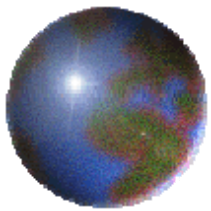


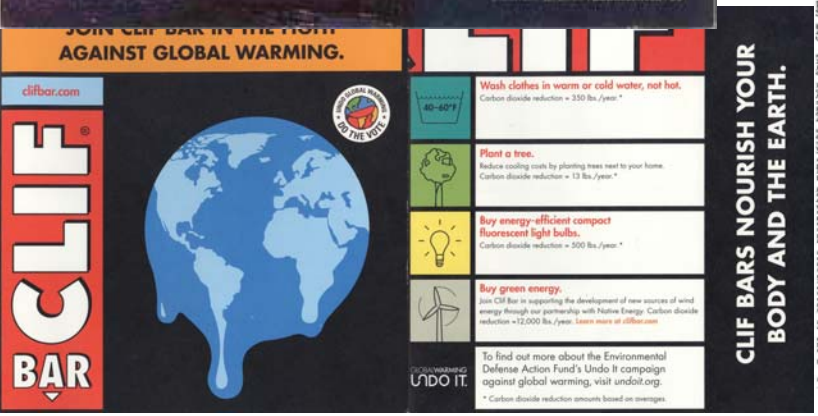
Introduction to U.S. Climate Change Policies – PFC, HFC, and SF_6 Partnerships

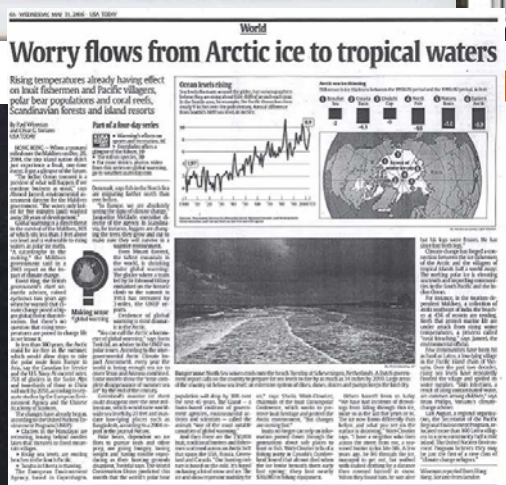
Scott C. Bartos
U.S. Environmental Protection Agency
Climate Change Division
November 29, 2006

bartos.scott@epa.gov

Organization

- Purpose: Provide framework for panel discussion
- Dynamic Policy Landscape
  - International Policies
  - U.S. Policy – 3 elements
    - 1) Slow emissions growth
    - 2) Advance climate science and technology
    - 3) Enhance international cooperation
  - U.S. State & Regional Policies
- Conclusion



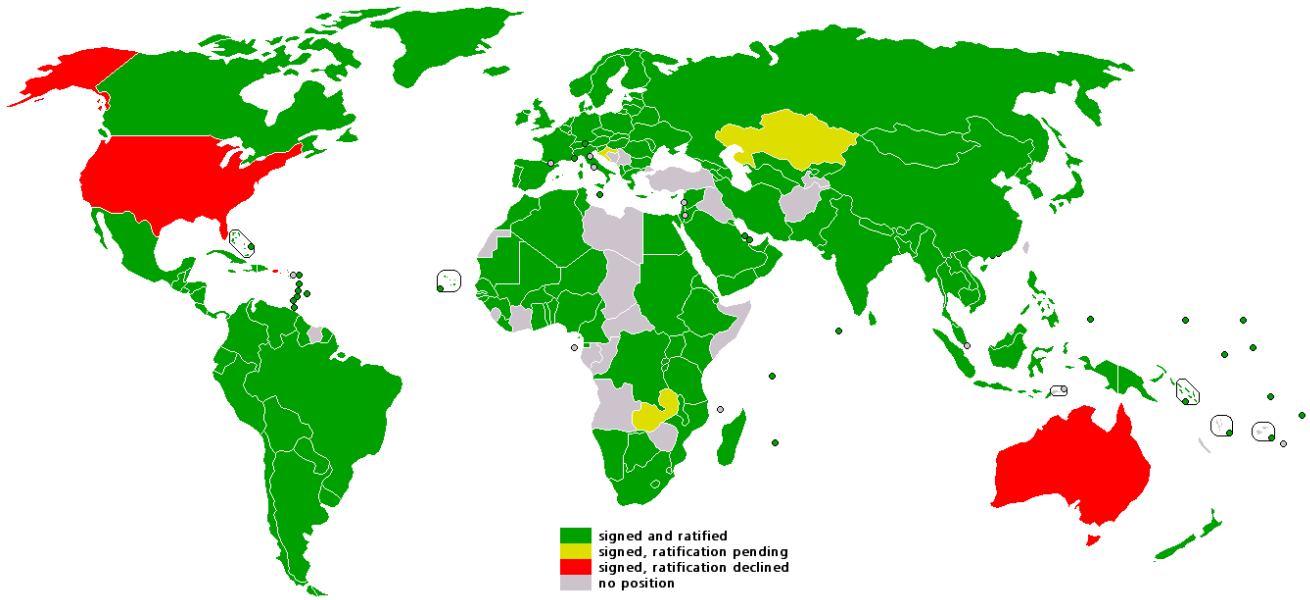


"Changing attitudes towards climate change is not like selling a particular brand of soap – it's like convincing someone to use soap in the first place"

>>Futerra, www.futerra.co.uk

International Coordination

- Kyoto Protocol – entered into force on Feb. 16, 2005
  - 165 countries
    - 1st commitment period 2008 – 2012
  - 61.6% of Annex I (developed) country GHG emissions



Map courtesy of Wikipedia: http://en.wikipedia.org/wiki/Image:Kyoto_Protocol_participation_map_2005.png

Three Elements of U.S. Climate Change Policy

- Slow domestic GHG emissions growth
  - Partnerships challenge businesses (and government) to reduce emissions
    - High global warming potential (GWP) industries
- Advance climate science and technology
  - Annual investment of $5.5 billion for science, technology, and tax incentives
- Enhance international cooperation

U.S. Policy – Slow GHG Emissions Growth

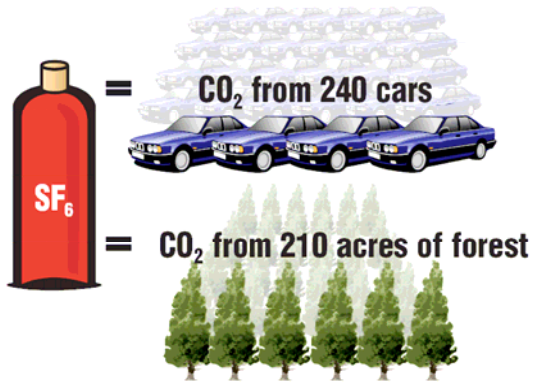
- Reduce U.S. GHG intensity by 18% from 2002 by 2012
  - 2002 = 183 metric tons GHG/$1 million GDP
  - 2012 = 151 metric tons GHG/$1 million GDP
- Voluntary partnerships with industries
  - All major sources of PFCs, HFCs, and SF_6
  - Climate VISION – February 2003, 15 sectors
    - **Aluminum**
    - Business Roundtable
    - Chemical Manufacturing
    - Forest Products
    - Lime
    - Minerals
    - Oil and Gas
    - **Semiconductors**
    - Auto Manufacturers
    - Cement
    - **Electric Power**
    - Iron and Steel
    - **Magnesium**
    - Mining
    - Railroads

Powerful Global Warming Gases

TABLE 25. GLOBAL WARMING POTENTIALS (GWPS) AND ATMOSPHERIC LIFETIMES OF GREENHOUSE GASES

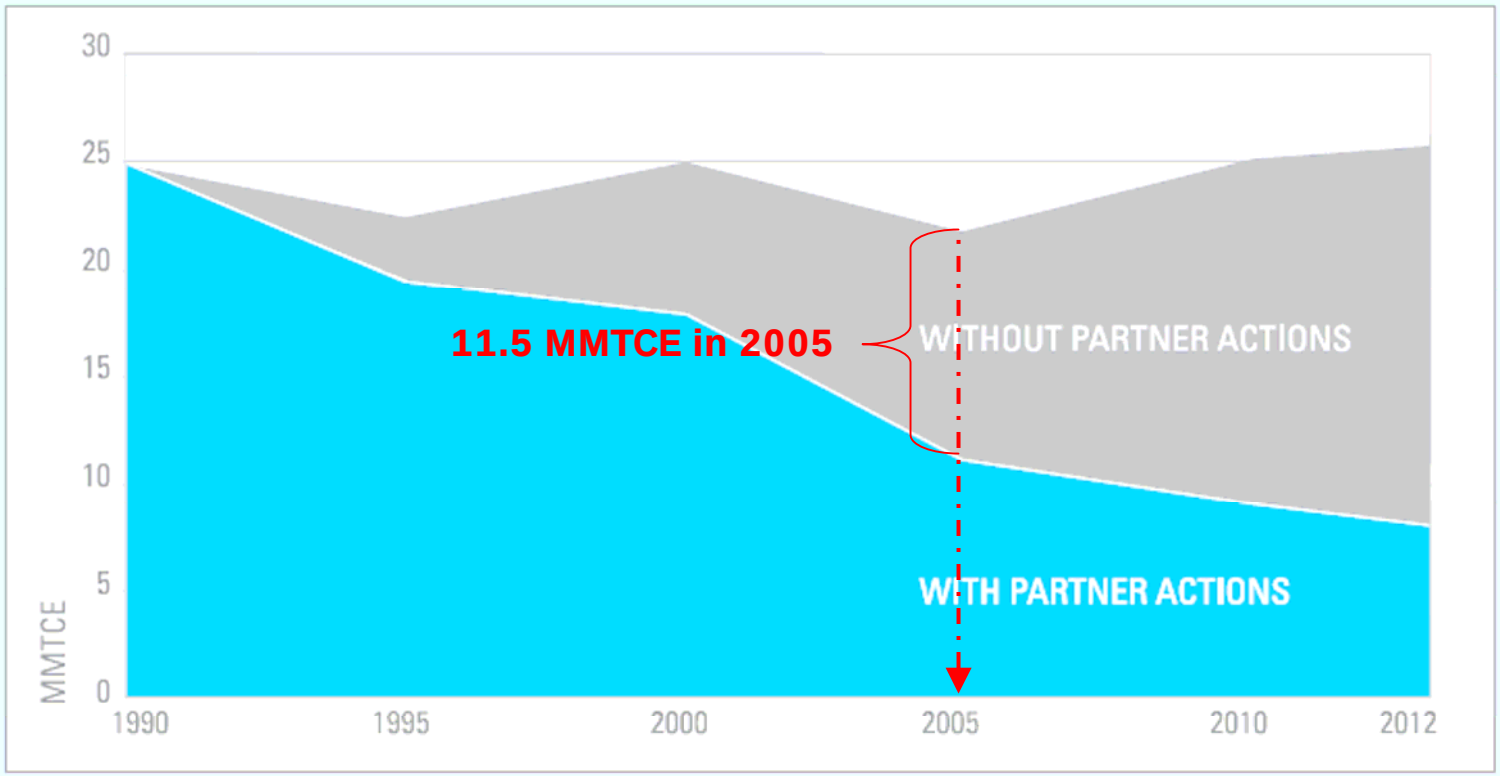
GREENHOUSE GAS	GLOBAL WARMING POTENTIAL FOR 100 YEARS	ATMOSPHERIC LIFETIME (YEARS)
Carbon Dioxide	1	50-200
Methane	21	12± 3
Nitrous Oxide	310	120
Hydrofluorocarbons	140-11,700	1.5-264
Perfluorocarbons	6,500-9,200	3,200-50,000
Sulfur Hexafluoride	23,900	3,200

Source: IPCC 1996



High GWP Industrial Partnership Achievements

FIGURE 19. PARTNER ACTIONS ARE PROJECTED TO MAINTAIN EMISSIONS OF HIGH GWP GASES BELOW 1990 LEVELS THROUGH 2012



EPA's Voluntary Climate Change Programs

Advance Climate Science and Technology

- U.S. Climate Change Science Program (CCSP) responsible for coordinating research across agencies
  - National Aeronautics and Space Administration (NASA) and National Oceanic & Atmospheric Administration (NOAA) are the primary climate science agencies
- CCSP is preparing 21 "Synthesis and Assessment Products" on key climate science issues
  - EPA has lead on 4 reports and contributes to several others
- EPA's Climate Change Division is responsible for broad communication on climate science
  - Website, print materials, and technical conferences

- www.epa.gov/climatechange
- www.climatescience.gov
- www.climatetechnology.gov

Enhance International Cooperation

- U.S. committed to mutual goals of **sustainable development and economic growth**
  - EPA participates in negotiations under the United Nations Framework Convention on Climate Change (UNFCCC)
- Engages in bilateral relationships with key nations

- Supports international efforts:
  - Asia-Pacific Partnership on Clean Development and Climate
  - World Semiconductor Council – PFC / Climate Partnership
  - Capacity building
  - Intergovernmental Panel on Climate Change (IPCC)

Integrated Environmental Strategies

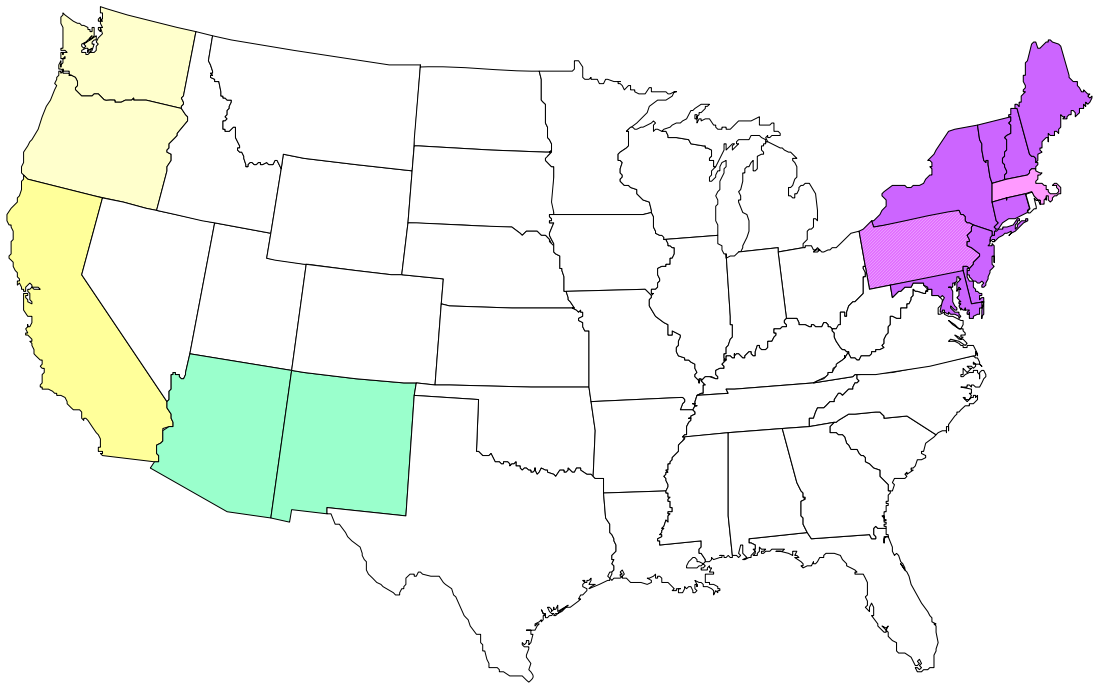
ASIA-PACIFIC PARTNERSHIP ON CLEAN DEVELOPMENT & CLIMATE

IPCC

UNEP

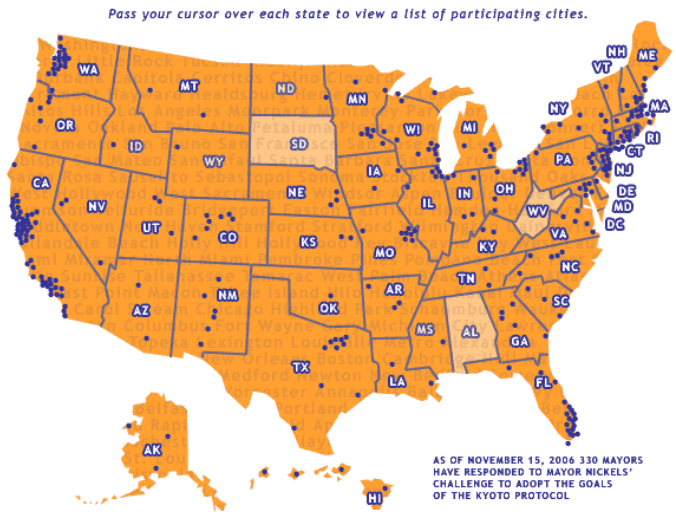
U.S. Regional, State, & Local Climate Change Strategies

- States Forming "Climate Coalitions"
  - Regional Greenhouse Gas Initiative (RGGI)
  - West Coast Governors' Global Warming Initiative
  - Southwest Climate Change Initiative
  - 23 States and D.C. have renewable portfolio standards (RPS)
    - NY seeks 24% by 2013



State & Local Climate Change Policies

- California – August 2006
  - Reduce emissions 25% by 2020
  - World' s 12th largest emitter
- U.S. Mayors Climate Protection Agreement
  - 330 cities, ›53 million citizens
  - Meet or exceed Kyoto goal
    - 7% below 1990 level by 2012
- Boulder, Colorado "Carbon Tax"
  - Reduce carbon emissions by 350,000 metric tons in 2012



Conclusion – Industry Leadership Critical for Success

- Dynamic Policy Landscape
  - Variety of approaches and mechanisms
  - From local to global in scale
- 2012 – U.S. will review progress toward goal and take additional action if necessary
- Today's greatest environmental challenge requires global cooperation
  - Public and private sectors
- Industry leaders have opportunity to improve and advise effective and consistent climate protection policy