

U.S. Climate Protection Partnerships with Industries

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Organization

- Review of Climate Change Science
- Emissions of Concern
- U.S. Climate Policy
- Framework for Cooperation
- EPA Partnerships with Industry
- Conclusion

IPCC 3rd Assessment Report, 2001

- “There is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities.”

and...

- “Human influences will continue to change atmospheric composition throughout the 21st century.”

Heat Trapping Gases

- Carbon dioxide, CO_2
- Methane, CH_4
- Nitrous Oxides, NO_x
- **Hydrofluorocarbons, HFCs**
- **Perfluorocarbons, PFCs**
- **Sulfur Hexafluoride, SF_6**

Chemical Characteristics

Compound	Atmospheric Lifetime (Years)	Global Warming Potential (100-year time horizon)*
CO ₂	200	1
CH ₄	12	21
HFC-134a	14	1,300
CF₄	50,000	6,500
HFC-23	260	12,000
SF₆	3,200	23,900

*IPCC 1995



Kyoto Protocol

- Requires:
 - Binding reductions during 2008-2012
 - Industrialized countries accounting for $\geq 55\%$ CO₂ emissions in 1990
- Enters into force – 2005
 - Russian ratification

US Administration Declines to Ratify Kyoto

Declares Kyoto “Flawed”

- Unworkable without developing countries
- Restrictions might slow economy
- Strengthens Energy Efficiency and Voluntary Programs
- Promises New Approach to Climate Protection

Administration's Approach to Climate Protection

- Slow and Eventually Reverse Growth in GHG Emissions
 - Use the Power of Markets
 - Promote Technological Development and Voluntary Actions with Industries
 - Ensure Economic Growth Through Cost-Effective Actions

US Climate Change Policy I

⌘ Reduce “GHG Intensity” by 18% by 2012

☒ 2002 = 183 metric tons GHG/\$1 million GDP

☒ 2012 = 151 metric tons GHG/\$1 million GDP

⌘ Accelerate scientific research and technology development

⌘ Expand Voluntary Partnerships

⌘ Climate VISION Initiative



US Climate Change Policy II

⌘ Improve emission reduction registry

☑ Revise Department of Energy's 1605(b)

☑ accuracy

☑ reliability

☑ verifiability

⌘ Protect and provide credits for reductions

⌘ Additional actions (if needed) in 2012



Voluntary Industry Initiatives

“Already, agreements with the semiconductor and aluminum industries and others have dramatically cut emissions of . . . the most potent greenhouse gases.”

President Bush, February 14, 2002

EPA's Partnership Framework

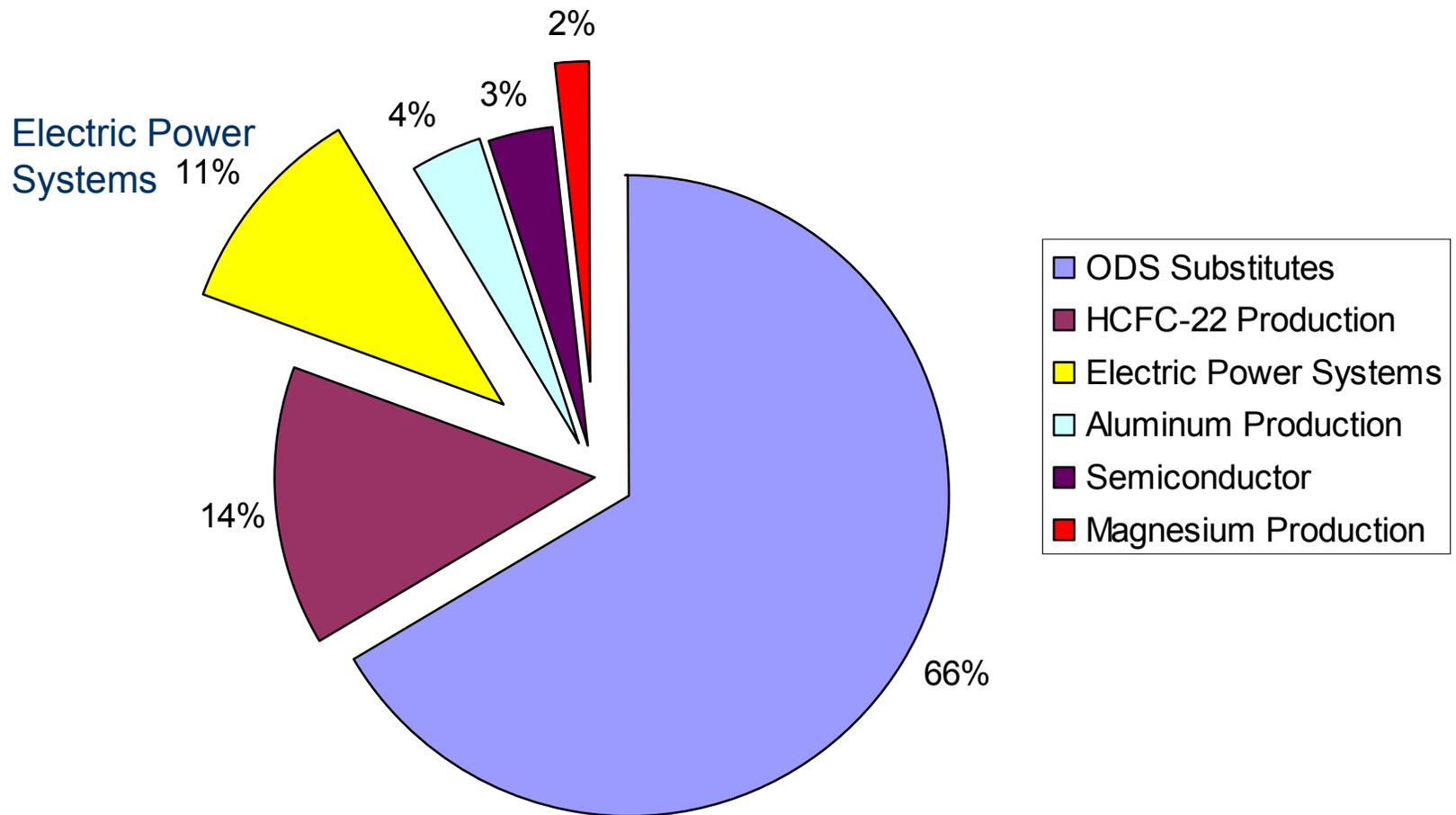
- Understand the industry, emission sources, and environmental concerns
- Open dialogue, seek common interests, draft agreement
 - Environmental stewardship
 - Improve product quality and cost
 - Conserve resources = save money
- Collect data, identify reduction opportunities, garner support
- **Establish Climate Protection Goal**
 - Send clear signal to industry suppliers, policy makers, stakeholders, and NGOs
- Support technical innovation and promote information sharing
- Monitor progress and reward achievements

2002 - High GWP Industrial Sources

⌘ 1/3 of Direct Industrial Process GHG Emissions

- ☒ ODS Substitutes (CFC replacements)
- ☒ Aluminum Production (PFCs)
- ☒ HCFC-22 Production (HFC-23)
- ☒ Semiconductors (PFCs, HFCs, SF₆)
- ☒ Magnesium Production and Casting (SF₆)
- ☒ Electric Power Systems (SF₆)

2002 U.S. Fluorinated GHG Emissions (138.2 MMTCO₂ Eq.)



EPA's Industrial Partnerships Climate Protection Goals

- Aluminum Production (1995)
 - Carbon emissions intensity reduction of 53% from 1990 by 2010
- Semiconductors (1996)
 - Goal 10% below 1995 emissions by 2010
 - U.S. Partners and World Semiconductor Council
- Magnesium Production and Casting (1999)
 - Goal to Eliminate SF₆ Emissions by 2010
 - U.S. Partners and International Mg Association
- Electric Power Systems (1999)
 - Individual Corporate Goals
 - **Largest SF₆ End User, No Industry-wide Reduction Goal**

Conclusion: Power of Voluntary Action

- Increase Certainty for Business Planning
- Lower Overall Costs
- Earn Customer Confidence & Trust of Environmental NGOs
- Protect the Climate
- Environmental Message – Voluntary, Cooperative Programs Work!