Exit Sign E-XPL Series -0.8W
Exterior	11	T5 Wall Packs	LED XSP Series Wall Mount 42W/25W
Exterior	5	(4) Pole Mounted & (1) Building Mounted 400w HID Fixtures	CREE LED OSQ Series 112W/168W
Interior	6	Fluorescent Refrigerated Lighting Fixtures	CREE LED 4' WS4 50W-64W
Interior	4	1 x 4 Troffer Fixtures	CREE ZR1-44W 1' x 4' LED Troffer
Interior	12	Restroom Wrap Fixtures	UR2-48 and UR3-48 4' 2L 44W LED
Interior	5	8' Tandem Fluorescent Fixtures	UR2-48 and UR3-28 4' 2L 44W LED



Electric Measures Overview

- **Category: HVAC**
- Programmable Thermostat



Electric Measures Overview

- **Category: Food Service**

- Tilting Skillet
- Holding, Heated, Refrigerator Cabinets
- Cook/Hold Oven
- Dishwasher – Conveyor Type
- Strip Curtains
- Door Gaskets
- EC Evaporator Fan Motors

- Exhaust Fan Hood Replacement
- Coffee Urn
- Cold, Hot and Serving Counters



Natural Gas Measures

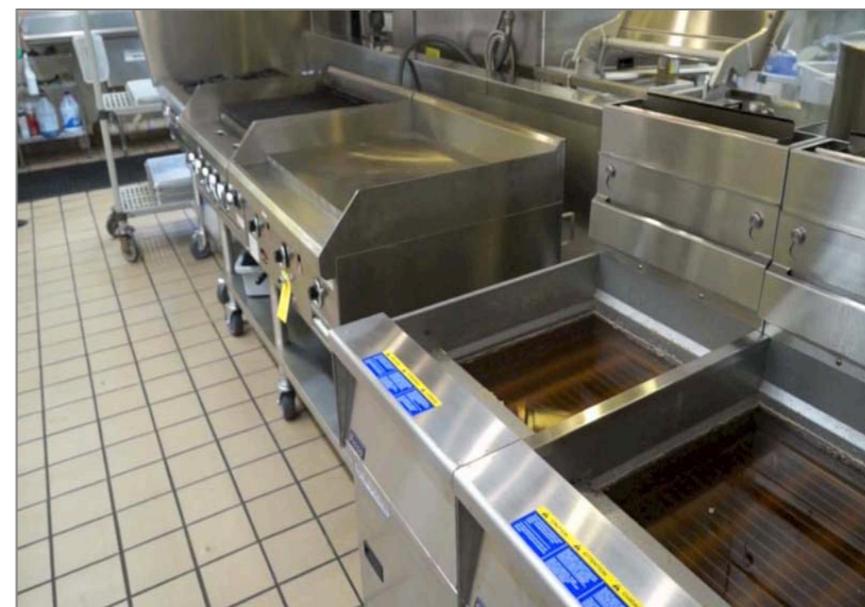
- **Category: HVAC**
 - Programmable thermostat
 - Domestic hot water





Natural Gas Measures

- **Category: Food Service**
 - Convection oven
 - Combi-oven
 - Fryer
 - Stationary kettle
 - Countertop hotplate and griddle
 - Charbroiler



Savings

	Savings	Savings Percentage
Total Savings – Electric kWh/year	41,353	19%
Total Savings – Mcf/year	314.1	19%



Demonstration Center

- **Demonstration Center**
 - Tours available for DTE customers interested in food service technology upgrades
 - Please contact the DTE Energy Efficiency Program for Business





In Summary

- Program Overview
- Commercial Kitchen Opportunities
- Special Offers
- Capuchin Soup Kitchen Energy Efficiency Makeover



If you have questions, please contact our office

Email: saveenergy@dteenergy.com

Phone: **866.796.0512** (press option 3)

Fax: **313.664.1950**

Website: dteenergy.com/savenow

Website: dtetradeally.com



: www.linkedin.com/in/dteenergysaveenergy