Going Above and Beyond: ACC Members' Approach to Good Business

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Overview

- Voluntary reporting – Responsible Care®
- Energy and the environment
- Green Chemistry
- HPV Challenge

Responsible Care®

- Global chemical industry performance initiative
- Mandatory for ACC members
- Responsible Care® Management System (RCMS) drives results in pollution prevention and requires third-party verification

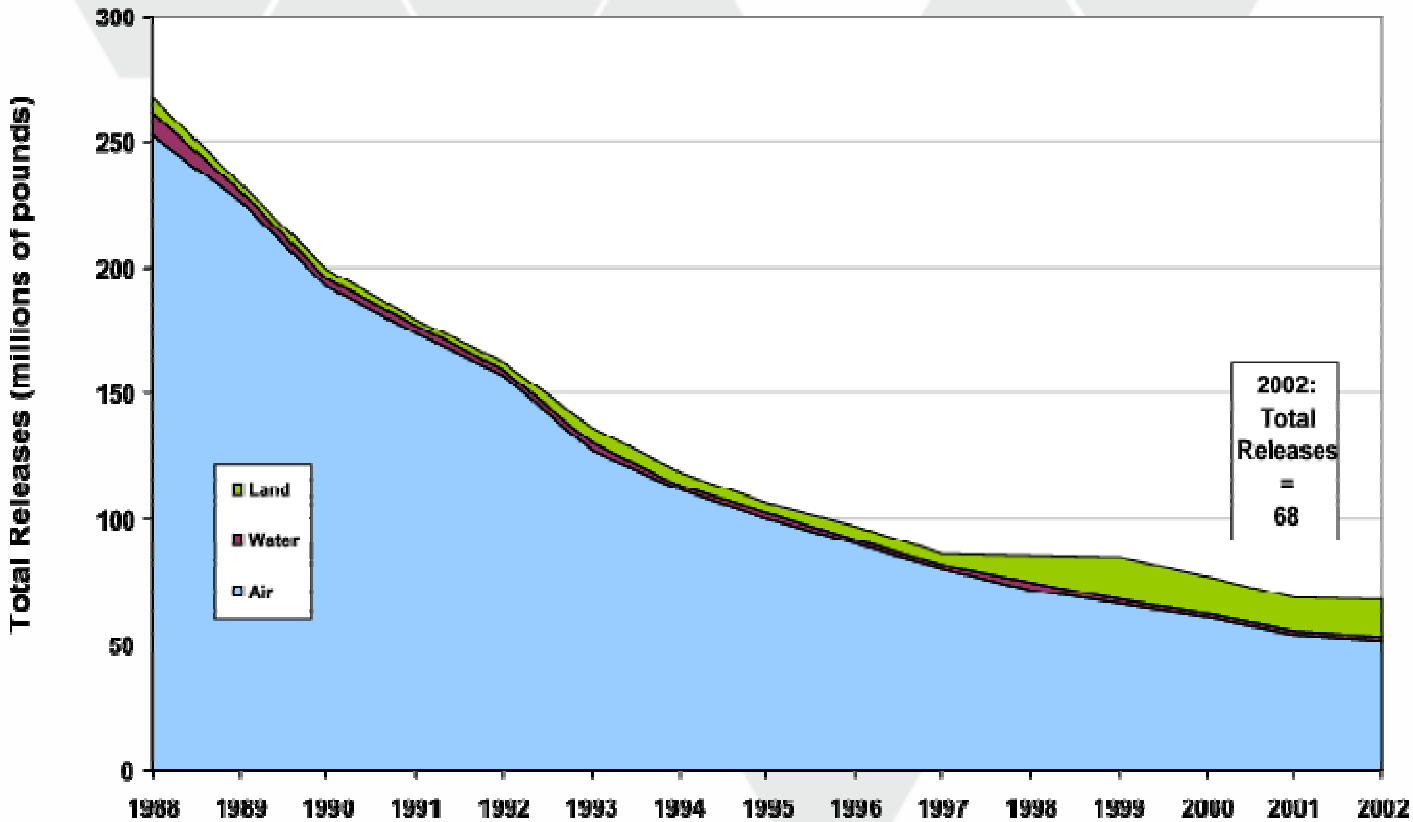
Relevant Performance Measures

- Pounds of TRI releases – air, land, water – separately reported
- Greenhouse gas emissions (pounds of carbon dioxide equivalent net emissions per pound of production)
- Energy efficiency (BTUs consumed per pound of production)

Performance

- Since 1988, the business of chemistry has reduced core emissions by 72% while increasing production by 35%
- Greenhouse gas intensity from members fell 8.6% from 2003-2004
- Energy efficiency of members improved by 6% from 2003-2004, even with a 6.1% increase in output

TRI Data for ACC Companies - Core



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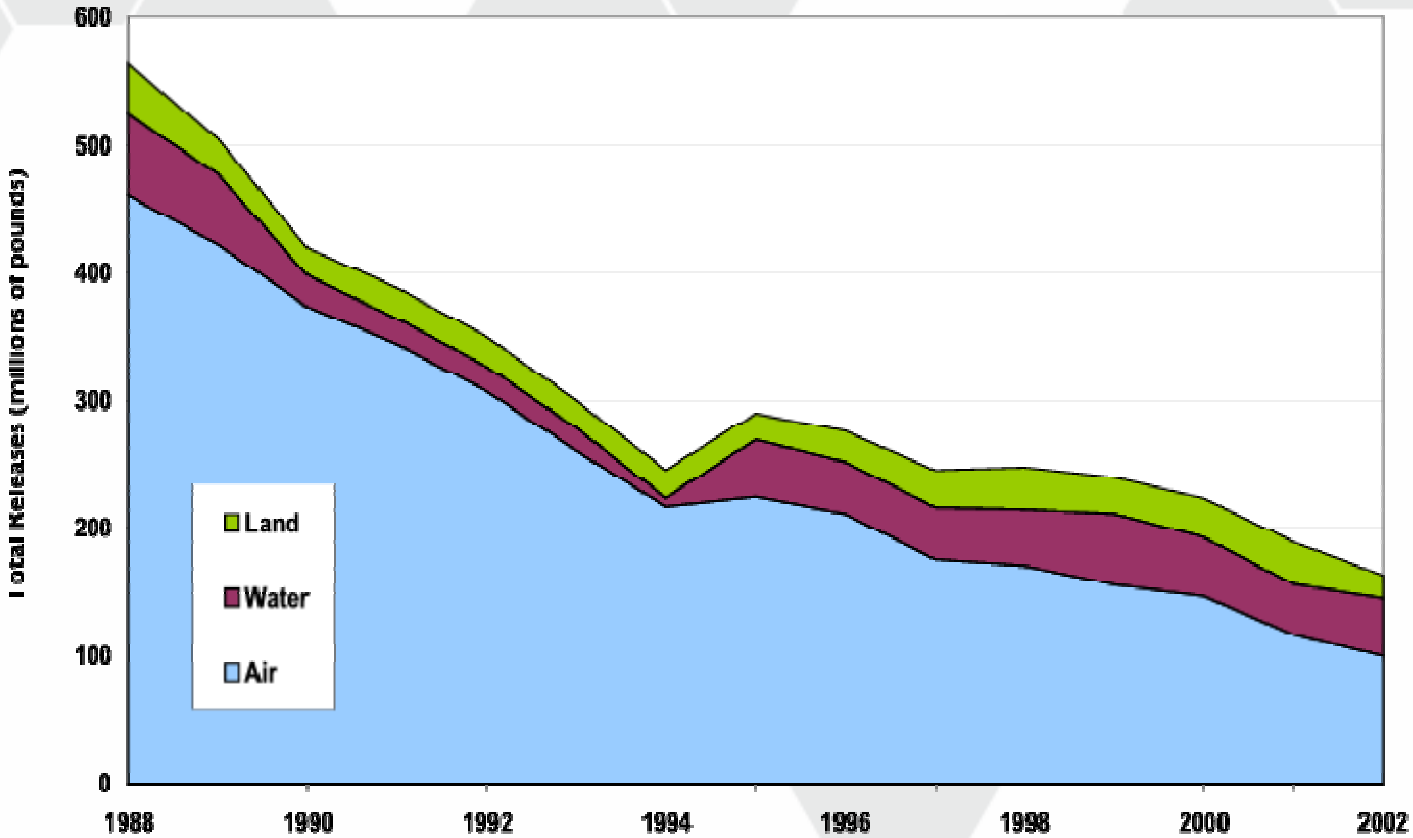
TRI Data for ACC Companies - All



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Voluntary Program Partnerships

- EPA Performance Track: recognition of management system efficiencies in Responsible Care®
- DOE's Climate VISION: ACC has committed to reduce intensity of greenhouse gases by 18% by 2012; achieved 30% reduction since 1990

ACC Members' Goals

- Many ACC members publicly state goals and results for their environment and energy initiatives:
  - DuPont has reduced its emissions of air carcinogens by more than 90% since 1990
  - Dow has reduced its emissions of priority compounds by 84% since 1994

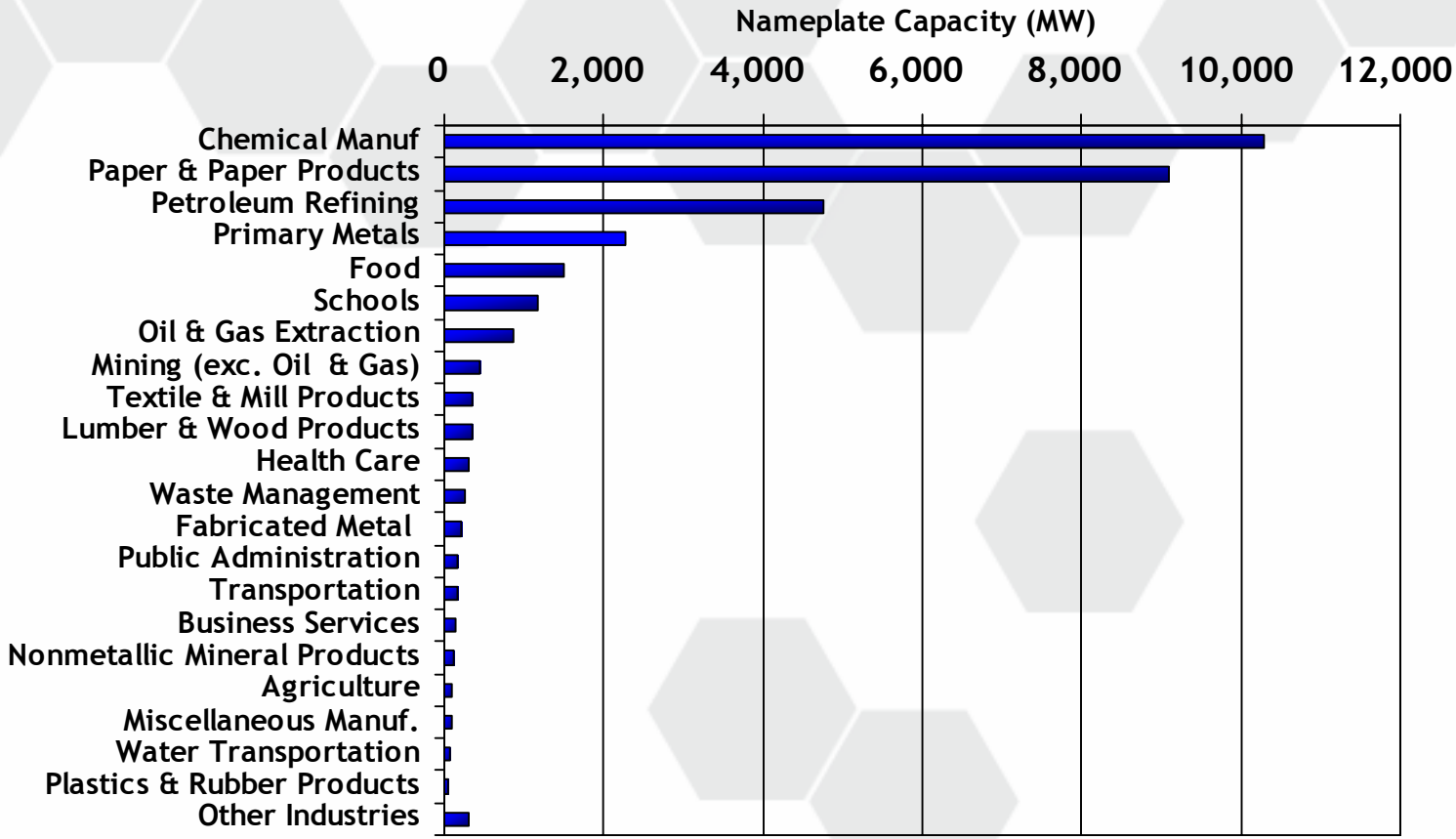
Energy and the Environment

- Since 1974, the chemical industry has reduced its fuel and power energy consumption per unit of output by 46%
- New technologies are allowing ACC members to continue to increase energy efficiencies

Chemical Industry's Electric Generation Capacity

- Chemical industry owns more than 10 Gigawatts of electric generating capacity
- Accounts for 1% of total US generating capacity
- Largest industrial sector owner after utilities
- Highest concentration of chemical industry electric generating capacity in Texas (44%), Louisiana (39%), and Florida (5%)
- Natural gas is the primary fuel for 86% of chemical industry electric generating capacity

Chemical Industry Electric Generating Capacity



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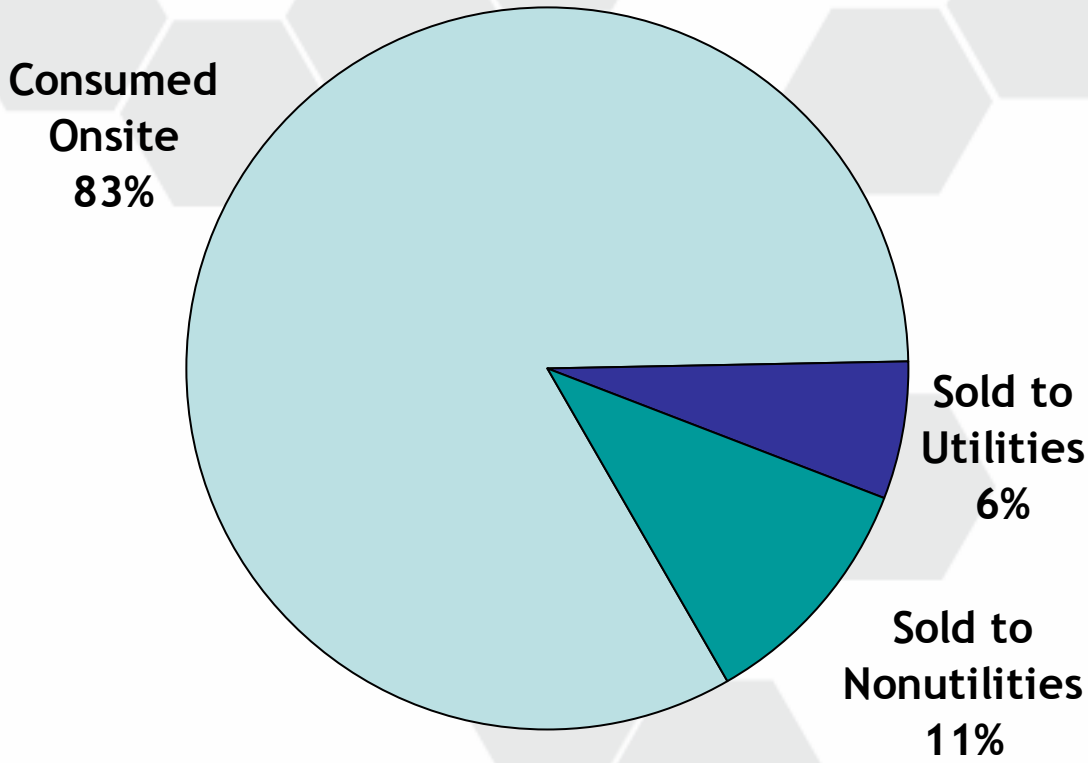
Cogeneration/Combined Heat and Power

- Cogeneration – the simultaneous generation of electricity and steam from a facility that is located at or near the manufacturing site
- Cogeneration facilities are much more efficient (50%) than the older stand alone electric utilities, which typically send large quantities of waste heat into the atmosphere
- Modern cogeneration facilities typically use natural gas as a fuel, emitting much less CO_2 to the atmosphere than typical coal-fired utility units
- Nearly a third of all cogeneration used in manufacturing is conducted by the business of chemistry

Disposition of Chemical Industry Electricity Generation



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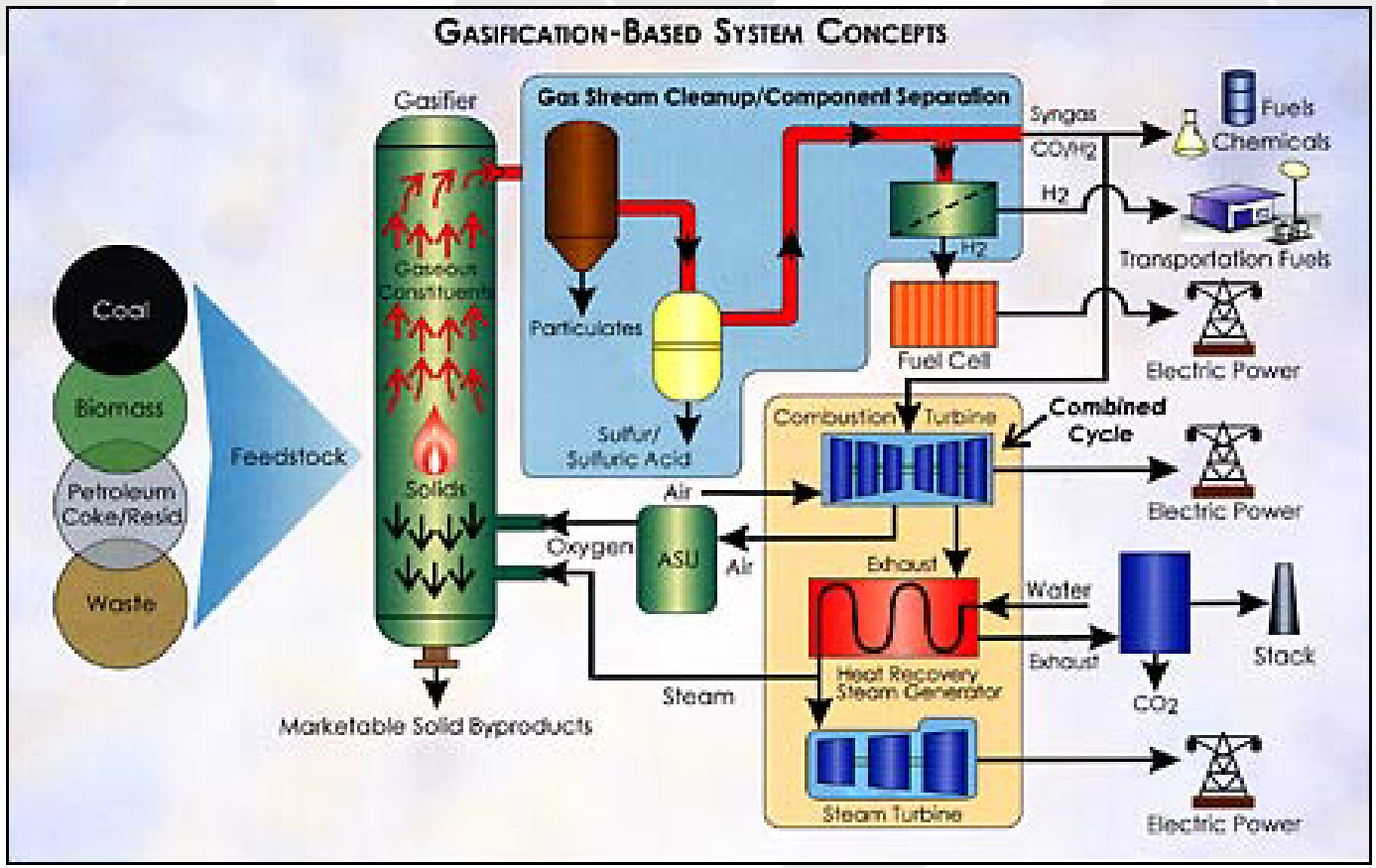
Coal Gasification

- Coal gasification breaks down coal into its basic chemical constituents – CO, hydrogen, and other gaseous compounds.
- Can achieve extremely low SOx, NOx and particulate emissions from burning coal-derived gases
- Energy Policy Act of 2005:
  - $1.8 billion for a 9 year Clean Coal Power Initiative
  - 70% of the initiative funding will be aimed at coal gasification

Coal Gasification Process



Green Chemistry

- ACC members have been routinely awarded for Green Chemistry achievements in resource efficiency, pollution prevention and safety
- Green Chemistry Challenge – Through high level recognition and support by EPA, the Challenge promotes innovative developments in and uses of green chemistry for pollution prevention

Green Engineering

- Green engineering is the design, commercialization and use of processes and products that are feasible and economical while minimizing generation of pollution at the source and risk to human health and the environment.

Green Building

- Sustainable or ‘green building’ design and construction is the opportunity to use our resources more efficiently while creating healthier and more energy-efficient homes
- BASF Near-Zero Energy Home (NJ)
  - Shows how chemistry can help make a house faster to build, affordable to own, and fortified against natural disasters.
  - Houses such as this can be eligible for energy efficiency mortgages and reduced insurance rates.

Green Building

- Plastics are helping to make buildings greener
  - Structural insulated panels (SIPs) made with expanded polystyrene (EPS) can help homeowners save hundreds of dollars annually on heating and cooling bills
  - Roofing systems made with spray polyurethane foam (SPF) offer durability, energy savings and moisture control.
  - Vinyl is found in durable, easy-to-clean vinyl wall coverings and requires only half as much energy to manufacture as alternative materials.

HPV Challenge

- High Production Volume (HPV) Challenge Program -- launched in 1998 in cooperation with EPA and Environmental Defense
- More than 300 companies and consortia volunteered for this ground-breaking program, providing safety information on nearly 95% of U.S. chemical production by volume
- Based on 1990 TSCA Inventory Update

HPV Challenge

- Hazard and screening information was provided on more than 2,200 chemicals
- EPA provides access to data through HPV Information System
- EPA currently completing mechanical screening of data to set future priorities for review

Extended HPV Program

- Voluntary initiative led by industry allowing companies to demonstrate adequate screening data exists for organic HPV chemicals
- Based on chemicals produced in high volumes based on 2002 TSCA Inventory Update
- Includes hazard information, screening level use and exposure information

For more information…

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