# Working Together to Promote Energy Efficiency

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3M

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## Six Market-Leading Businesses















## Net Sales (billions)







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## Solving Problems Everywhere

- Operate companies in more than 65 countries
  - 35 international companies with manufacturing operations,
     35 with laboratories
  - In the United States, operations in 28 states
- R&D and related expenditures total \$6.861 billion for the last five years
- More than 75,000 employees worldwide
- We provide 'borderless customer success'



# 3M's Sustainability Strategy





## What is "Sustainability"?

**Environmental Protection Economic** Success Social Responsibility

"Meeting the Needs of Society Today, While Respecting the Ability of Future Generations to Meet Their Needs"



#### **Environmental Results Worldwide**

Our progress toward sustainability

- Prevented the generation of 2.9 billion pounds of pollutants since 1975 with more than 7,400 3P projects.
- Cut volatile organic air emissions 95%.
- In 2010 again, received the ENERGY STAR Sustained Excellence Award for Energy Management.
- 3M reduced absolute greenhouse gas emissions by 69% from 1990-2008.







A Competitive Advantage



## **3M Energy Management**

- 3M began its Energy Management Program in 1973
  - 37 years of continuous improvement
- 3M U.S. operations used only 4% more energy in 2009 than in 1973 while U.S. net sales increased nearly 3x.
- Worldwide, 3M's operations have reduced their energy use by more than 40% since 2000 (based on total Btu's used per dollar of net sales).
- Our total energy use in 2009 was 22% less than in 2000
- Greenhouse gas emissions have been reduced significantly.



#### **Scope and Structure**

- Energy use and costs tracked at over 200 locations world-wide
- Energy teams at each of 56 larger locations
- Management supports teams through annual plans
- Corporate Energy Management provides resources including quarterly progress reports
  - Guidelines for energy teams
  - Best Practice sharing
  - Monthly web conferences

- Access to experts
- Assessments
- Awards and Recognition



## Corporate Energy Goals

#### 2005 - 2010

**Target**: Reduce energy usage by 20% based on Btu's per unit of product

Scope: All divisions/countries

#### Process:

- <u>Top-down</u> consistent company-wide target
- Businesses develop prioritized plans for projects & spend and measured by results
- Facilities report data quarterly

#### **Future (being finalized)**

**Target**: 25% improvement in energy utilization

**Rationale**: Consistent with U.S. Department of Energy Save Energy Now Leaders pledge

#### **Process:**

<u>Top-down</u> consistent company-wide target

#### **Objectives**

- 1. Encourage businesses to think in terms of energy strategically
- 2. Encourage facilities to continue to drive site-specific reductions





## 3M Involvement



## EPA 'Green Lights' Program

- Surveyed and upgraded lighting at over 35 million square feet of space
- Savings of \$4.2 million per year achieved

## ENERGY STAR for Industry

- Utilized ENERGY STAR Guidelines for Energy Management
- Benchmarked and networked with numerous companies and organizations
- Utilize ENERGY STAR communications materials to leverage 3M program

## Product Labeling



ENERGY STAR®: Guidelines for Energy Management

- ManagementSystem for Energy
- 3M is using this approach recommended by ENERGY STAR



energy About	CH STA		WORLD, ENERGY STAR.	
ENERGY STAR Produ	ucts Home Improvement	New Homes Building	s & Plants Partner Resources	
Home > Products > Change the World, Start with ENERGY STAR > Participating Organizations > 3M				
« Return to Change the World Ho	ome			
Success by the Numbers	Get Inspired	Sign Up	Spread the Word	
See what others are doing	Learn about the ENERGY STAR Pledge	Become a Pledge Driver	Helpful Tools & Resources	
Top Pledge Drivers See all Participating Organizations				
3M TAKE THE ENERGY STAR PLEDGE €				
diverse markets, ranging from aut technology platforms - often in cor around the world use or benefit fro economic success is directly relai has been tracking and reducing it efficiency in the United States. And		e strength is applying its mo mer needs. This means that bal leader, 3M recognized Ic s and protecting the environn since then has achieved an M had reduced VOCs (solver	re than 40 distinct teach day people ong ago that its nent. The company	
	articipating Organization		Spread the Word.	
2009-2010 Participation Highlights		2009-2010 Saving	s Breakdown	
Coal for the Vacre	8 900 000 lbs of abas	Croophouse	Cas 21 335 950 lbs	

Goal for the Year:	8,900,000 lbs of ghgs	
Current Total:	21,335,950 lbs of ghgs	
Percent to Goal:	240%	

Questions about your Goal?
If you have questions about setting or changing your goal, please email <a href="mailto:changetheworld@energystar.gov">changetheworld@energystar.gov</a>.

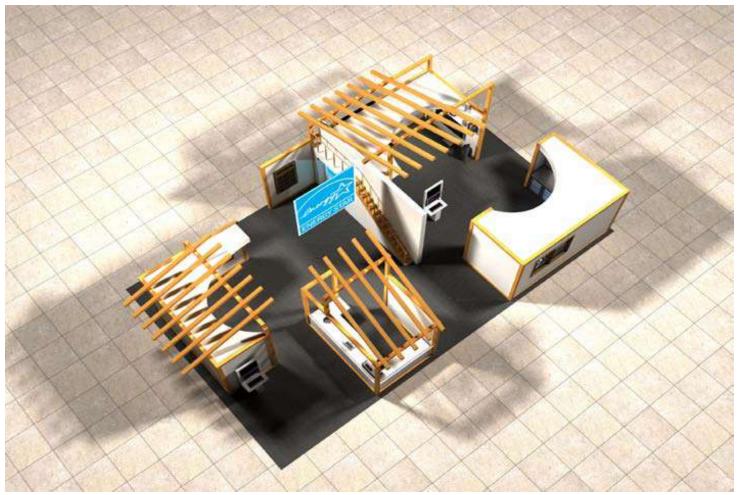
Greenhouse Gas Emissions:	21,335,950 lbs
Individuals:	1,214
Dollars:	\$1,686,125
kWh:	11,556,449
BTUs:	30,479,619,021

See Pledges by Action Item



## **How to Communicate**









Sixth Consecutive Year!

## 3M and DOE Involvement:

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- •
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- DOE Motor Challenge Program
  - Showcase Demonstration Project
  - Midwest Motor Consortium
- Other 'Challenge / Best Practice' programs
- 'Save Energy Now' Assessments
- Superior Energy Performance Initiative
  - Energy Management Standard
- Save Energy Now Leaders



- Member of Steering Committee developing the program
- 3M the <u>very first</u> company to join
- Workshop/Signing Event In Detroit On September 10
- Washington D.C. Ceremony December 3

## **Save Energy Now Leaders**











#### We:

- Pledge to adopt a goal to reduce energy intensity by 25% or more over 10 years.
  - Within 12 months, complete the following:
    - Establish an energy use and energy intensity baseline
    - Develop an energy management plan
    - Designate an energy leader or energy manager
  - Take steps to reduce energy intensity and the associated carbon emissions
  - Report energy intensity, energy use data, and achievements annually to DOE.

#### Save Energy Now LEADER = Customized Services



#### Receive:

- DOE Representative
- Individual Technical Account Manager
- No-cost expert Technical Assistance
- Recognition as a LEADER

# DOE Representative contacts the Energy Manager

#### **Develop customized plan:**

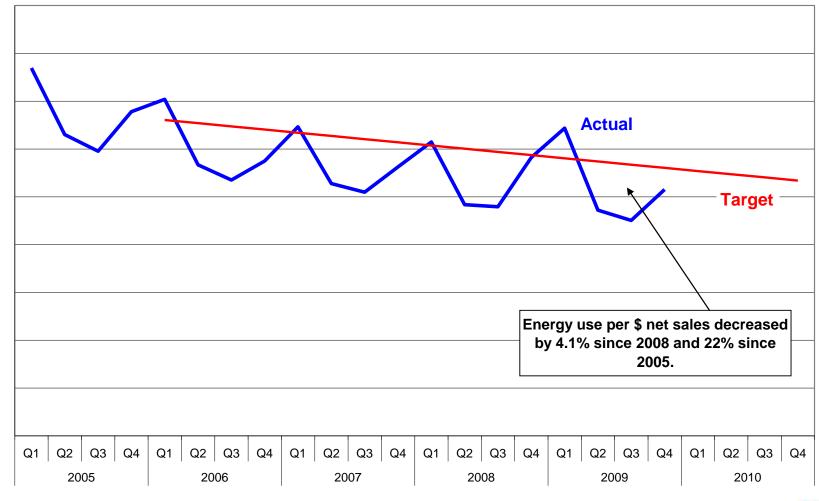
- Guide to how to get the most out of the Save Energy Now portfolio
- Access to DOE Contractor Assistance
- Track reporting requirements
- Arrange for delivery of services
  - Energy assessments
  - Consultation with Energy Expert

#### Work with a DOE Energy Expert

#### Provide technical assistance with:

- Developing a useful energy baseline and tracking method
  - Tailored to the plant's operations and product output
  - Satisfies the reporting requirements
- Writing an energy management plan
- Developing engineering feasibility studies to help implement projects

# **Energy Results Btu's per \$ of Net Sales**









# Innovation



# Back-up



