

# Shrinking While Growing

Driving Continual Improvement in Energy Efficiency

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# The Trend Begins with Corporate Commitment

- DuPont's Goal is "Sustainable Growth"
  - Increasing shareholder and societal value...
  - While decreasing the footprint<sup>†</sup> of our operations...
  - Along the value chains in which we operate
- We consider Sustainable Growth a "core value" like safety
- We are deeply committed to reducing our footprint...
- So we've set goals to drive our progress

<sup>†</sup>Footprint = injuries, illnesses, incidents, waste, emissions, depletable forms of raw materials and energy



## DuPont's Commitment on Energy Footprint

- By 2010, we have committed to:
  - Hold total energy use flat versus a 1990 baseline
  - Reduce greenhouse gas emissions by 65% versus 1990
  - Supply 10% of total energy needs from renewable resources at a cost competitive with best available fossil alternatives
- These goals changed our approach to energy efficiency
- Energy efficiency is now a sustainability commitment...
- Not just a **tactic** to cut costs in response to high prices



## DuPont's 2015 Footprint Goals

- We recently announced new “footprint” goals for 2015
  - Reduce GHG emissions by 15% versus 2004 baseline
  - Reduce water consumption by 30% at “distressed” locations
  - Implement 100% leading edge, energy-efficient fleet vehicles
  - Reduce air carcinogens by 50% vs. 2004 baseline
- We cannot achieve the Greenhouse Gas (GHG) emissions reduction goal unless energy use is at least **flat versus 1990**

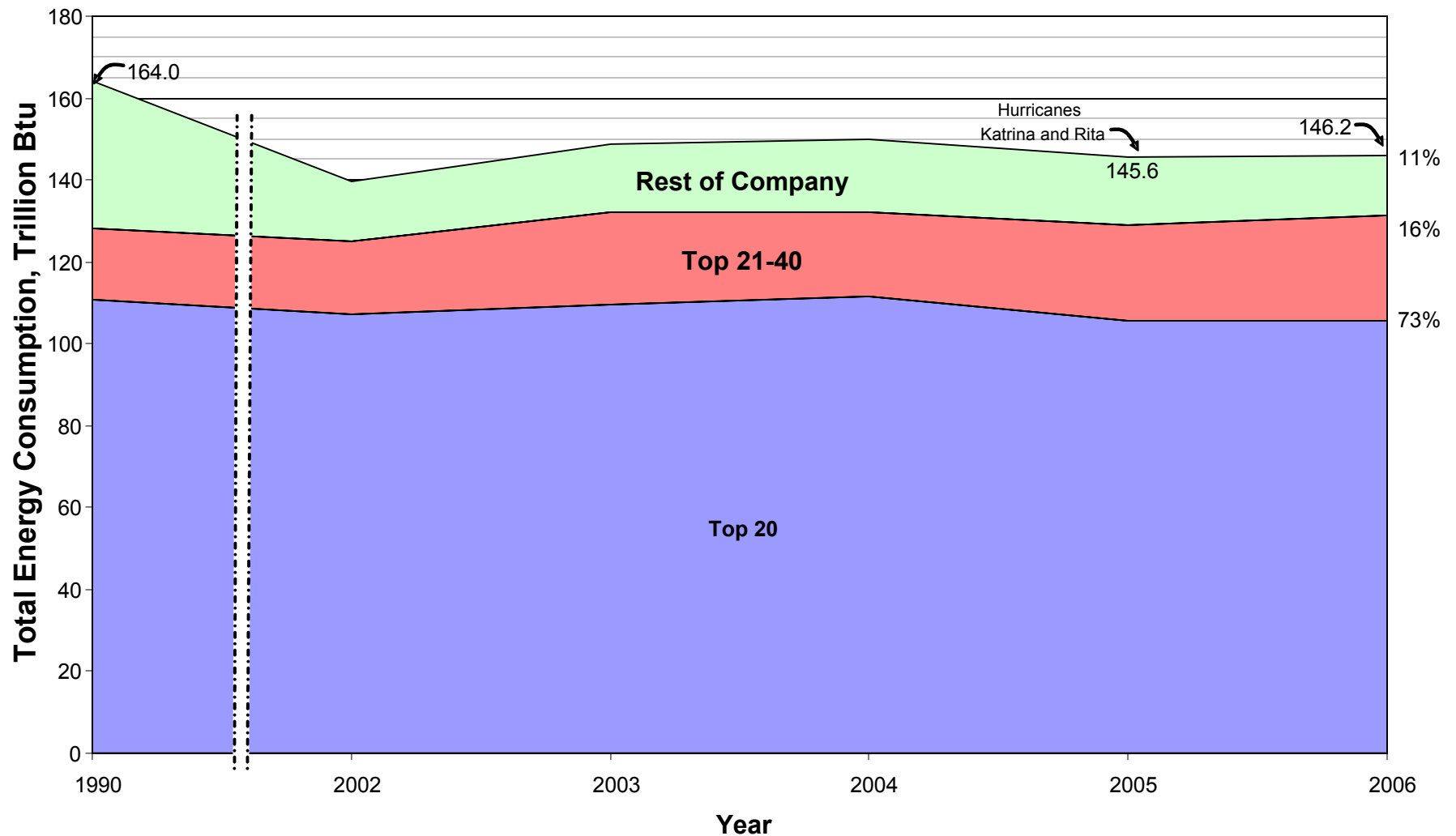


## Current State of Energy Use in DuPont

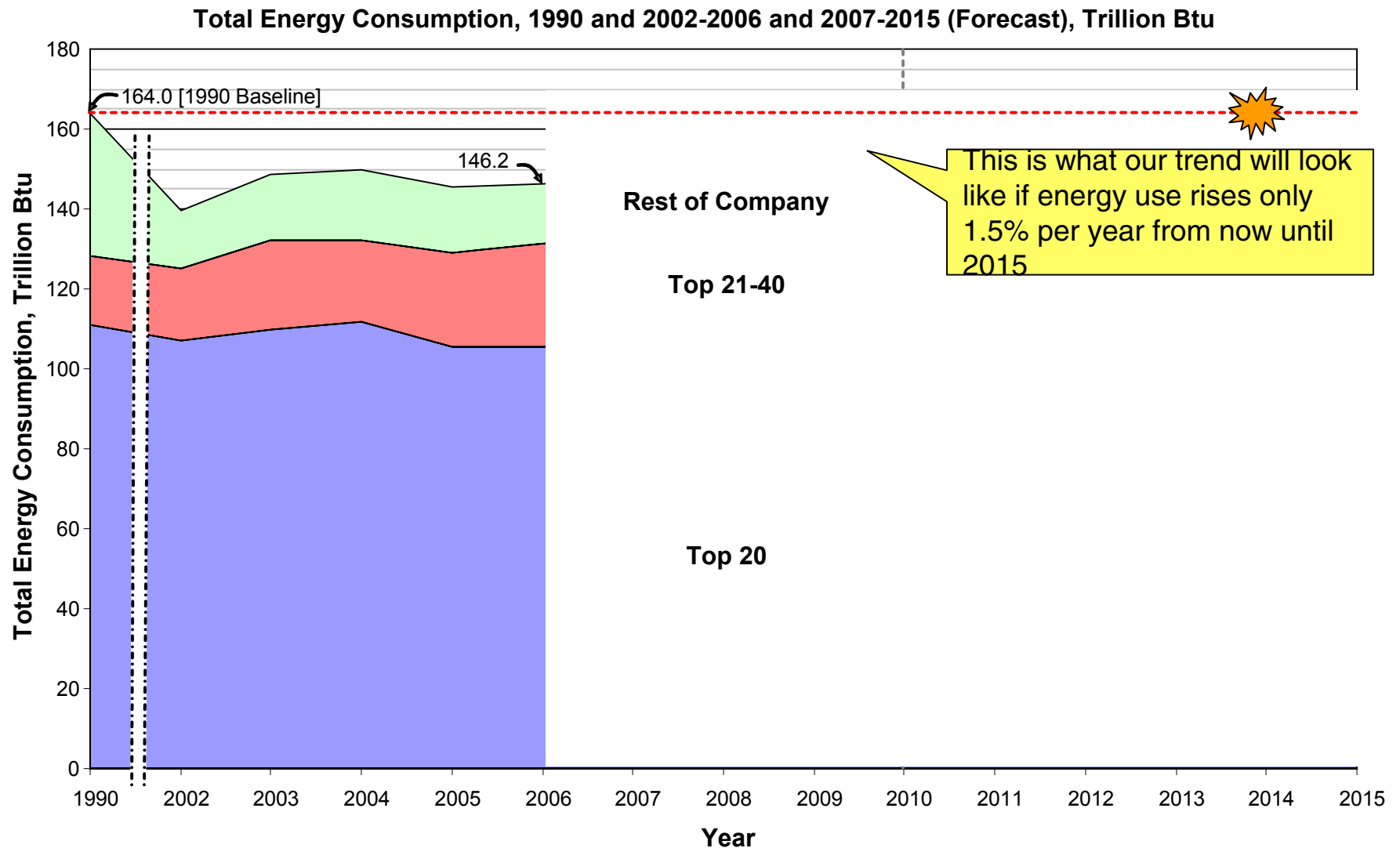
- \$1 Billion annual spend on fuel, steam and electricity
- Natural gas is over 40% of total energy use and growing
- Progress vs. 2010 Energy and Environment Goals
  - Total energy use is **10% below** 1990 “flat” baseline
  - ~**5%** of total energy is sourced **from renewable** resources
  - Greenhouse gas emissions are **down 72%** vs. 1990



# Global Energy Consumption, 1990—2006



# But Can We “Keep On Keeping Flat” vs. 1990?



## How Do We “Keep On Shrinking”?

- We must continue to improve efficiency to meet our goals
- There are 5 primary ways we can do this
  - Find and eliminate operating defects (Six Sigma)
  - Modify equipment to eliminate defects (Capital Set Aside)
  - Implement cogeneration (higher cycle efficiency)
  - Change our processes to improve energy efficiency (R&D)
  - Develop and market less energy-intensive products
- We are aggressively pursuing improvements in all areas
- I would like to highlight two of them



## Eliminate Operations Defects with Six Sigma

- 63 of our largest plants now have “Site Energy Champions” and efficiency programs with annual savings commitments
- Over 500 improvement projects implemented since 2005
- Most improvements driven by “Six Sigma” methodology
- Total year-over-year energy reduction of ~8% (\$90 Million)
- We received a 2005 “Energy Efficiency Award” from the American Chemistry Council for this work
- Outlook: defects will continue to be found, but at lower rate



# Energy Capital Set Aside Program

- We've struggled to fund energy efficiency capital projects
  - Our bias has been to spend limited capital on “growth”
  - Belief is that few opportunities exist with “great” returns
- Experimental “Capital Set Aside” program created this year
  - 1% of capital budget set aside for “good” efficiency projects
- 23 Set Aside projects approved to date
  - Total capital expenditure: \$32 Million
  - Annual footprint impact: 260k Tons CO<sub>2</sub>, 2.8 Trillion Btu (2%)
  - Financial impact: pretax savings of \$35 Million/year, 88% IRR!
- Outlook: Probably not an unlimited supply of these!



# Implications

- Sustained improvement begins with corporate commitment
- Commitment leads to shifts in mindsets and behaviors
  - Not “cost cutting” but “who we are and what we’re about”
- If you’re serious, you:
  - Set aggressive, public goals
  - Track and publish performance over time
  - Drive site improvement with champions and defect programs
  - Put your money where your mouth is (capital set aside)
- Where does that leave you?





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