



*Sustainability at Owens Corning  
Frank O'Brien-Bernini,  
Owens Corning Chief Sustainability Officer*

# Owens Corning At A Glance



- Founded in 1938, an industry leader in glass fiber insulation, roofing and asphalt and glass fiber reinforcements
- 2008 sales: \$5.8 billion
- 16,500 employees in 30 countries
- FORTUNE 500 company for 55 consecutive years



## Leading North American Market Positions

- Residential Insulation
- Commercial & Industrial Insulation
- Manufactured Stone Veneer
- Residential Shingles
- Roofing Asphalts

## Global Leader

- Composites

# Sustainability...context setting



- **Strong global macro trends**
  - Energy use & availability
  - Climate change
  - Population / consumption
- **Presenting a massive opportunity in our markets**
  - Soaring interest in Energy Efficiency...public and private
  - Personal desire to achieve sustainability
  - Green building & renewables demand
- **Winning with green...today!**
  - Pink-is-Green™...business and communication strategy

**Customer-inspired solutions addressing global challenges**

# Owens Corning's Sustainability Business Strategy

- 1. Greening our Operations**
- 2. Greening our Products**
- 3. Accelerating energy efficiency improvements in the built environment**





# Leveraging the knowledge of the world...



Garforth International llc  
Energy Productivity Solutions

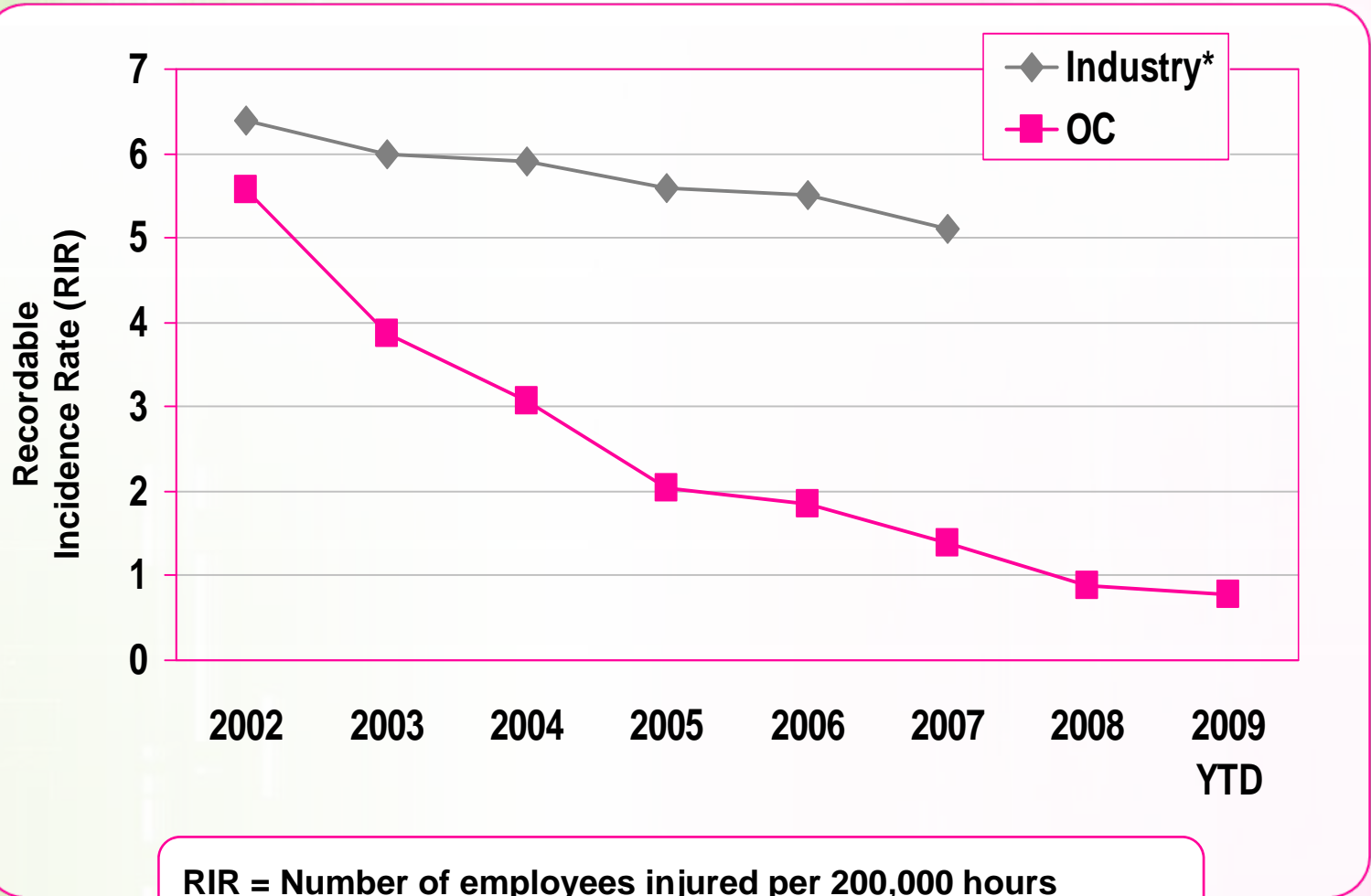


# Owens Corning's Sustainability Business Strategy

1. Greening our Operations
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# It All Starts With Safety...



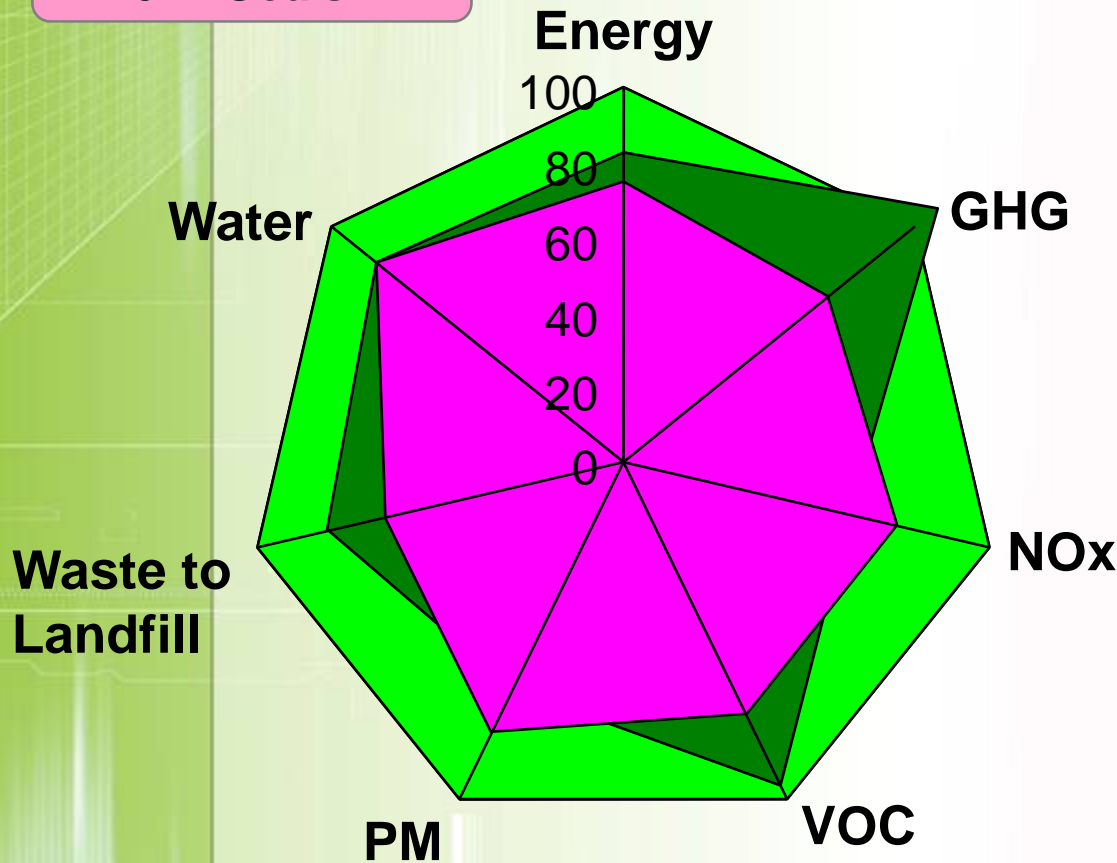
RIR = Number of employees injured per 200,000 hours worked. *Injured* is defined by OSHA recordability guidelines

\*North American Industry Classification System



# Greening Our Operations: Our footprint commitment and our progress

- 2002 Base Year
- 2008
- 2012 Goals



## Global Intensity Goals 2002-2012

Energy	-25%
GHG	-30%
NOx	-25%
VOC	-25%
PM	-20%
Waste	-35%
Water	-15%



# Energy Sourcing



# Demand Reduction

### Indirect vs. Direct Energy Consumption



■ Direct – Fossil Fuels  
■ Indirect – Electricity

### Direct Energy Consumption by Source



■ Metered Gas  
■ Heavy Oil  
■ Light Oil  
■ Propane/LPG

### Indirect Energy Consumption by Source



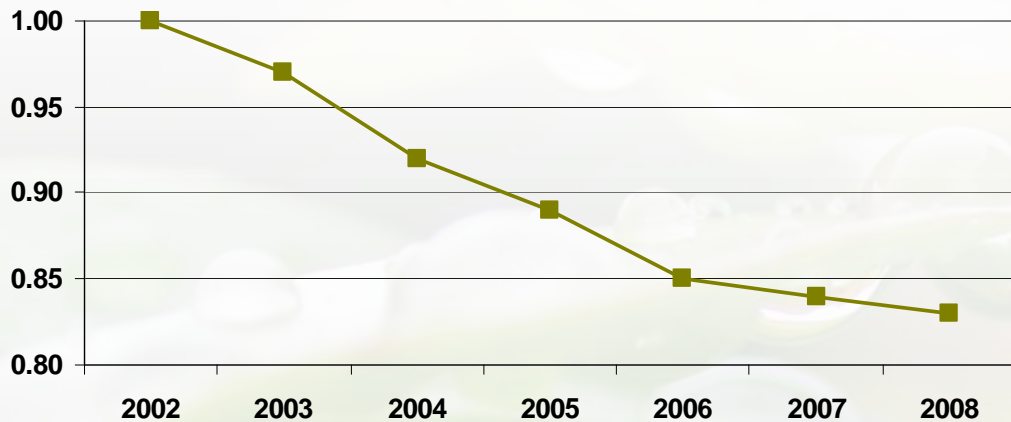
■ Coal  
■ Nuclear  
■ Natural Gas  
■ Hydro  
■ Renewables  
■ Fuel Oil  
■ Other

- **Supply optimization**
- **Supply security**
- **Risk management**
- **Hedging**
- **Invoice accuracy**

- **Continuous improvement**
- **Capital investments**
- **Best practice networks**
- **Carbon SWOT**
- **Renewables / RECs**
- **Demand response**

# Greening Our Operations: Energy Intensity Reduction is a Key Driver

## Energy Intensity



**1% Energy Intensity  
Reduction...  
\$5 million EBIT**



pink is green™



1. Engaged employees
2. Capital-light proven solutions
3. Proprietary innovations

# Engaged Employees Teaming with our Partners

- Energy Kaizen / Continuous Improvement Events
- Focused Plant Work Teams / Networks
- DOE “Save Energy Now” Assessments
  - 35 DOE Energy Savings Assessments Completed
  - \$9.0 million of identified savings opportunity
  - \$4.5 million of savings implemented
  - 290 Owens Corning Participants



# Engaged Employees Teaming with our Partners

## DOE

- “Save Energy Now” Energy Savings Assessments
- Industrial Technologies Program Superior Energy Performance for the development of an international standard for energy performance (ISO 5001)
- “Energy Matters” Publications...best practice sharing

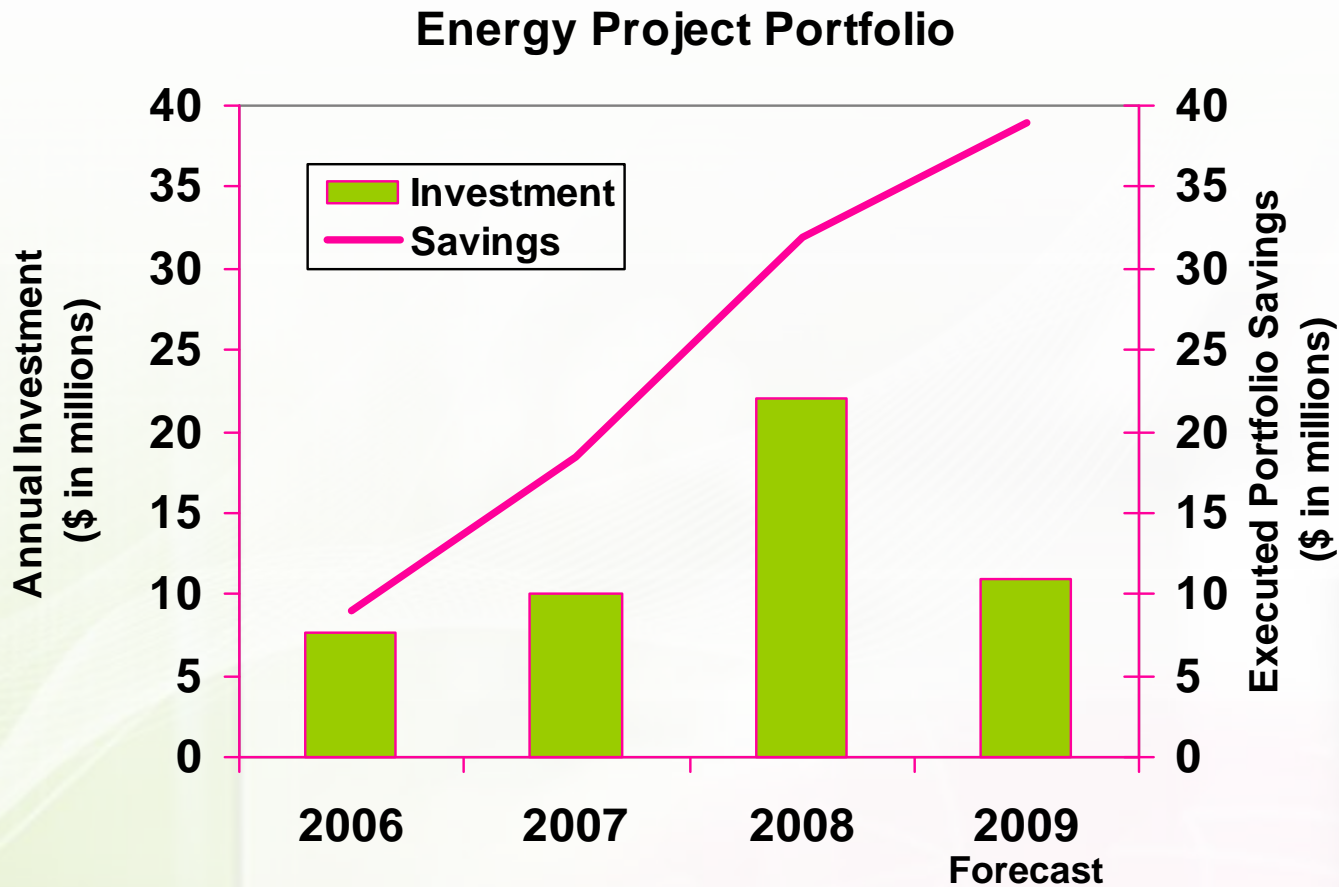
## EPA

- Partner: Climate Leaders, SmartWay Transport, WasteWise and Green Power Partnership (OC among top 30 Fortune 500 companies for Green Power consumption)
- Energy Star Glass Industry Focus Group...best practice sharing, benchmarking, and metrics

## NIST

- Advanced Technology Program

# Capital-light Proven Solutions



**A pipeline of rapid-return capital projects**

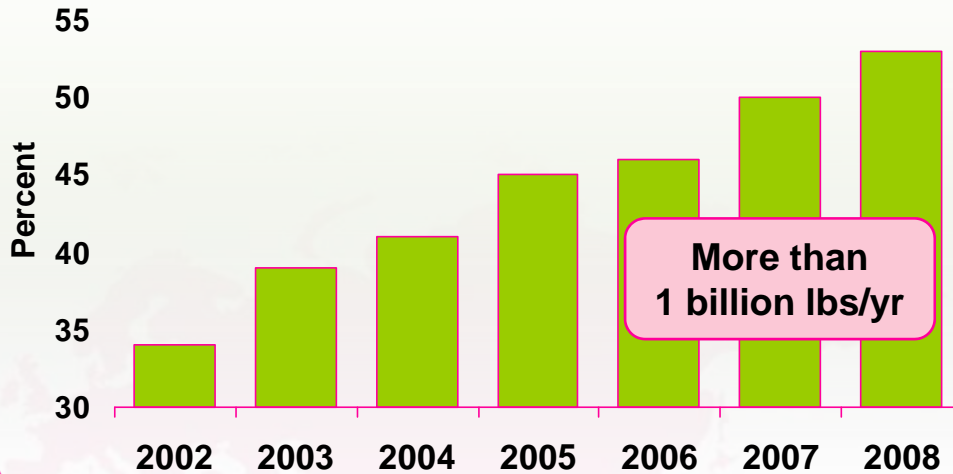
# Proven Solutions – Key Areas of Focus

- Proven Solutions: Small Capital Investments
  - Insulation – Steam Lines, Ovens, Pipes
  - Lighting Upgrades
  - Power Factor Correction
  - VFDs on Pumps, Motors, Fans
  - Compressed Air Upgrades
  - Burner Tuning, Boiler Control Upgrades
  - Leak Detection – Natural Gas, Compressed Air, Water
- Heat Recovery
  - Waste Heat to Absorption Chillers
  - In-Line Stack Heat Exchangers for Space Heating / Product Curing
  - Preheating of Combustion Air



# Proprietary Innovations

## Recycled Glass Use in Insulation



## Composites Furnace

## Leading Edge Technology

- Energy and emissions reduction
- Manufacturing cost reduction
- Capacity increase
- Longer asset life

# Massive opportunity in our markets

1. Greening our Operations
2. Greening our Products
3. Accelerating energy efficiency in the built environment



***Winning with green with our customers***







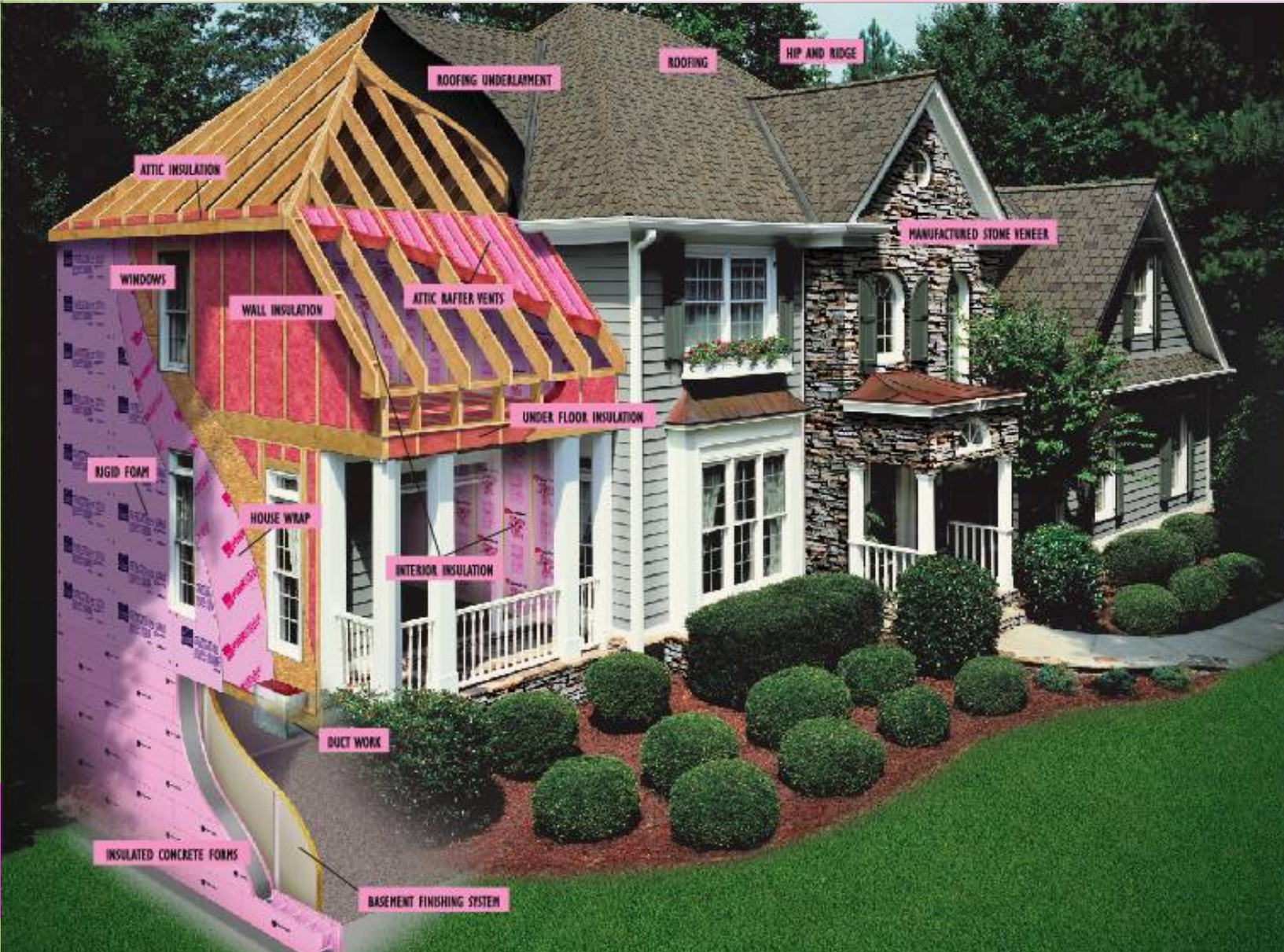
# Greening our Products: Leading in green / sustainable building

## **Common themes include products that...**

- 1. Save Energy or Water**
- 2. Use Salvaged, Recycled or Agricultural Waste Content**
- 3. Conserve Natural Resources through**
  1. Reducing Material Usage
  2. Exceptional Durability or Low Maintenance
- 4. Avoid Toxic or Other Emissions**
- 5. Contribute to Safe, Healthy Indoor Environment**
- 6. Are Reusable or Recyclable at End of Life**

**Compelling Products & Messaging that cuts through**

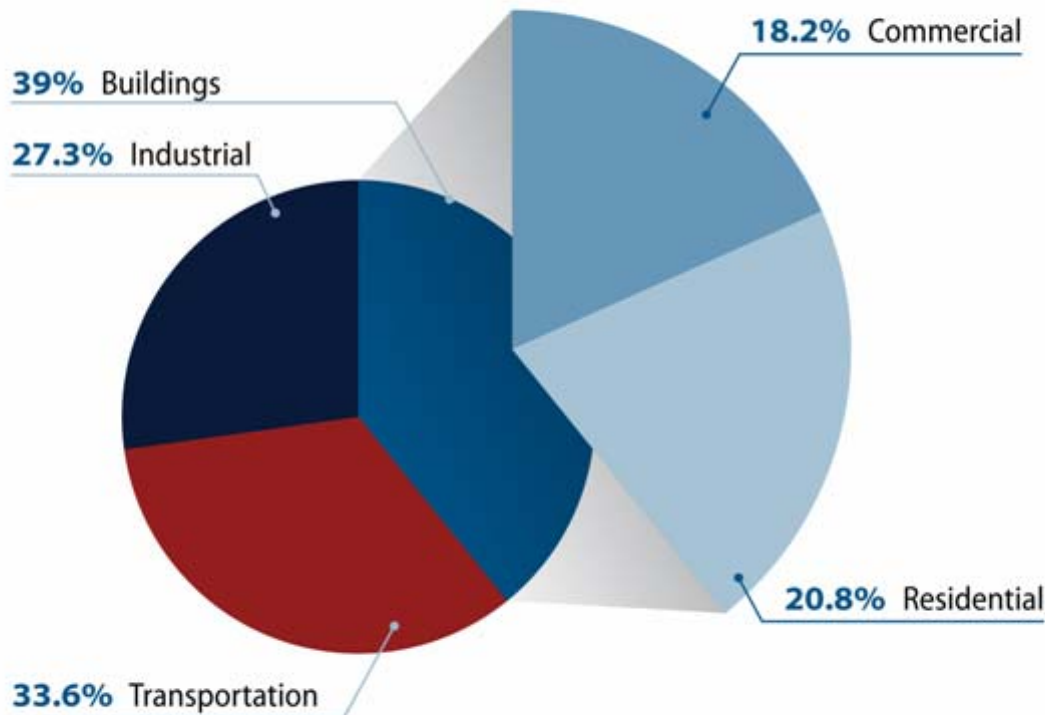
# Building Materials



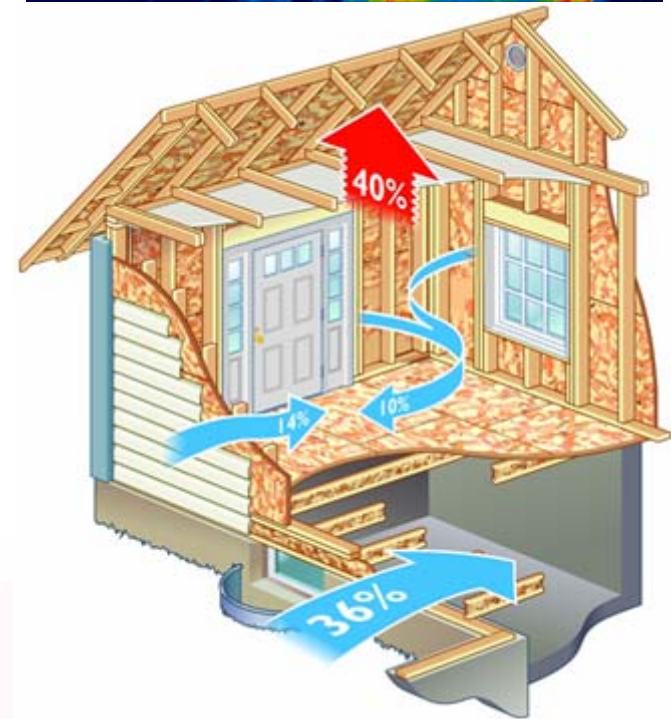
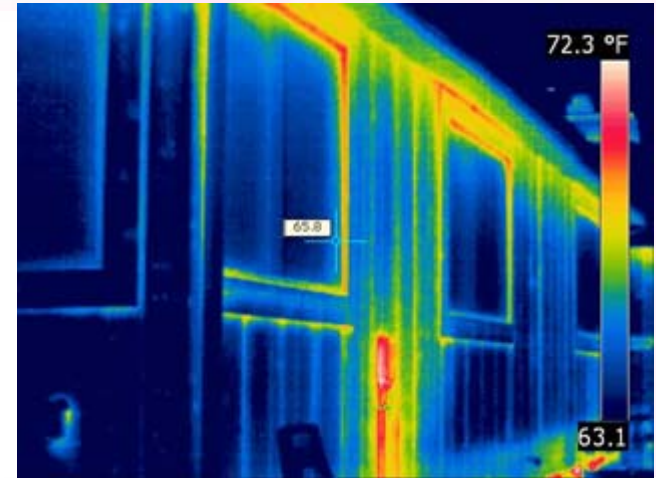
# Buildings Dominate CO2 Emissions

...more than industry and more than transportation

## U.S. greenhouse gas emissions by end use sector



Data Source: US EIA Emissions of Greenhouse Gases in the United States 2007  
Table 6. Chart by permission of the Center for American Progress



**Buildings Consume the most Energy**

# Innovations in Energy Efficiency



## Reduces:

- Heating/cooling energy up to 1/3
- Air leakage up to 70%
- Outside noise up to 40%
- Moisture, allergens, pollutants



# Composites – Innovations in Renewables



**Owens Corning** is the leading supplier of glass reinforcements for wind power today



# Owens Corning Global Energy Summary

- ✓ We understand energy consumption and how to reduce it
- ✓ Our actions are delivering reductions in energy consumption and GHG emissions in our operations and in our markets
- ✓ We effectively team with our partners in government to learn, grow, and develop practical solutions – **THANK YOU**





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