

# **Energy and Greenhouse Gas Management**

October 17, 2007

Call-in Number: 1-866-299-3188

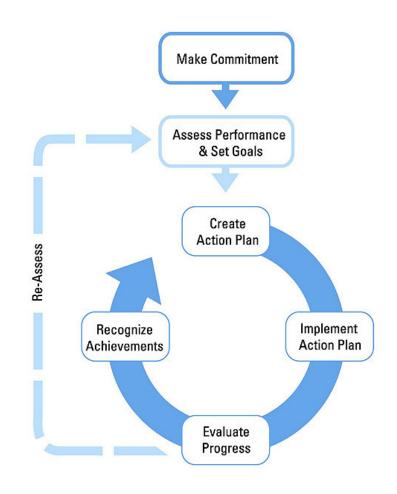
Conference Code: 202 343 9965



# About The Web Conferences



- Monthly
- Topics are structured on a strategic approach to energy management
- Opportunity to share ideas with others
- Slides are a starting point for discussion
- Open & Interactive



### Web Conference Tips



<u>Mute phone</u> when listening! Improves sound quality for everyone.

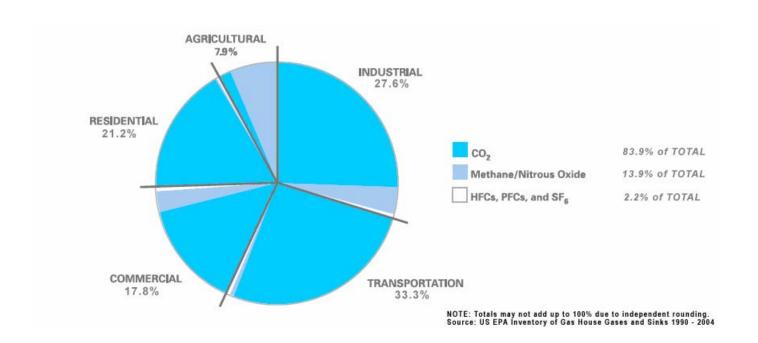
Use \* 6 - to mute and # 6 to un-mute

- Hold & Music If your phone system has music-on-hold, please don't put the web conference on hold!
- Presentation slides will be sent by email to all participants following the web conference.

### The Link to Climate Change



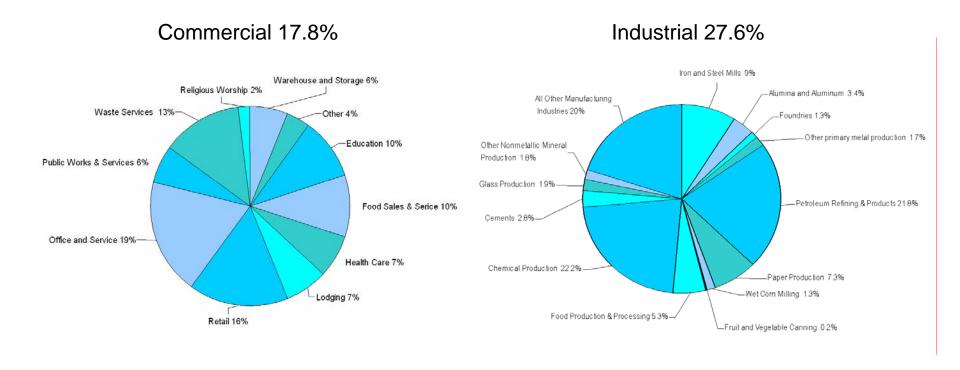
- 85% of US GHG emissions are from CO2
- Energy use is the primary source of CO2 emissions



### **Sector CO2 Emissions**



Distribution of Commercial and Industrial CO2 emissions (Direct & Indirect) associated with energy use.



Sources: Representative estimate based on the US EPA Inventory of Greenhouse Gases and Sinks 1990 – 2004 (April 2007), the Energy Information Administration's 2003 Commercial Building Energy Consumption Survey (CBECS), and the Manufacturing Energy Consumption Survey (MECS) 1991 – 2002 as reported by the Energy Information Agency (DOE/EIA-0573(2005)) November 2006.

# **Energy Efficiency and GHG Management**



#### Carbon Disclosure Project S&P 500 Findings:

- 78% of companies responding stated that energy efficiency is a key strategy for GHG reductions.
  - BUT only 21% stated they have energy goals!
  - 29% reported establishing GHG reduction goals.
- 43% of respondents are ENERGY STAR Partners.
- Most of the companies scoring high on the Climate Governance Index are ENERGY STAR and Climate Leader partners.

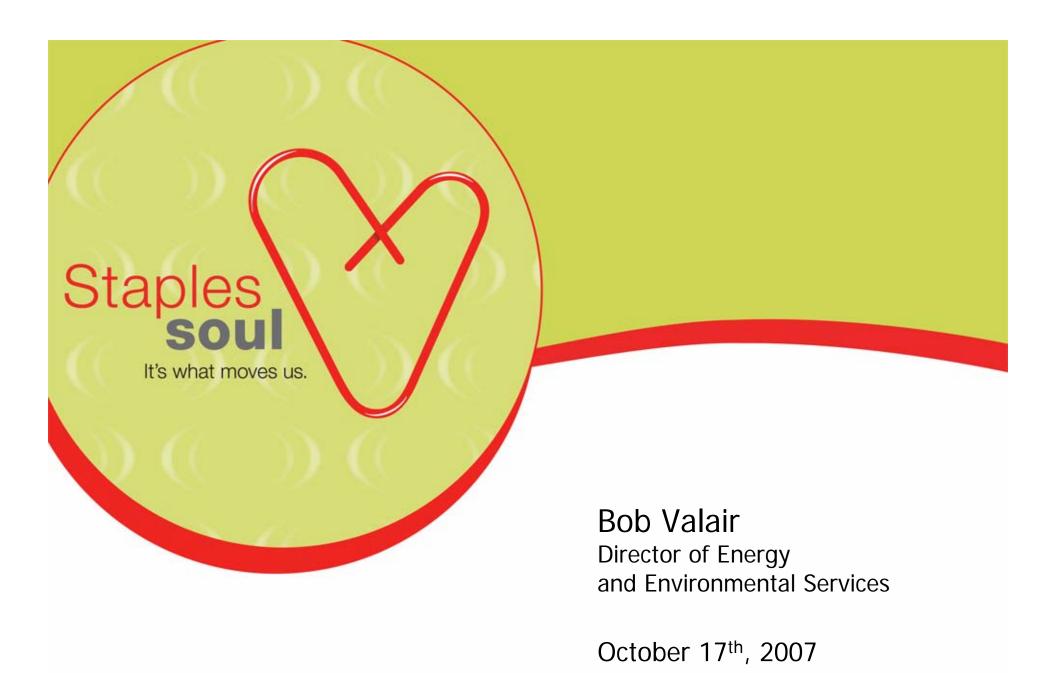
### Today's Web Conference



**Energy and GHG Management** 

Speakers:

- Bob Valair Staples
- Jon Russett General Mills
- Announcements



### **Company Profile**



- \$18.2 Billion reseller of office products/supplies
- Created Office Superstore concept in 1986 Brighton, MA
- 74,000 associates worldwide
- 1,880 stores + worldwide
- North American Retail
- North American Delivery
- International South America, Europe and Asia
- Operations in 21 countries



### Partnership with EPA



- In 1995 Staples partnered with the EPA's "Green Lights" program.
- Began implementing energy efficiency programs and realized operational expense savings.
- Established corporate commitment which embraced vision to be a leader in office supply while protecting the environment and to make a difference in the community.
- Developed internal and external programs linking the Voice of the Customer, Shareholders and Staples' employees to energy efficiency and environmental stewardship.



## Why is energy efficiency and climate change so important to Staples?



We owe it our shareholders and investors, employees and families to make the change to make a difference!



### **Staples Commitment**



Staples is committed to developing and enhancing sustainable business in three specific areas of corporate performance economic, social and environment -"triple bottom line".

Staples company-wide commitment to protect natural resources through sustainable practices covers four major areas or cornerstones.

- Environmentally Preferable Products
- Recycling
- Energy and Climate
- Environmental Education



### It's about soul...



- Energy efficiency and environmental stewardship is about everything that we do and is fully integrated into our culture, its "Staples Soul".
- Employees know that Staples is a "green" company and embrace initiatives in support of that goal.
- Energy managers are part of the solution however it takes middle management and executive managements' support to drive the process.

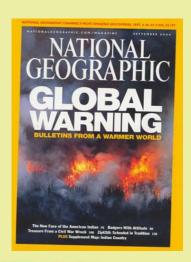


### **Integrated Approach to Energy** and Climate



Global climate change is a the result of increase carbon dioxide levels in the atmosphere. Our impacts on climate change result form the direct and indirect emissions associated with the consumption of energy derived from fossil fuel sources. Our "carbon footprint" or areas where most of our carbon is accounted is focused in facilities and in fleet operations. To reduce this footprint we have established an absolute carbon reduction target of **7% below** our 2001 levels by 2010 for the US and will announce a global target in 2006. Achieving these goals will require an integrated carbon mitigation strategy.

- Energy Conservation
- Green building design
- Purchasing more Green-e-certified renewable energy
- On site distributed generation wind solar geothermal
- New technologies, hybrid vehicles
- Carbon sequestration







### The Energy Manager's role

- Build partnerships with internal teams in Finance, Construction, Store Planning and Sr. Management.
- Established key performance indicators and documentation processes for measurement and verification of energy efficient technology upgrades to systems capturing energy usage data.
- Utilized internal models built from years of documentation, the internal teams and the EPA established a conservative GHG Emission reduction goal.
- Staples team meets regularly with the EPA Climate Leaders staff to track progress and keep focused on reduction goal.



### **Energy Projects**



- Motor Boss technologies
  - motors more energy efficient allowing RPM speed changes.
- Micro turbines
- Thermal Storage
- Demand Side Management
  - Developed a Strategic team and the "WILL KILL" Program for the entire portfolio
- LEED Certification buildings, first store in MIA fall 2007,
  - All of the things we have done up to date allows us to make that jump to LEED certified buildings
  - Implementation of LEED building methodologies into their standard prototype designs
  - Solar installations



### **Energy and Climate**









### **Energy and Climate**









## **Corporate Approaches to Green Building**







### **Corporate Approaches to Green Building**







### Solar







Environment

### **Energy and Climate**



9 Solar Projects

Reduces greenhouse gas emissions

Reduces our operating expense

Encourages others to consider renewable energy options

Ontario, CA



Rialto, CA



Englewood, NJ





## How to get approval for energy projects?



- Document, document, document!
  - Proven track record of successful project implementation meeting internal ROI standards.
  - Establishes internal creditability and reputation for success
- Develop relationships with utilities and outside resources in support of services for rebates and incentives to offset capital investment costs.
- Keep an open mind!
  - Be open to pilots
  - Alternative and creative financing solutions
  - Leased vs. Owned



### Future Projects under consideration that was easy:

150+ Retail/Non-retail solar locations

Home Office - Wind

Rialto, CA - Wind

Portland, OR - Wind









Environment

### **Future Projects Under Consideration**

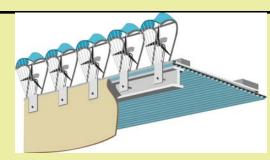


Wind Turbines

Hybrid Delivery Vehicles

Land Based Carbon Sequestration







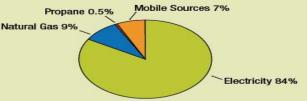




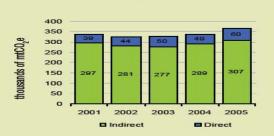


We continue to reduce net operating expense associated with energy through an integrated approach and improve the net carbon impact, associated with operating our business.

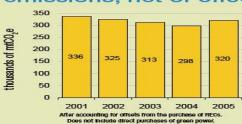




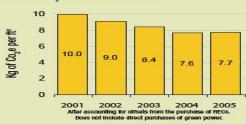
#### total greenhouse gas emissions, not including offsets



#### greenhouse gas emissions, net of offsets



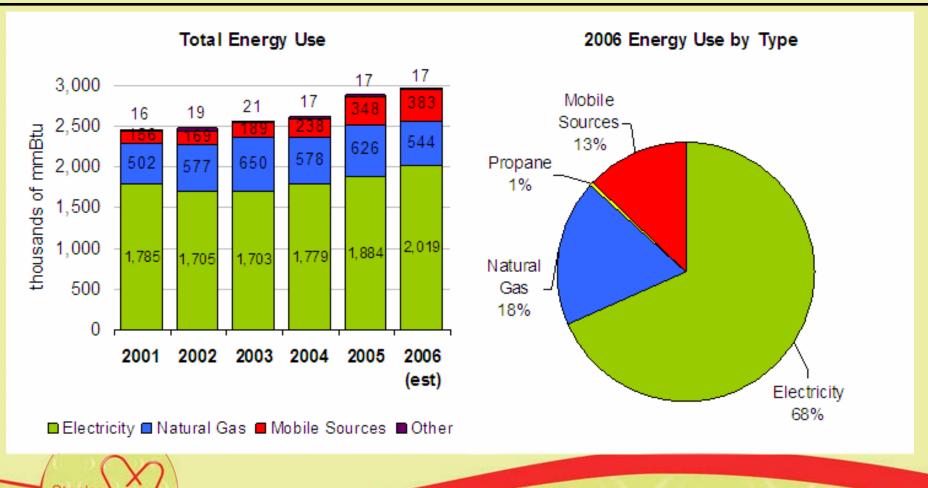
#### net GHG emissions per square foot







### **Climate Leaders Progress**

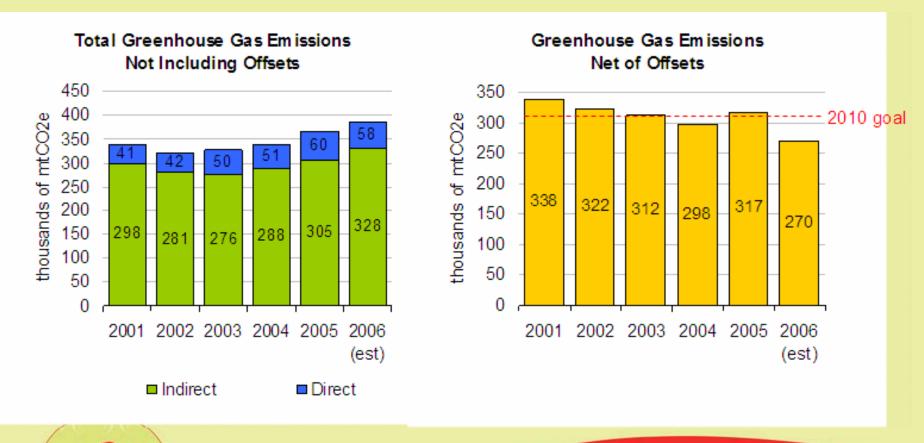




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### **Climate Leaders Progress**





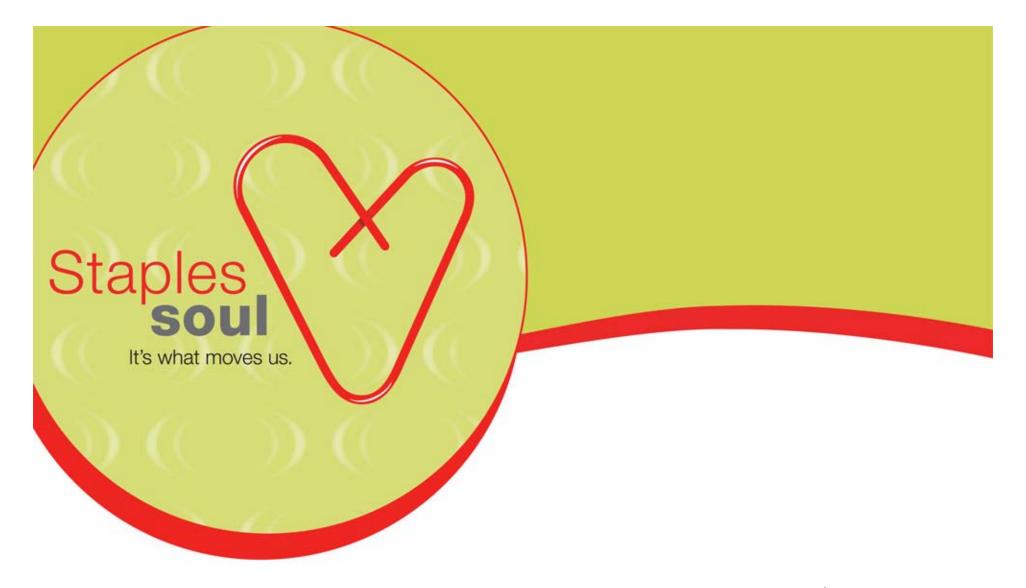
Environment



### Advice to energy managers.

- Develop Strategic Energy Plan
- Recap yearly capital expense project implementation
- Establish key performance indicators for energy efficiency projects – document!
- Partner with internal team department team members.
- Embrace the EPA partnership and meet regularly to access progress and keep on track.
- "Talk the talk" and "Walk the walk".





www.staples.com/soul

## General Mills Energy Program and Green House Gas Emissions

Jon Russett, CEM, BEP
Supply Chain Energy Manager
General Mills Inc.

Energy Star October 2007

- General Mills Energy Program
- GHG Importance to General Mills
- How Our EMP Supports the GHG Program
- Our Challenges and Next Steps

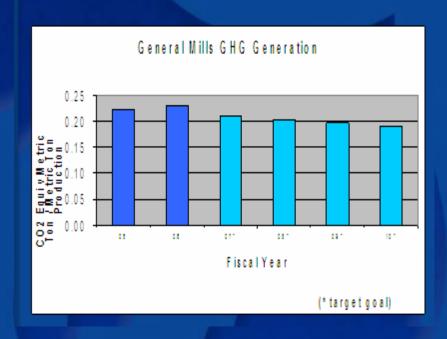
### General Mills Energy Program Strives To

- Create Energy Awareness
- Provide Energy Assessment Tools
- Facilitate GMI Energy Networking
- Measure and Track Plant Performance
- Change Behavior around Energy Usage and Management
- Benchmark Industry Practices
- Partner With Energy Star

### GHG Importance to General Mills

- Our Customers
- Our Consumers
- Increasing International Regulations
- Pending U.S. Legislation
- The Right Thing To Do

### General Mills GHG Impact



#### Fiscal 2006 Results

Total Emissions due to energy use in production facilities, expressed as C02 equivalents was 0.23 metric ton equivalents per metric ton of product.

Direct emissions from burning fuel(s) 26% of total or 0.06 metric ton equivalents per metric ton of product

Reported in 2007 GMI CSR and Carbon Disclosure Project 2007

### General Mills GHG Impact

- Primary source is CO<sub>2</sub>
- Result of burning fossil fuels
  - Directly at our facilities
  - Indirectly from purchased electricity

### General Mills GHG Program Overview

- Reduction in energy consumption will drive the reduction in GHG emissions
- Maintain energy use data
- Calculate GHG from energy use
- Set 15% reduction goal (F'05-F'10)
- Transparent reporting of goal results
- Using the Climate Leaders Greenhouse Gas Inventory Protocol

### A Partnership

 Working closely with HSE to jointly set goals and track performance

Partnering With HSE to ensure our messages are in sync

### Challenges

- Future of pending U.S. legislation
- Understanding total carbon foot print
- Fit for renewable energy
- World opinion still forming





### **Questions & Discussion**

### Resources



- Portfolio Manager Now includes carbon factors from eGrid. www.energystar.gov/benchmark
- Climate Leaders Program Inventorying and goal setting guidance and resources.
   www.epa.gov/climateleaders
- Look for more resources on Energy & GHG management from ENERGY STAR over the coming months!

# Upcoming Web Conferences



November 14 – Energy Strategy for the Road Ahead

January 16 – ENERGY STAR Program Update

February 21 – Green Power Strategies

March 19 — Engaging Employees in Energy Efficiency

Download past web conference presentations at:

www.energystar.gov/index.cfm?c=networking.bus\_networking

Questions or comments? Contact: tunnessen.walt@epa.gov



### Thank You!