



# Suppliers Partnership for the Environment (SP)

## Energy and Water Work Group Breakfast Meeting

*Chrysler Headquarters*  
Auburn Hills, MI

May 3, 2011



# Antitrust Guidelines

1. SP meetings and discussions are, in general, to be industry-promotion, industry-issue, industry-development or technically oriented. Subject to the above and the advice of SP legal counsel, discussions may generally cover industry product developments on a generic basis, advancing “technical know-how,” improving productivity and efficiency, historical market data on a general (i.e. non-specific company) basis, and regulatory or legal industry-wide issues, policies of federal and state law enforcement bodies, and federal or state laws or pending legislation important to industry.
2. In view of antitrust considerations (both civil and criminal) and to avoid any possible restraints of competition, the following legally sensitive subjects as to a given company or its competitors must be avoided during any discussion between competitors:
  - (a) Future marketing plans of individual competitors should not be discussed between competitors;
  - (b) Any complaints or business plans relating to specific customers, specific suppliers, specific geographic markets or specific products, should not be discussed between competitors; agreements between competitors to allocate markets (customers or products) are illegal under antitrust laws; agreements between competitors to refuse to deal with a supplier or a customer are illegal under antitrust laws;
  - (c) Purchasing plans or bidding plans should not be discussed (except privately between two parties with a vertical commercial relationship such as supplier and customer);
  - (d) Current and future price information and pricing plans, bidding plans, refund or rebate plans, discount plans, credit plans, specific product costs, profit margin information and terms of sale should not be discussed between competitors. All of the above are elements of competition; and
  - (e) Any question regarding the legality of a discussion topic or business practice should be brought to the attention of SP legal counsel or a company’s individual legal counsel for legal advice.

# CTC “Zero Waste to Landfill” Program

*Submitted by John Troy, Mgr - CTC Environmental Compliance Programs*

The Chrysler Technology Center (CTC) achieved “**Zero Waste to Landfill**” status in 2010 for both non-regulated and regulated waste streams. This achievement is an additional benefit of the initiative to apply World Class Manufacturing (WCM) principles and practices within a service organization. The CTC Facilities & General Services Organization’s World Class Services (WCS) - Environment Pillar Team took on the challenge to eliminate CTC’s wastes from landfills and demonstrate its continued commitment toward environmental stewardship.

Every waste stream generated at CTC was evaluated to determine if one of the three R’s (Reduce, Reuse, Recycle) could be applied before turning to alternate control methods. **Non-regulated** wastes include paper, cardboard, pallets, tires, scrap metal & wood, plastic bottles and general refuse. **Regulated** waste streams include fuels, oils, paint, solvents, sealers, adhesives, wet/dry cell batteries, process sludges and numerous other chemical wastes that are controlled under government requirements.

## Non-regulated + Regulated Waste Streams x the 3 R’s = ZERO Waste to Landfill

CTC tenants start the process with a first sort of their wastes within their suites and labs. Sorted recyclables are collected and sent to various recycling programs for reprocessing. The remaining comingled **non-regulated** waste streams are sent off-site for secondary sorting in order to reclaim any additional recyclables and reduce the final volume for incineration.

**Regulated** waste streams are also segregated and sorted for recycling or sent to fuel blending programs for energy recovery. The remaining balance of both **non-regulated** and **regulated** waste streams go to incineration for energy generation avoiding unnecessary landfilling.

This program demonstrates the commitment of the Facilities & General Services organization to manage its operations in an environmentally responsible manner for the betterment of the company and the community.

## Reduce, Reuse, Recycle



**“Zero Waste to Landfill”**  
**All CTC generated waste streams**  
(Trash, Non-regulated, Regulated)  
**excluding construction debris/soils.**



FACILITIES AND GENERAL SERVICES



# Agenda

- Welcome and Introduction
  - Mark Werthman, Chrysler Group LLC**
  - Rahul Naik, ARCADIS**
- Overview of SP – **Adam Westerdale, General Oil Company**
- Managing the Manufacturing Energy Team: Strategies in Energy Program Management – **Bill Allemon, ARCADIS**
- Local Utility Energy Efficiency Programs/Resources for Manufacturers
  - Gerald Polk, DTE Energy**
  - David MacDonald, Consumers Energy**
- Discussion of Opportunities for SP and Closing Comments



# What is SP?

## Vision:

Association of automotive OEMS and their suppliers working in partnership with the EPA to find creative ways to improve the environment while providing economic value to the members.

## Mission:

A forum for large, medium and small service and product vendors and vehicle manufacturers to develop and share tools, information, knowledge, good practices and technical support to ensure that the suppliers' products and their processes provide environmental improvement and cost savings to SP participants.



# 2011 SP Member Companies



# What is EPA's Role in SP?

- SP is in partnership with the U.S. EPA
- EPA provides topics for special projects, information, tools and resources

“The Suppliers Partnership for the Environment establishes a forum where the Environmental Protection Agency and the automobile supply industry can work together to achieve common goals of environmental performance. Through pollution prevention, smarter decisions can be implemented throughout the automobile manufacturing process that will benefit both the environment and a company's bottom line. We welcome this effort.”

Stephen L. Johnson,

Former Administrator, U.S. EPA



# Value of SP Membership

- Provides a common auto sector approach to greening the supply chain.
- Provides a forum for companies to work together to share “good practices” through work groups to address specific issues.
- Supports four member led workgroups that address issues identified by the membership.
- Quarterly meetings of SP provide opportunities for members to network, to learn about issues and activities impacting the environment and the automobile supply chain and identify areas for action by SP.
- SP is constantly working to identify new and more environmentally efficient and creative ways to provide enhance the viability and competitiveness of the automobile industry through the supply chain.



# SP Work Groups

- **Chemical Issues:** Creating Materials Health & Environmental Assessment Strategy (MAS) to develop a common screening process for OEMs and their suppliers. Addressing global chemical regulations that are impacting product/material engineering and manufacturing.
- **Energy and Water:** Addressing ways for SP companies to reduce their energy and water consumption and optimize their efficiency, reducing their carbon footprint by utilizing more efficient technologies, practices and services. Supporting an SP Energy and Water Utility Managers Forum to address energy and water issues impacting the automobile supply chain.
- **Materials Efficiency:** Finding creative relationships and technologies that will reduce packaging by-product environmental impacts and creating multi-tiered environmental approaches to managing packaging by -products.
- **Technology and Networking:** Developing a SP Technology Roadmap to connect suppliers that have unique, environmentally responsible technologies with OEMs and Tier 1 Suppliers. Supporting a forum for Tier 2 and Tier 3 suppliers to the industry so that their issues and ideas can be addressed by OEMs and Tier 1 supplier companies.



# SP Energy/Water Forum Concept

## **Vision:**

Provide a forum for energy and water utility managers from the automobile supply chain to:

Discuss and collaborate on regulatory and policy issues impacting the automobile supply chain relating to energy and water; and, collect, disseminate, assess and/or educate on available tools and resources to assist companies in improving the energy and water efficiency of the automobile industry.

## **Mission:**

Sponsor and support ongoing collection and dissemination of information, discussions and action between automobile OEMs, their suppliers, the utility industry and government entities, on energy and water issues affecting the operations of companies in the automobile supply chain.

# Managing the Manufacturing Energy Team

Strategies in Energy Program Management



**Bill Allemon, VP Energy Management Services**  
[william.allemon@arcadis-us.com](mailto:william.allemon@arcadis-us.com)

Imagine the result

# Agenda

- ARCADIS Overview
- Energy Management Basics
- Corporate Team Structures
- Agency Programs
- Utility Rebate Programs
- SP for Environment
- Q&A

# Company Overview

ARCADIS delivers technical excellence and client satisfaction in consulting, design, engineering, urban planning, architectural and project management services.

We focus our services on three main business lines, each with their own strengths and strategies.

**Infrastructure**

**Environment**

**Water**

**Buildings**



# ARCADIS US and International Services Overview

- Leading International Engineering, Planning and Consulting Firm
- Our Services: Infrastructure, Environment, Buildings, Water
- Our Markets: United States, Europe, Latin America, Asia
- Global Presence: 15,000 employees worldwide
- National Presence: 6,000 employees in 200 offices
- Financially Stable: \$2.8 billion revenue

# Energy Management Basics



# Why Energy Efficiency?

## Benefits

- Cost Savings
- Reduced GHG Emissions
- Offset Increasing Rates
- Manage a Large, Uncontrolled Expense
- Directly Impacts the Bottom Line
- Improve Infrastructure Reliability
- Efficient Use of Renewable Energy
- Improve Corporate Marketability
- Community Outreach / Good Corporate Citizen

# Common Pitfalls

## Focusing Solely on Audits

- Only 35% of findings are typically implemented

## Focusing on Quick Payback Projects

- Not a sustainable strategy

## No Plan, No Action

- Disbelief that sustainable, effective change is possible

# Key Program Elements

## Management Practices

- Management Commitment
- Energy Team
- Goal Setting
- Track & Analyze Data
- Benchmarking

## Actions

- Projects
- Best Practices Replication
- Low-Cost / No-Cost Actions
- Pilot Projects
- Assessments

## Communication

- Performance Reporting
- Employee Awareness
- Reward & Recognition
- Community Outreach

# Building the Energy Management Team



# Energy Management Business Models

Self-Perform

Corp Lead  
w/Outsourced  
Team

Turn-Key  
Outsource

Hybrid

# Business Model: Self-Performing

## Benefits

- Aligned Priorities
- Full Integration with Corporate Culture
- Leverage Corporate Knowledge & Experience

## Challenges

- High Overhead Costs
- May Limit Creativity

## Trend

- Declining use due to headcount restrictions and other resource constraints

# Business Model: Corporate Leader with Outsourced Team

## Benefits

- Dedicated resource maintains vision and assists to overcome corporate inertia
- Opportunity to integrate team
- Lower corporate headcount

## Challenges

- Cost justification
- Full integration risks dampened creativity

## Trend

- A common model that enables funding from various expense sources

# Business Model: Turn-Key Outsourcing

## Benefits

- Eliminates corporate headcount
- Moves fixed costs to variable
- Long term contract with defined metrics enables consistency and performance monitoring

## Challenges

- Cost justification
- Alignment with corporate culture

## Trend

- Common model in commercial buildings & real estate sector
- Rarely seen in industry due to technical subject matter & production risks

# Business Model: Hybrid

Selecting best of each to meet organization-specific needs. Use of consultants to provide guidance.

## Benefits

- Tailored to organization
- Use of services as needed
- Extension of plant engineering organization
- Right-sizing of onsite staff

## Challenges

- May disconnect organization from peers, making benchmarking difficult

## Trend

- New model gaining in popularity since “Great Recession” as production increases, but headcount does not



# Resources & Tools

# Energy Management Process



# Agency Programs

## Benefits

- Typically no-cost or cost-sharing opportunity
- Access to grants and incentives

## Challenges

- Programs vary between States, Municipalities, Utilities
- Federal programs may vary yearly or with Administrations

## Trend

- Increased awareness and use of Gov Agency programs due to Recovery Act incentives

# EPA EnergyStar



## Overview

- Taxpayer funded program to improve air quality through superior energy efficiency
- Supports all sectors of energy use and generation

## Benefits:

- Industry Focused Best Practices Sharing
- Monthly Partner Webcasts
- Focus Groups
- Commercial Building Label
- Benchmarking Tools
- Energy Star Partner Award
- Communication Templates
- Supports Implementation of Existing & New Standards

# U.S. Dept of Energy



## Buildings Technology Program

- Improving Building Components
- Energy Modeling Tools
- Building Energy Codes
- Energy Alliances by Sector
  - Retail, Commercial Real Estate, Hospitals

## Industrial Technologies Program

- Process Technology Improvements
- Save Energy Now Program

# Utility Rebate Programs

## Benefits

- Offset capital budget to improve project ROI
- Recover fees collected by utilities
- Drive innovation and management awareness

## Challenges

- Programs vary between utilities/states
- Some locations lack any program

## Trend

- The number of regions with programs continue to increase
- The generosity of programs typically decline after first initial years

Imagine the result





# Local Utility Energy Efficiency Programs/Resources for Manufacturers

- Gerald Polk, DTE Energy
- David MacDonald, Consumers Energy



Your Energy Savings



**SP Energy and Water Work Group Breakfast Meeting**

# **Commercial & Industrial Energy Optimization Programs**

May 3, 2011

[dteenergy.com/saveenergy](http://dteenergy.com/saveenergy)

# Agenda

- Introduction
- DTE Energy Your Energy Savings Program Overview
- 2011 Program Changes
- Making the Program Work For You
- Q & A
- Closing



# DTE Energy Your Energy Savings Program Overview

# Key Energy Optimization (EO) Elements of Michigan Legislation

## PA 295

- Michigan Public Act 295 (PA 295)
- Passed October 2008
- Requires investor owned utilities, municipalities, and rural electric cooperatives to institute energy optimization programs

## DTE Energy Participation

- Lower customer bills
- Reduce energy demand throughout Michigan
- Help protect the environment

## Customer Benefits

- Helps motivate as well as offset the costs of investment when upgrading to or replacing with energy efficient products
- Provides long term energy savings
- Lowers electric/gas bills compared to less efficient equipment
- Reduces your carbon footprint

# Incentive Types

- **Prescriptive Incentives**
  - Predetermined measures and incentives for industrial and commercial customers for the installation of specific energy efficient equipment for numerous applications
  - Incentives typically average 20% to 50% of the incremental cost of purchasing qualifying technologies
- **Custom Incentives**
  - Custom incentives are determined on a case-by-case basis and are paid per unit energy saved (\$0.08/kWh and/or \$4/MCF)
- **New Construction & Renovation**
  - Incentives are available for up to \$3,000 for whole building modeling
  - Additional incentives are determined based on modeling results showing that energy efficiency exceeds ASHRAE 90.1-2004 standards by 10%

# Program Caps and Limitations

## Incentive Funds are Limited Funds are Reserved Based on Availability

Yearly Program Caps	Gas	Electric
Per Facility	\$25,000	\$150,000
Per Customer	\$100,000	\$500,000

Customer sites with self-directed EO programs will not be eligible to participate in DTE Energy's EO incentive program.

# Prescriptive Measure Examples

- **Lighting**
  - T12 to T8 retrofits
  - High bay lighting retrofits with occupancy sensors
- **Motors/ Variable Frequency Drives**
  - NEMA premium efficiency motors
- **HVAC equipment**
  - High efficiency air conditioning systems
- **Refrigeration and other misc. equipment**
  - Anti-sweat heaters
  - Vending equipment controllers
- **Gas Measures**
  - Programmable Thermostats
  - Boiler tune-ups
  - Steam trap repair/replacement



VFDs for HVAC fans and pumps

# Eligible and Ineligible Custom Measure Examples

**Capital investment** measures that **increase energy efficiency** and that are **NOT** eligible for a Prescriptive Incentive may qualify as a Custom Measure.

## **Eligible Custom Measures include:**

- Process improvements
- New technology applications
- Air compressor controls and end use reduction improvements
- Refrigeration or chiller plant optimization
- Cooling tower optimization
- Insulation improvements
- Heat recovery projects

## **Ineligible Custom Measures include:**

- Fuel switching
- Renewable generation
- On-site electricity generation
- Peak shifting
- Simple control modifications or changes in operational and/or maintenance practices not involving capital costs

# Custom Incentives

- Incentives based on annual energy savings on a per kWh or MCF basis
- This program addresses almost any qualifying energy efficiency measure excluding those eligible for prescriptive incentives
- Custom Incentive Amounts\*
  - **\$0.08/kWh**
  - **\$4/MCF**
- **1.0** year minimum and **8.0** year maximum project simple payback

$$\text{Payback} = \frac{\text{Project Cost}}{\text{Annual Energy Bill Savings}}$$

- Capped at 50% of project cost

\*Incentive amounts are subject to change. See current application for the most up-to-date levels.

## Program Overview:

- Incentives are available for new construction or major renovation projects within DTE's service territory
- Contact the Your Energy Savings team and apply when you begin your design (the sooner the better)
- Energy savings and available incentives are based on tiered levels of improvement in performance over the standard building code. The higher the energy savings, the higher the incentives
- A whole building model is required to determine savings
- Projects must be completed within 18 months of receiving a Funds Reservation Letter

# 2010 Program Results

- Applications paid: over 2700
- Total number of measures: over 6300
- Customers involved with program: over 1900
- Contractors involved with program: over 500
- Total incentives paid for gas and electric projects: over \$10M
- Electric savings of 128,000 MWH
- Gas savings of 295,000 MCF

\*Based on data as of January 2011

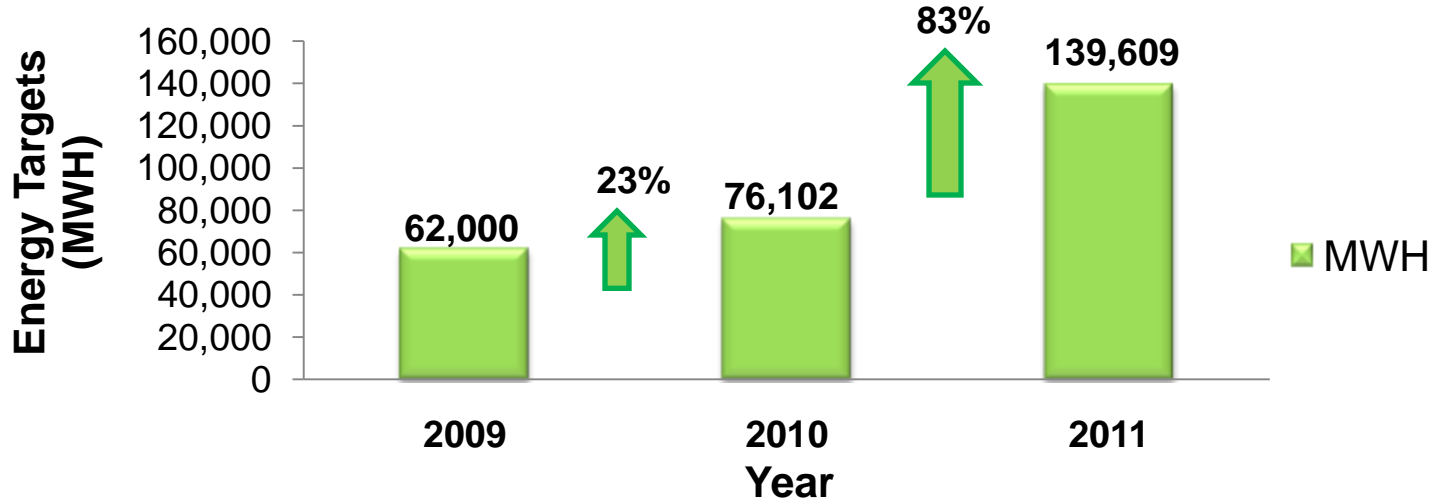


Your Energy Savings

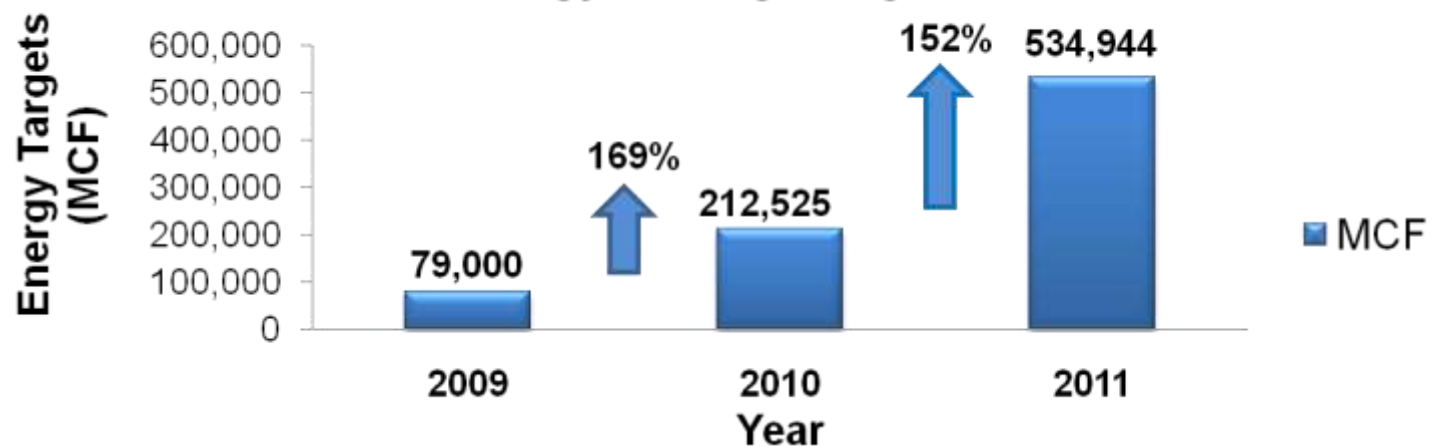
# 2011 Program Changes

# Energy Optimization Targets

## Electric Energy Savings Targets



## Gas Energy Savings Targets



# 2011 Program Changes

- Based on input from customers, trade allies, and participation levels, the program has been adjusted to improve the overall program experience
- Some of these changes include:
  - Simplification of Policies & Procedures Manual: Application has been removed to reduce repetitiveness
  - Decimal values are now allowed for many measures under 1,000 Sq. Ft.(lighting, roof insulation, lighting controls, EMS)
  - Reservation Application is required for all de-lamping projects

# 2011 Measure Changes

- New Measures

- ECM Motors
- Evaporative Fan Motor Controls
- LED Refrigerated Case Lighting
- U-Bulbs
- LW HP T8 replacing T12
- Gas Water Heaters > 75 gal > 75,000 Btu/h



- Revised Incentives

- Boiler Tune-ups (3 levels)
- HP T8 replacing T12
- Fluorescent Fixtures replacing Interior HIDs

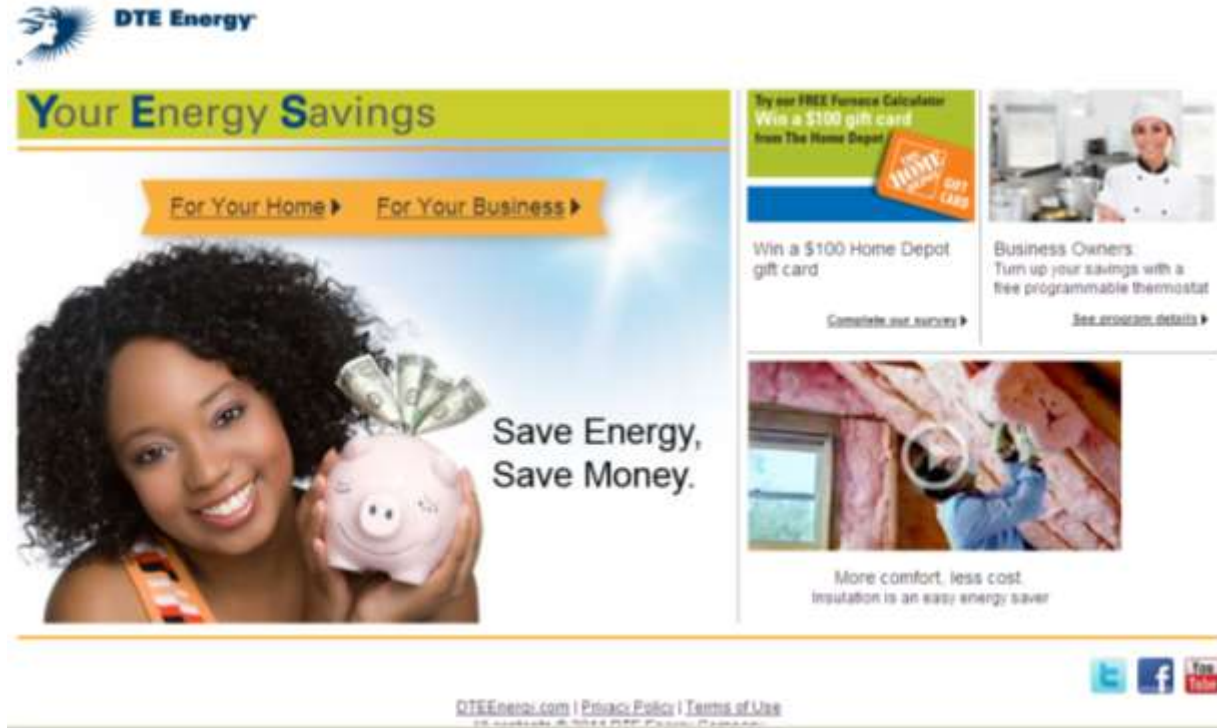


Your Energy Savings

# Making the Program Work for You

# Finding Information on the Website

To obtain an application, visit: [www.dteenergy.com/saveenergy](http://www.dteenergy.com/saveenergy)



**DTE Energy**  
Your Energy Savings

For Your Home ▶ For Your Business ▶

Save Energy,  
Save Money.

Try our FREE Ferris Calculator  
Win a \$100 gift card  
from The Home Depot

Win a \$100 Home Depot  
gift card

Business Owners:  
Turn up your savings with a  
free programmable thermostat

More comfort, less cost.  
Insulation is an easy energy saver

DTEEnergy.com | Privacy Policy | Terms of Use

## Then Select:

1. “For Your Business”
2. “Rebates and Offers”
3. “Prescriptive” or “Custom” Incentives depending on your project type

# Downloading an Application



**DTE Energy**

Powered by Google Search

Visit Other DTE Energy Web Sites

DTE Energy Company

Residential Customers | **Business Customers** | DTE Energy Company

My Account | Billing / Payment | **Save Energy** | Start / Stop Service | Problems / Safety | Products / Programs | Large Businesses

Sign In

▼ Rebates and Offers

- Free Thermostat
- [Prescriptive Incentives](#)
- Custom Incentives
- Construction & Remodeling
- ENERGY STAR Lighting
- ENERGY STAR Products
- Multifamily Program

► Energy Tips

- Energy Efficiency Directory
- Energy Efficiency Webinars
- Events
- Trade Allies
- Case Studies/Fact Sheets
- Self Directed Option

## 2011 Prescriptive Incentives for Your Business

Looking to save money and energy at your facility? The Your Energy Savings<sup>SM</sup> Program offers several opportunities.

You can take advantage of incentives for energy-efficient upgrades and improvements tailored to reduce energy used in your business, resulting positively to your bottom line.



Incentives are available for an array of energy-saving technologies, both electric and gas. Choose your project menu includes incentives for lighting, heating, ventilation and air conditioning, and more. If your project doesn't fall under this prescriptive menu, you may still be eligible for incentives in multifamily buildings or the [Multifamily Dwelling Program](#) in certain areas.

**CLICK TO DOWNLOAD  
EXCEL OR PDF VERSION  
OF APPLICATION**

**To participate:**

1. View the [list of available measure categories](#) and incentive details. See Step 3, below.
2. Verify your eligibility. See sections P.3 through P.5 in the [Your Energy Savings Policy and Procedure Manual\\*](#)
3. Submit your Incentive Application to reserve funding. (This is required for all De-lamping measures. It is highly recommended for the rest of the Prescriptive Incentive Program measures.) Download the incentive application here:
  - [Excel format](#)
  - [PDF format](#)

Review the [Guidelines for Completing the Your Energy Savings<sup>SM</sup> Program Application](#)

**2011 Rebate Program Status**

Paid 16% | Active 62%

**Electric Installations**

# Keeping Informed of Program Status



**Orange arrows- Paid:**  
Funds paid to date

**Blue arrows- Active:**  
Funds that have been paid to or reserved by our customers

# Program FAQ's

To participate:

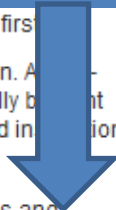
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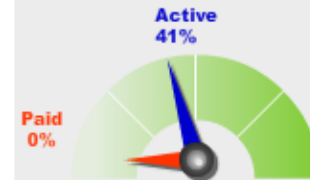
4. Install your equipment or systems within 90 days of receipt of funding.
5. Submit the required documentation of project completion within 30 days of project completion.
6. Submit your Final Application. Final Applications must be received by the end of the month of completion or by December 15, 2011 for the 2011 program year, whichever comes first.
7. DTE Energy's Your Energy Savings Staff will review your final project documentation. An on-site inspection may be required for verification purposes. Incentive payments will typically be made within 4 to 6 weeks from the time that all the documentation is received and the field installation is complete.

This Web page provides a general program overview only. For full program specifications and requirements, please see the Your Energy Savings [Policy and Procedures Manual\\*](#) and our [FAQs](#). The Policies and Procedures document outlines the rules and processes that govern the program. Applicants must follow the program rules as detailed in this document and the accompanying application. By signing the application agreement form, the customer agrees to all rules and requirements in place on the date of signature.

**CLICK THIS LINK  
TO ACCESS  
PROGRAM FAQ'S**



## 2011 Rebate Program Status



Electric Installations



Gas Installations

Available funds paid as of  
January 3, 2011

- Orange arrow shows funds paid to date
- Blue arrow shows funds that have been paid to or reserved by our customers

*Once 100% of the available funds have been paid or reserved, a waiting list will be initiated.*

# Additional Materials

- Collateral Materials Available:
  - Case Studies
  - Fact Sheets
  - Brochures
  - Guidelines for Completing Your Application
  - Policies and Procedures Manual
  - Measures Checklist





Your Energy Savings

# Questions?



# Thank You!

## Email

[YourEnergySavings@kema.com](mailto:YourEnergySavings@kema.com)

Or, contact any Your Energy Savings team member for personal assistance.

## Phone

1-866-796-0512

## Fax

1-877-607-0744

## Website

[www.dteenergy.com/saveenergy](http://www.dteenergy.com/saveenergy)



Your Energy Savings

# Appendix



# Requesting a Reservation Before the Custom Project Begins

For **CUSTOM PROJECTS**, the customer must complete and submit **ALL** of the following pages:

- ✓ **APPLICATION CHECKLIST**
- ✓ **CUSTOMER INFORMATION**
- ✓ **CONTRACTOR INFORMATION**
- ✓ **CUSTOM WORKSHEET** providing a brief project description
- ✓ **ITEMIZED QUOTE** providing the cost of each piece of custom equipment
- ✓ **MANUFACTURER'S EQUIPMENT SPECIFICATIONS** for each piece of custom equipment

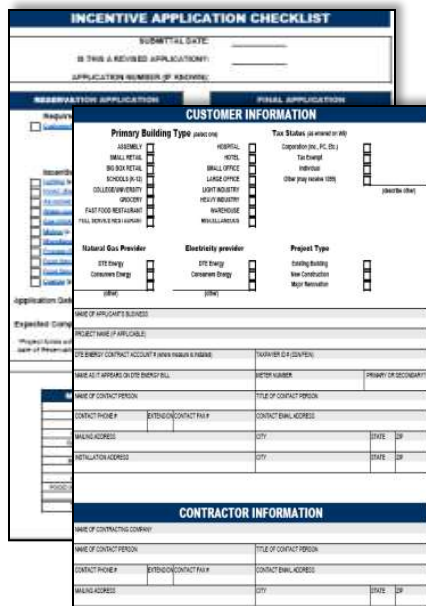
The collage displays several key forms:

- INCENTIVE APPLICATION CHECKLIST:** A checklist for determining eligibility for various incentives.
- CUSTOMER INFORMATION:** A form for providing details about the building type, primary building type, and utility provider.
- CONTRACTOR INFORMATION:** A form for providing details about the contractor, including name, address, and contact information.
- CUSTOM INCENTIVES WORKSHEET:** A worksheet for tracking incentives, categorized by Energy Savers, Energy Efficient, and Energy Efficient Plus.
- ENERGY SAVERS:** A form for providing details about the project, including the address and the type of equipment to be installed.
- QUOTE:** A detailed itemized quote for Green Lamps, showing the quantity, description, unit price, and total cost for various lamp models.
- GREEN LAMPS LAMP SPECIFICATIONS:** A table of specifications for the lamps, including model number, type, and color.
- GREEN LAMPS ELECTRONIC BALLAST SPECIFICATIONS:** A table of specifications for the ballasts, including model number, type, and color.

# Requesting an Incentive Payment After the Project Is Completed

For both **PRESCRIPTIVE** and **CUSTOM PROJECT** incentives, the customer must complete and submit **ALL** of the following pages:

- ✓ **APPLICATION CHECKLIST**
- ✓ **CUSTOMER INFORMATION**
- ✓ **CONTRACTOR INFORMATION**
- ✓ **CUSTOMER AGREEMENT**
- ✓ All applicable **PRESCRIPTIVE** and/or **CUSTOM WORKSHEETS**
- ✓ **ITEMIZED INVOICE(S)**
- ✓ **MANUFACTURER'S EQUIPMENT SPECIFICATIONS** for all equipment



**INCENTIVE APPLICATION CHECKLIST**

IS THIS A REQUIRED APPLICATION? \_\_\_\_\_

APPLICATION NUMBER (if known): \_\_\_\_\_

**CUSTOMER INFORMATION**

Primary Building Type:  ASSEMBLY,  HOTEL,  BUSINESS OFFICE,  COLLEGE/UNIVERSITY,  GROCERY,  FAST FOOD RESTAURANT,  FULL SERVICE RESTAURANT,  INDUSTRIAL,  MANUFACTURING,  RETAIL,  TAXI STATION (or other),  OTHER (please specify): \_\_\_\_\_

Natural Gas Provider:  DTE Energy,  Consumers Energy

Electricity provider:  DTE Energy,  Consumers Energy

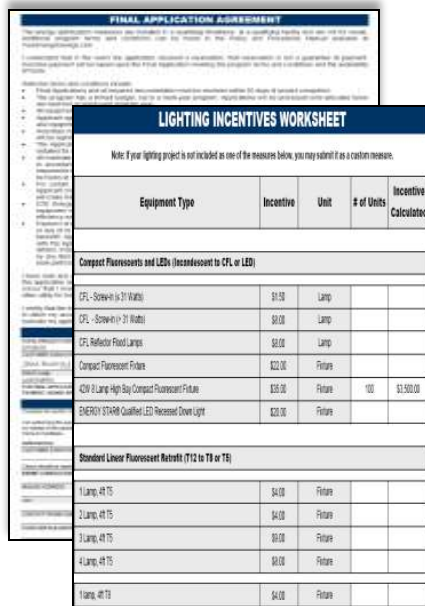
Project Type:  Existing Building,  New Construction,  Major Renovation

**CONTRACTOR INFORMATION**

Name of Contracting Company: \_\_\_\_\_ Title of Contract Person: \_\_\_\_\_

Contact Phone #: \_\_\_\_\_ E-MAIL (or CONTACT FAX #): \_\_\_\_\_ CONTACT E-MAIL ADDRESS: \_\_\_\_\_

Address: \_\_\_\_\_ CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_



**FINAL APPLICATION AGREEMENT**

**LIGHTING INCENTIVES WORKSHEET**

Note: If your lighting project is not included as one of the measures below, you may submit it as a custom measure.

Equipment Type	Incentive	Unit	# of Units	Incentive Calculated
<b>Compact Fluorescents and LEDs (Incentive to CFL or LED)</b>				
CFL - Screw-In (31 Watts)	\$1.50	Lamp		
CFL - Screw-In (37 Watts)	\$1.00	Lamp		
CFL Reflector Flood Lamps	\$1.00	Lamp		
Compact Fluorescent Fixtures	\$22.00	Fixture		
4'x4' 8-Lamp High Bay Compact Fluorescent Fixture	\$55.00	Fixture	100	\$1,550.00
ENERGY STAR® Qualified LED Recessed Down Light	\$20.00	Fixture		
<b>Standard Linear Fluorescent Retrofit (T12 to T8 or T5)</b>				
1-Lamp, 4'x15'	\$4.00	Fixture		
2-Lamp, 4'x15'	\$4.00	Fixture		
3-Lamp, 4'x15'	\$9.00	Fixture		
4-Lamp, 4'x15'	\$9.00	Fixture		
1-Lamp, 4'x7'	\$4.00	Fixture		



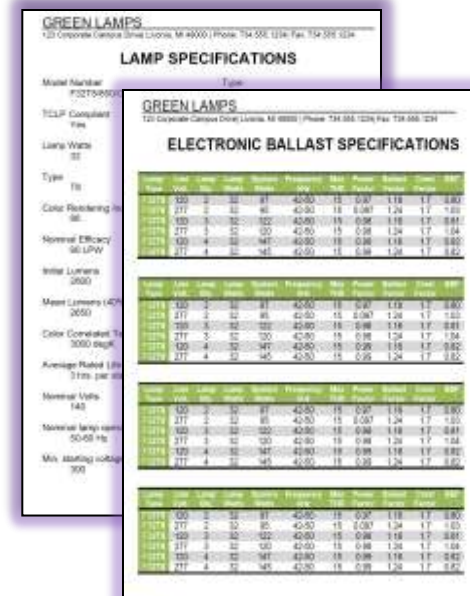
**ENERGY SAVERS QUOTE**

**CUSTOM INCENTIVE WORKSHEET**

Measure Description: \_\_\_\_\_

Measure Description	Quantity	Unit	Incentive	Total Incentive
Measure 1: _____	_____	_____	_____	_____
Measure 2: _____	_____	_____	_____	_____
Measure 3: _____	_____	_____	_____	_____
Measure 4: _____	_____	_____	_____	_____

Total Custom Incentives: **\$17,888.00**



**GREEN LAMPS LAMP SPECIFICATIONS**

**ELECTRONIC BALLAST SPECIFICATIONS**

Model Number	Power Factor	THD (%)	Efficiency (%)	Power Factor	THD (%)	Efficiency (%)
132	0.99	18	42.50	0.97	1.18	1.7
217	0.99	18	42.50	0.97	1.24	1.7
320	0.99	18	42.50	0.96	1.18	1.7
321	0.99	18	42.50	0.96	1.24	1.7
322	0.99	18	42.50	0.96	1.18	1.7
323	0.99	18	42.50	0.96	1.24	1.7
324	0.99	18	42.50	0.96	1.18	1.7
325	0.99	18	42.50	0.96	1.24	1.7

# Energy Efficiency Programs and Manufacturing

Supplier Partnership for the Environment  
May 3, 2011



Consumers Energy Saving Solutions  
*Everyone has the power to save.*

# Today's topics

- Michigan energy optimization programs
- Benefits to Businesses
  - Sustainability
  - Energy Savings
  - Cost Savings
- Energy savings opportunities for business

# Energy Efficiency Programs

- Programs were mandated by PA 295 enacted in October 2008
- Utilities are required to reduce energy consumption through energy efficiency measures
- All utilities in the state are required to participate
- Consumers Energy is required to show energy savings of electric use by 1% and natural gas use by .75% in 2012

# Energy Efficiency Programs

- Incentive programs are available for all customers
  - Commercial
  - Industrial
  - Residential
- Consumers Energy optimization programs offer incentives for upgrading, replacing or maintaining equipment
- Since 2009 Consumers Energy has given out over \$20 million in incentives to C&I customers



# SUSTAINABILITY



Consumers Energy Saving Solutions  
*Everyone has the power to save.*

# What is Sustainability?

“Sustainability is the policies and strategies that meet society’s present needs without compromising the ability of future generations to meet their own needs.”

U.S. Environmental Protection Agency - 2011

- We all want to do the right thing....

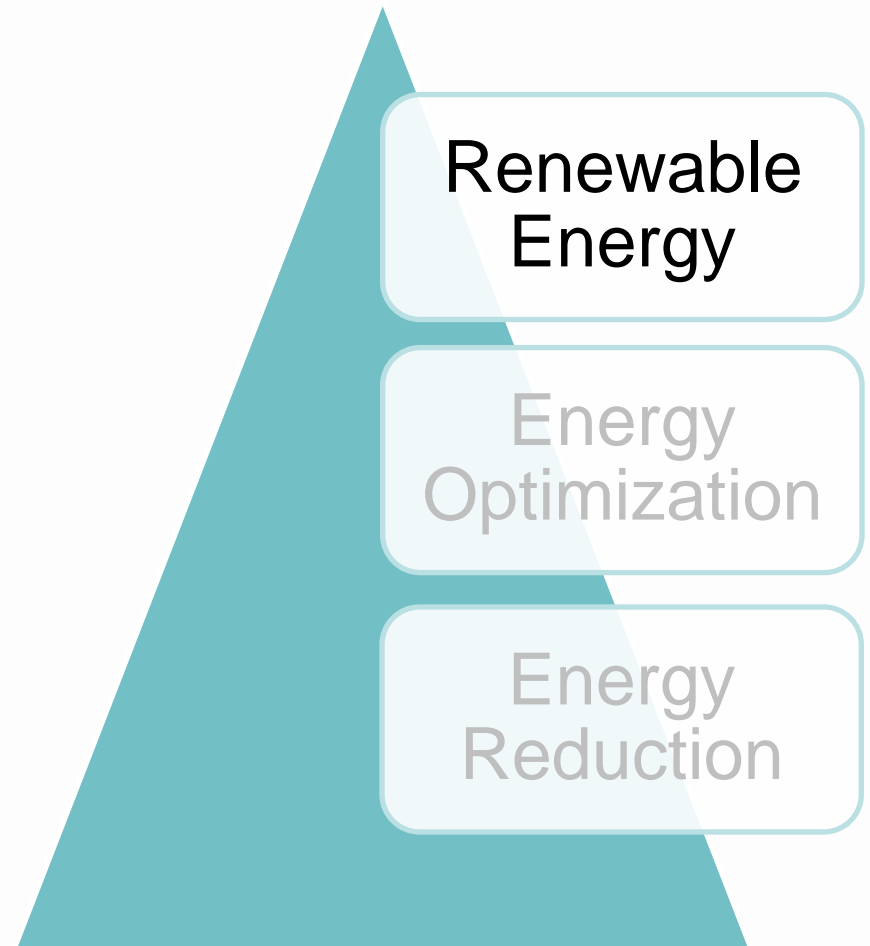
As long as it doesn't cost too much

# Elements of Sustainability



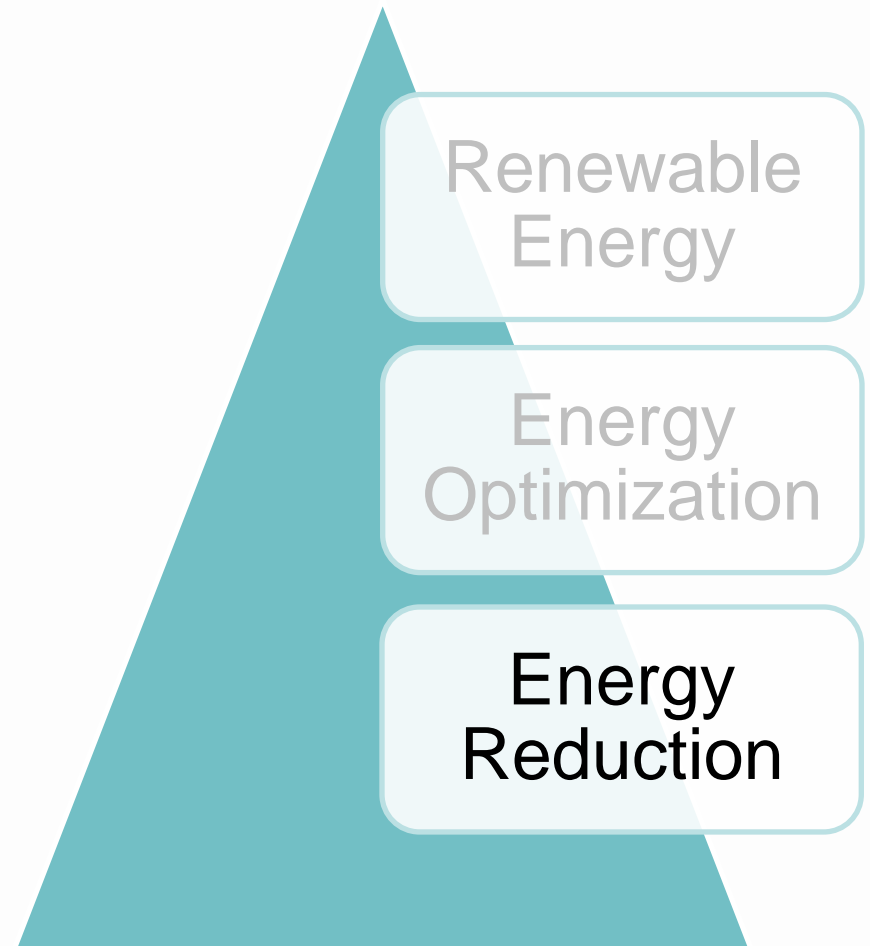
# Focus on Energy

- People associate renewable energy with sustainability
  - Wind turbines
  - Solar panels
- Renewable is expensive
  - Not a 100% solution
  - High initial cost



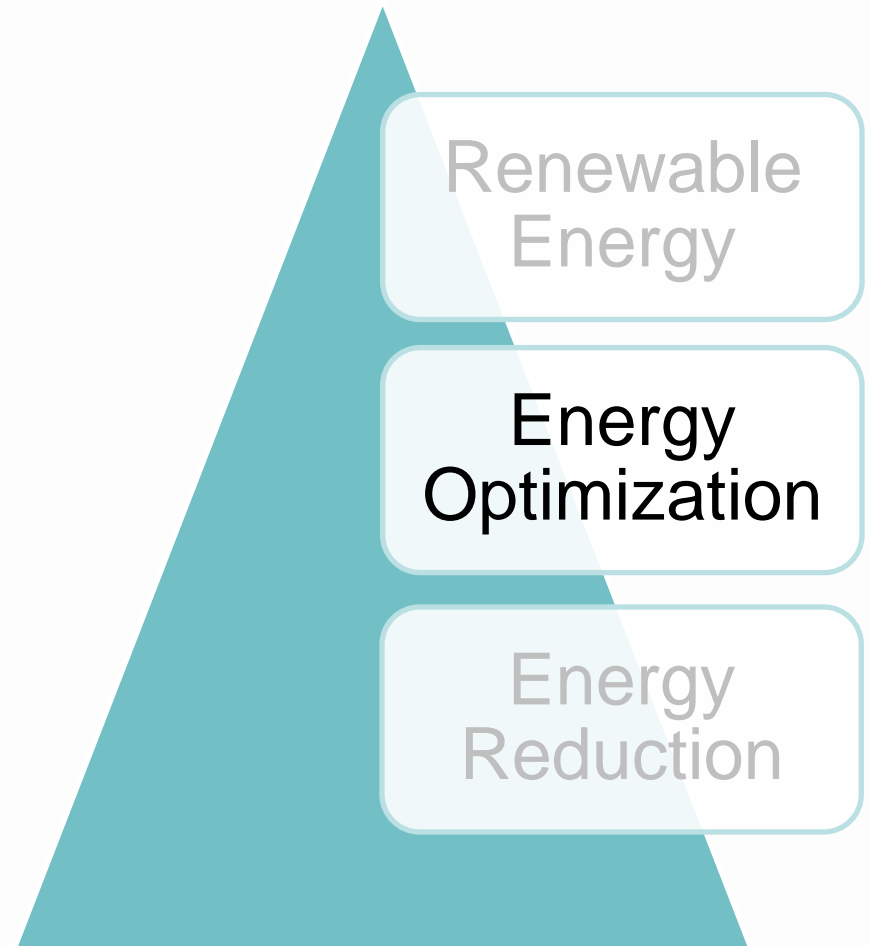
# Focus on Energy

- Energy reduction works
- Just turn off the lights and the heat
- Not always practical
- But it is free



# Focus on Energy

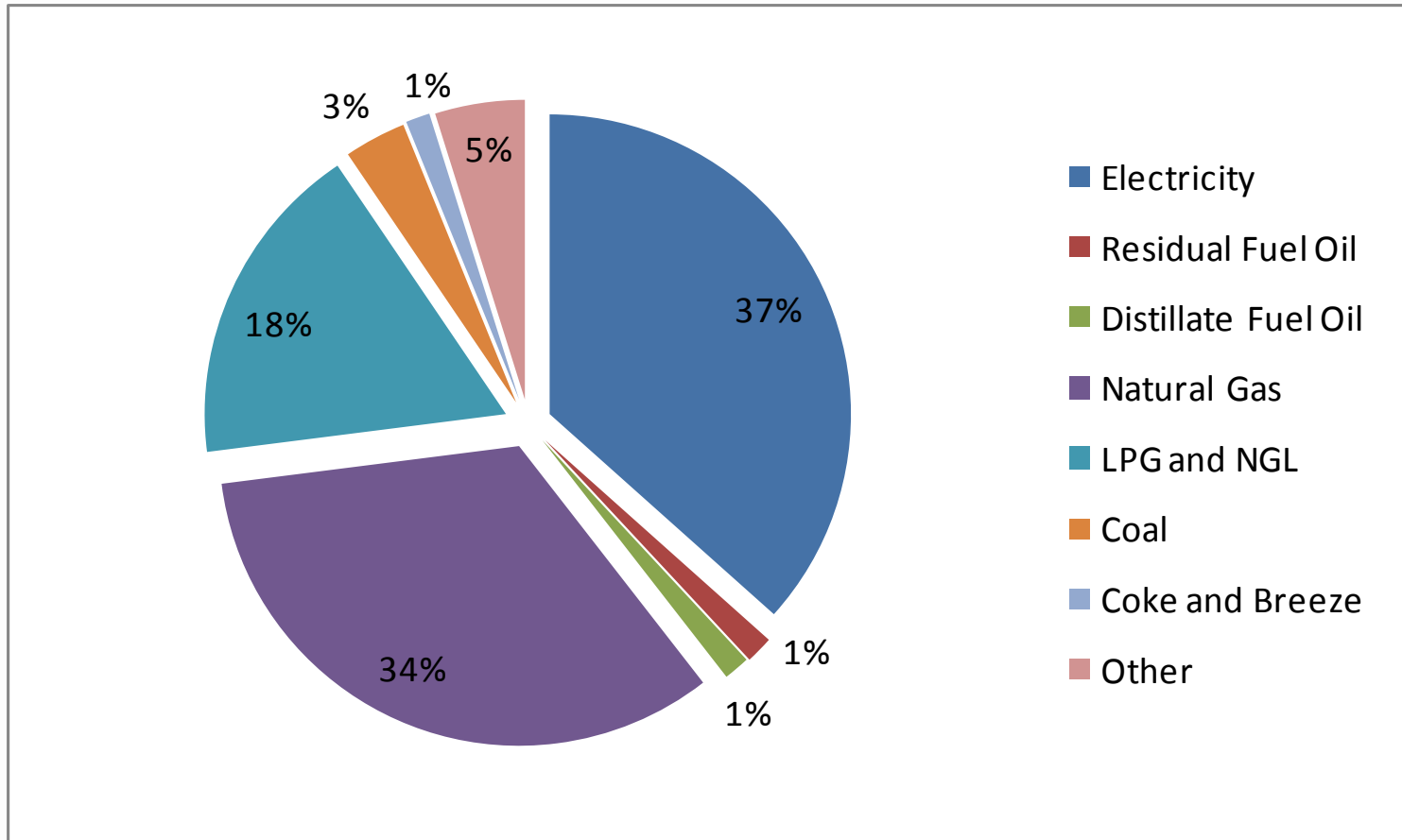
- Energy Optimization is the intelligent use of energy
- The use of efficient:
  - Lighting
  - Equipment
  - Processes
- There is a cost, but it has a defined ROI





# ENERGY SAVINGS

# Manufacturing energy spending



U.S. Energy Information Assoc. – 2006 MECS

# Energy Costs

- The industrial sector uses over 35% of the natural gas and electricity in the US
- US manufacturers spend over \$136 billion annually in energy costs
- Energy cost ranges from 5 – 40% of production cost
- Over 80% of manufacturers do not participate in energy management activities
- What have you done to reduce your energy costs?

U.S. Energy Information Assoc. – 2006 MECS

# COST SAVINGS



# Cut the Cost of Equipment

- Incentives reduce the incremental cost of energy efficient measures
- Typically lower the cost of an energy efficient measure by 30% or more
  - Exterior LED lighting up to \$120/fixture
  - T8/T5 fluorescent bulbs up to \$5/bulb
  - Energy management systems up to \$.40/ft<sup>2</sup>
  - Boiler tune-ups up to \$350/boiler

# Investment Opportunities

- Lowered cost of energy efficient measures allows companies to make improvements they might not have made
- Reduced costs leave more money available for other business investments
- Reduced energy use could free up additional money for more investment in the business



# ENERGY SAVINGS OPPORTUNITIES

# Building retrofit incentives

- **There are two types of Incentives:**
- **Prescriptive Incentives**
  - Think “**off the rack**,” get it and go
    - You install energy efficient equipment and achieve energy savings and pre-determined incentive levels
  - Incentives typically average 20% to 50% of the incremental cost of purchasing qualifying technologies
- **Custom Incentives**
  - Think “**tailored**,” custom fit to your business
    - Incentives are determined on a case-by-case basis
    - Must have a greater than one-year payback period and less than eight years

# Prescriptive Measures

- Electric Measures
  - CFL's
  - T12-T8/T5 replacement
  - Exit signs
  - Exterior lighting
  - Metal halide replacement
  - Occupancy sensors
  - Chiller replacement
  - VFD's
  - Barrel wraps
  - Compressed air nozzle
- Gas Measures
  - Programmable thermostats
  - Boiler/Furnace/RTU tune-ups
  - Demand control ventilation
  - Energy management systems
  - Boiler controls
  - Insulation
  - Loading dock seals

# Custom Projects

- Capital investment measures that increase energy efficiency that are not eligible for a Prescriptive incentive may qualify as a Non-Prescriptive measure.

## **Eligible Measures:**

- Process improvements
- New technology applications
- Air compressor controls and end use reduction improvements
- Refrigeration
- Chiller plant optimization
- Cooling tower optimization
- Window replacements
- Insulation improvements
- Heat recovery projects

## **Ineligible Measures:**

- Fuel switching
- Renewable generation
- On-site generation
- Peak shifting

# Custom Projects

- Three key elements to a successful custom incentive
  - Story
  - Strategy
  - Savings

# Process Improvement

- Paint mix process improvement
- Over ventilation exists from old paint processes
- Reduced ventilation requirement to meet current needs
  - Reduced air changes from 12 to 6 per hour
- Up to 50% energy savings in heating costs



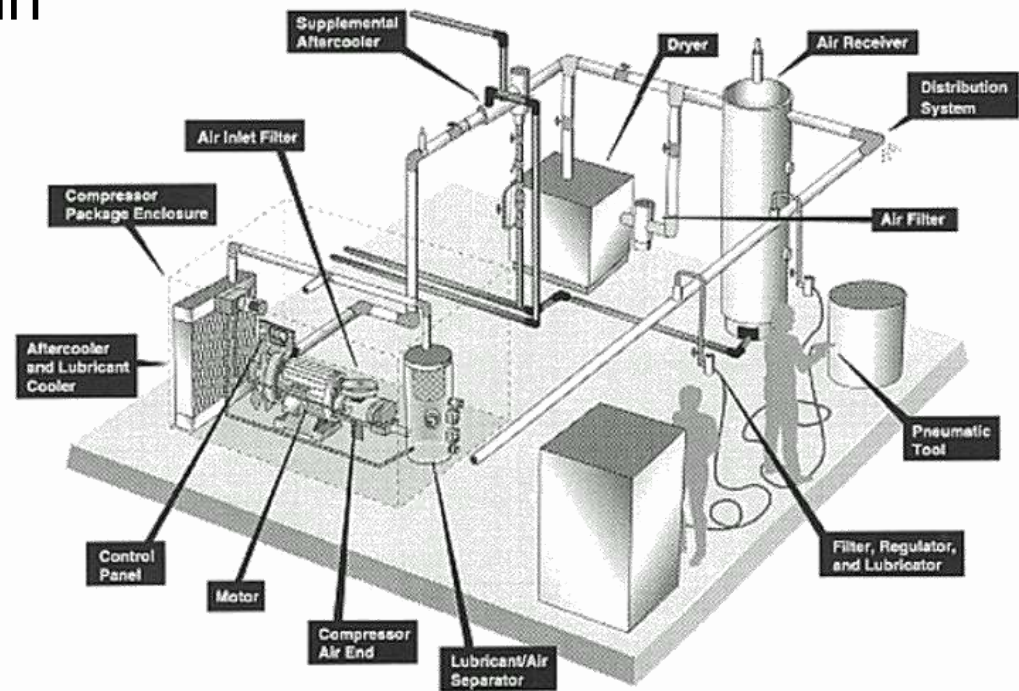
# HV/LS Fans

- High Volume/Low Speed Fans
- Can provide both natural gas and electricity savings
- Potential heating savings of 25%
- Increased efficiency for heating and cooling systems
  - Warm air recirculation in winter
  - Evaporative cooling in summer
- Increased personnel comfort



# Compressed Air Systems

- Compressed air is the most expensive utility in a facility
- Audits are a great starting point
  - Identify leaks
  - Inappropriate uses
  - Replace inefficient equipment
  - Optimize cycle times/loading
- 25%+ energy savings



# Incentive Programs

- New Construction/Major Renovation
- Existing Building Commissioning
- Air Compression Audits

# Thank You!

## Contact Us

- E-mail: ConsumersEnergyBusinessSolutions@kema.com
- Web: [www.consumersenergy.com](http://www.consumersenergy.com)
- **Application available at:**  
[www.consumersenergy.com/eeprograms](http://www.consumersenergy.com/eeprograms)
- Phone: (877) 607-0737
- Fax: (877) 607-0738



# Upcoming SP Meetings

- **June 7 (Detroit, MI)** - Hosted by MPS Group in conjunction with the *National Environmental Sustainability Summit* at the Westin Book Cadillac
  - SP's Executive Committee will lead a presentation on SP's 2011-2012 Strategic Plan during the meeting.
  
- **Sept 8 (Spring Hill, TN)** – Co-hosted with the Tennessee Automotive Manufacturers Association (TAMA)
  - Includes a Panel of Federal Government Liaisons on “Resources Available for Manufacturers and Developing Relationships”. Speakers invited from EPA, DOE, NIST and Commerce.



# For More Information on SP

**Steve Hellem, Executive Director**  
**Kellen Mahoney, Program Manager**

**Suppliers Partnership for the Environment**

**1155 15<sup>th</sup> Street, NW, Suite 500**

**Washington, DC 20005**

**Phone: 202-530-0096**

**Fax: 202-530-0659**

**[www.supplierspartnership.org](http://www.supplierspartnership.org)**