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TECHNOLOGIES
FORUM and
Exhibition



April 22–24, 2003

Hyatt Regency on Capitol Hill
400 New Jersey Avenue, N.W.
Washington, D.C.

Conference
Program

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International Climate Change Partnership
Alliance for Responsible Atmospheric Policy

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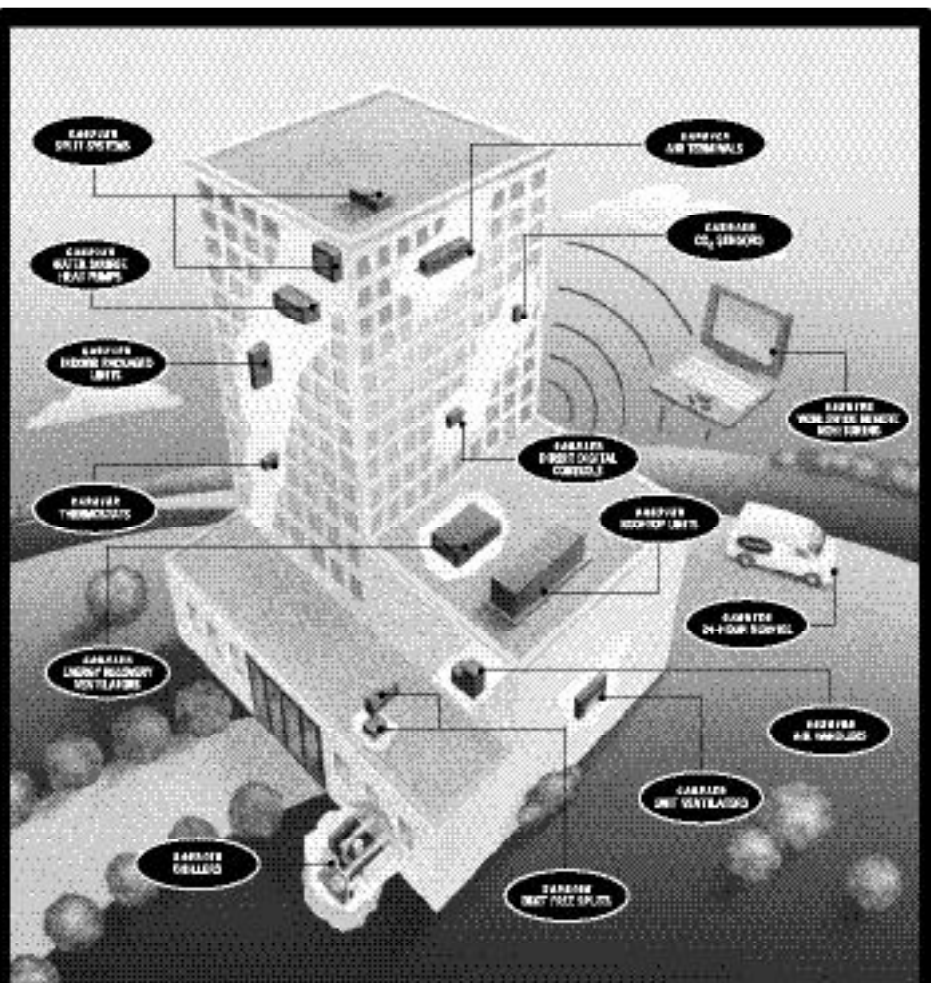
International Climate Change Partnership
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U.S. Environmental Protection Agency
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Using this Program

The Program is arranged by topics. Please refer to the schedule on pages 7-10 for a chronological reference to the Forum.

Proceedings

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Program Committee

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- Denis Clodic, Ecole des Mines de Paris, Paris, France
- Phil Callaghan, European Commission, Brussels, Belgium
- Nick Campbell, ATOFINA, Paris, France
- Alex Cavadias, Environment Canada, Hull, Quebec, Canada
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- Cynthia Cummis, U.S. Environmental Protection Agency, Washington, DC
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- Steve Dunn, U.S. Environmental Protection Agency, Washington, DC
- Kevin Fay, International Climate Change Partnership, Arlington, VA
- Yuichi Fujimoto, Japan Industrial Conference on Ozone Layer Protection, Yokohama, Japan
- Sue Gander, U.S. Environmental Protection Agency, Washington, DC
- David Godwin, U.S. Environmental Protection Agency, Washington, DC
- Susan Haefeli, World Business Council for Sustainable Development, Geneva, Switzerland
- Reid Harvey, U.S. Environmental Protection Agency, Washington, DC
- Kathleen Hogan, U.S. Environmental Protection Agency, Washington, DC
- Drusilla Hufford, U.S. Environmental Protection Agency, Washington, DC
- Kurt Johnson, U.S. Environmental Protection Agency, Washington, DC
- Anhar Karimjee, U.S. Environmental Protection Agency, Washington, DC
- Tom Land, U.S. Environmental Protection Agency, Washington, DC
- Bella Maranion, U.S. Environmental Protection Agency, Washington, DC
- Andrei Marcu, International Emissions Trading Association, Toronto, Canada
- Mack McFarland, DuPont, Wilmington, DE
- Alan Miller, World Bank, Washington, DC
- John Millhone, U.S. Department of Energy, Washington, DC
- Jonathan Pershing, International Energy Agency, Paris, France
- Greg Picker, Australian Greenhouse Office, Canberra, Australia
- Lynn Price, Lawrence Berkeley National Laboratory, Berkeley, CA
- Sally Rand, U.S. Environmental Protection Agency, Washington, DC
- Fred Sciance, General Motors, Detroit, MI
- Rajendra Shende, United Nations Environment Programme, Paris, France
- Katherine Sibold, U.S. Environmental Protection Agency, Washington, DC
- Dave Stirpe, Alliance for Responsible Atmospheric Policy, Arlington, VA
- Paul Schwengels, U.S. Environmental Protection Agency, Washington, DC
- Josee Trudel, Environment Canada, Hull, Canada
- Bill Walter, Carrier, Syracuse, NY
- Larry Wethje, Association of Home Appliance Manufacturers, Washington, DC
- Julia Williams-Jacobse, Ministry of Housing, Spatial Planning and the Environment, The Hague, Netherlands
- Jim Wolf, Trane, Arlington, VA

Schedule of Conference Sessions and Events

Monday, April 21	
4:00 PM – 9:00 PM	<p>■ REGISTRATION Regency Ballroom Lobby</p>
Tuesday, April 22	
7:30 AM – 5:00 PM	<p>■ REGISTRATION Regency Ballroom Lobby</p>
7:00 AM – 8:30 AM	<p>■ COFFEE & REFRESHMENTS Hall of Battles</p>
8:30 AM – 9:00 AM	<p>■ KEYNOTE ADDRESS -p.11 Ticonderoga</p>
9:00 AM – 10:30 AM	<p>■ PLENARY SESSION -p. 11 Ticonderoga</p>
10:30 AM – 11:00 AM	<p>■ EXHIBITS/REFRESHMENT BREAK Columbia Ballroom and Regency A</p>
CONFERENCE SESSIONS	
11:00 AM – 12:30 PM	<p>Climate Change: U.S. Environmental Protection Agency's "Climate Leaders": Successful Strategies for Meeting Greenhouse Gas Reduction Goals – p.12 Columbia B</p> <p>Climate Change: Renewable Energy in Climate Change Mitigation – p.19 Columbia A</p> <p>Energy Efficiency: Energy Saving Technologies and Japan's "Top Runner" Energy Saving Regulation – p.23 Concord</p> <p>Fluorochemicals: Implications of Including HFCs in the Kyoto Protocol While Achieving the Goals of the Montreal Protocol – p.26 Capitol Room</p>
12:30 PM – 2:00 PM	<p>■ LUNCH: See page 11 Ticonderoga <i>Sponsored by CH2M Hill</i></p>
CONFERENCE SESSIONS	
2:00 PM – 3:30 PM	<p>Climate Change: U.S. Voluntary Initiatives to Address Emissions Reduction, Part I – p.12 Columbia B</p> <p>Climate Change: Post-Kyoto: Next Steps in the Climate Change Debate – p.14 Columbia A</p> <p>Ozone Protection: Implementation of the Montreal Protocol – p.20 Concord</p> <p>Motor Vehicle Air Conditioning: Technical Innovations – p.24 Capitol Room</p>

Schedule of Conference Sessions and Events

Tuesday, April 22 Continued

3:30 PM – 4:00 PM	<p>■ EXHIBITS/REFRESHMENT BREAK Columbia Ballroom and Regency A</p>
	CONFERENCE SESSIONS
4:00 PM – 5:30 PM	<p>Climate Change: U.S. Voluntary Initiatives to Address Emissions Reduction, Part II – p.12 Columbia B</p> <p>Climate Change: U.S. Legislation to Address Climate Change – p.14 Columbia A</p> <p>Ozone Protection: Ending Illegal Trade in Ozone-Depleting Substances – p.21 Concord</p> <p>Ozone Protection: EPA's Significant New Alternatives Policy (SNAP): Recent and Future Actions – p.21 Capitol Room</p>
5:30 PM – 8:00 PM	<p>■ EXHIBITS/EVENING RECEPTION — <i>Sponsored by TRANE</i> Columbia Ballroom and Regency A</p>
	Wednesday, April 23
7:30 AM – 5:00 PM	<p>■ REGISTRATION Regency Ballroom Lobby</p>
	CONFERENCE SESSIONS
8:30 AM – 10:00 AM	<p>Climate Change: Cutting Edge Trends, Practices, and Programs – p.13 Columbia B</p> <p>Climate Change: Clean Development Mechanism (CDM) – p.15 Ticonderoga</p> <p>Climate Change: Reducing Greenhouse Gas Emissions and Improving Air Quality: Capturing, Quantifying, and Communicating Co-Benefits in Developing Countries – p.17 Concord</p> <p>Alternative Compounds: HFPEs, HFCs, HFEs, and Other Alternatives – p.25 Columbia A</p> <p>Foams: Blowing Agents in the Next Generation and Past Generations – p.25 Yorktown</p>
10:00 AM – 10:30 AM	<p>■ EXHIBITS/REFRESHMENTS BREAK Columbia Ballroom and Regency A</p>

Schedule of Conference Sessions and Events

Wednesday, April 23 Continued

CONFERENCE SESSIONS	
10:30 AM – 12:00 PM	Climate Change: Emissions Trading, Policy, Corporate Experiences – p.13 Columbia B
	Climate Change: Developing and Verifying Greenhouse Gas Inventories – p.15 Columbia A
	Climate Change: Information Systems That Support Business Efforts to Transfer Technology – p.17 Concord
	Air Conditioning and Refrigeration: Environmental Friendliness, Energy Efficiency and Technological Innovation – p.24 Ticonderoga
	Foams: Transition to Next Generation Blowing Agents – p.25 Yorktown
12:00 PM – 1:30 PM	<ul style="list-style-type: none"> ■ EXHIBITS Columbia Ballroom and Regency A ■ LUNCH on your own
CONFERENCE SESSIONS	
1:30 PM – 3:00 PM	Climate Change: Transacting in Greenhouse Gas Markets – p.13 Columbia B
	Climate Change: Public-Private Climate Partnerships at the Local Level – p.19 Ticonderoga
	Climate Change: International Technology Market Transformation Results – p.18 Columbia A
	Ozone Protection: Refrigerant Management and Compliance – p.23 Yorktown
3:00 PM – 3:30 PM	<ul style="list-style-type: none"> ■ EXHIBITS/REFRESHMENTS BREAK Columbia Ballroom and Regency A
CONFERENCE SESSIONS	
3:30 PM – 5:00 PM	Climate Change: Voluntary Greenhouse Gas Reporting and Crediting under the U.S. Department of Energy's 1605(b) Program – p.15 Columbia B
	Climate Change: Impacts of Climate Change in Developing Countries – p.18 Columbia A
	Ozone and Climate Protection: Estimating Greenhouse Gas Emissions in CFC Replacement Sectors – p.22 Concord
	Ozone Protection: Worldwide Government Attention Concerning Use and Restriction on Ozone-Depleting Substances – p.22 Yorktown
	Motor Vehicle Air Conditioning: Regulatory Innovations – p.24 Ticonderoga

Schedule of Conference Sessions and Events

Wednesday, April 23 Continued	
5:00 PM – 8:00 PM	<p>■ EXHIBITS/EVENING RECEPTION — <i>Sponsored by International Emissions Trading Association</i> Columbia Ballroom and Regency A</p>
Thursday, April 24	
7:00 AM – 1:00 PM	<p>■ REGISTRATION Regency Ballroom Lobby</p>
	CONFERENCE SESSIONS
8:00 AM – 9:30 AM	<p>Climate Change: Trading Emissions Credits Across Different Systems: Voluntary, Mandatory, Absolute, and Relative – p.14 Ticonderoga</p> <p>Climate Change: Prospects for Limiting Growth of China's Greenhouse Gas Emissions – p.19 Concord</p> <p>Climate Change: Sinks and Carbon Sequestration – p.16 Columbia B</p> <p>Fluorochemicals: HFCs Are Energy Efficient, Cost-Effective and Safe Alternatives – p.26 Yorktown</p>
9:30 AM – 9:45 AM	<p>■ BREAK Hall of Battles</p>
	CONFERENCE SESSIONS
9:45 AM – 11:15 AM	<p>Climate Change: Financial Performance - How the Investment Community Can Address Climate Change – p.16 Columbia B</p> <p>Climate Change: Efforts in Developing Countries that Integrate Greenhouse Gas Mitigation with Sustainable Development – p.18 Concord</p> <p>Climate Change: State Emissions Reduction Activities – p.20 Ticonderoga</p> <p>Fluorochemicals: International Programs Addressing HFCs, PFCs, and SF6: Part I – p.27 Yorktown</p>
11:15 AM – 11:30 PM	<p>■ BREAK Hall of Battles</p>
	CONFERENCE SESSIONS
11:30 AM – 1:00 PM	<p>Climate Change: Urban Heat Island Effect – p.20 Ticonderoga</p> <p>Ozone and Climate Protection: Achievements of the Montreal Protocol Multilateral Fund: Successes of Industries in the Developing Countries – p.21 Concord</p> <p>Fluorochemicals: International Programs Addressing HFCs, PFCs, and SF6, Part II – p.27 Yorktown</p>

KEYNOTE ADDRESS

Tuesday, April 22 • 8:30 am - 9:00 am • Ticonderoga

The Honorable Linda Fisher, Deputy Administrator, U.S. Environmental Protection Agency, Washington, DC

PLENARY SESSION

Tuesday, April 22 • 9:00 am – 10:30 am • Ticonderoga

Moderator: Kevin Fay, International Climate Change Partnership, Arlington, VA

David Conover, Director, Office of National Climate Change Technology Initiative, U.S. Department of Energy, Washington, DC
Technology Approach to the Climate Challenge

Susan Solomon, Senior Scientist, National Oceanic and Atmospheric Administration (NOAA); and Co-Chair, Working Group I, Intergovernmental Panel on Climate Change (IPCC), Boulder, CO
Climate Change Ozone Depletion Science Assessments

Bob Page, Chairman, International Emissions Trading Association, Calgary, Alberta, Canada
Emerging Carbon Market and Its Role in Climate Protection

Durwood Zaelke, President, Center for International Environmental Law, Washington, DC
Industry Genius - Ten Examples of Protecting the Climate and Ozone Layer

LUNCH

Sponsored by CH2M Hill

Tuesday, April 22 • 12:30 pm – 2:00 pm • Ticonderoga

The Honorable Timothy E. Wirth, President, United Nations Foundation, Washington, DC

CONFERENCE SESSIONS

■ **Climate Change: U.S. Environmental Protection Agency's "Climate Leaders": Successful Strategies for Meeting Greenhouse Gas Reduction Goals**

Tuesday, April 22 11:00 am - 12:30 pm Columbia B

Moderator: Cynthia Cummis, U.S. Environmental Protection Agency, Washington, DC

Cynthia Cummis, U.S. Environmental Protection Agency, Washington, DC
Setting Greenhouse Gas Reduction Goals

Frank Ericson, SC Johnson & Son, Racine, WI
Energy Cogeneration: A Climate Leaders Case Study

Tom Chizmadia, Holcim, Dundee, MI
CO2 Reduction: More Than a Simple Technological Solution

Al Forte, Pfizer, New York, NY
A Climate Leaders Goal Implementation Plan

■ **Climate Change: U.S. Voluntary Initiatives to Address Emissions Reduction, Part I**

Tuesday, April 22 2:00 pm - 3:30 pm Columbia B

Moderator: Kevin Fay, International Climate Change Partnership, Arlington, VA

Speakers will address President Bush's new voluntary initiatives.

Marian Hopkins, The Business Roundtable, Washington, DC
Climate RESOLVE: Responsible Environmental Steps, Opportunities to Lead by Voluntary Efforts

Eric Holdsworth, Edison Electric Institute, Washington, DC
Power Partners: Meeting the Challenge

Andy O'Hare, Portland Cement Association, Washington, DC
Voluntary Program for the Cement Industry

Ray Ratheal, Eastman Chemical Company, Kingsport, TN
Chemical Industry Pledges Leadership in Cutting Greenhouse Gas Emissions

■ **Climate Change: U.S. Voluntary Initiatives to Address Emissions Reduction, Part II**

Tuesday, April 22 4:00 pm - 5:30 pm Columbia B

Moderator: Kathleen Hogan, United States Environmental Protection Agency, Washington, DC

Speakers will address President Bush's new voluntary initiatives.

Kathleen Hogan, U.S. Environmental Protection Agency, Washington, DC
Bush Administration Voluntary Plan

Sharon Kneiss, American Forest and Paper Association, Washington, DC
Forest Products Industry Pledges 12% Reduction in Greenhouse Gases

Valerie Ughetta, Alliance of Automobile Manufacturers, Washington, DC
Auto Commitment for DOE Climate VISION Program

Helmut Brandt, Lunt Manufacturing, Schaumburg, IL
The Magnesium Industry's Cooperative Actions for Climate Protection

■ **Climate Change: Cutting Edge Trends, Practices, and Programs**

Wednesday, April 23 8:30 am - 10:00 am Columbia B

Moderator: Deborah Miller, Air Conditioning and Refrigeration Institute, Arlington, VA

Steve Harper, Intel, Washington, DC
Energy Efficiency in High Tech: Trends and Challenges

Christopher Bordeaux, U.S. Department of Energy, Washington, DC
Hydrogen, Fuel Cells, and Infrastructure Technologies Program at U.S. Department of Energy

Terry Pritchett, General Motors, Detroit, MI
From Policy to Practice: A Corporate Strategy to Address Climate Change

■ **Climate Change: Emissions Trading, Policy, Corporate Experiences**

Wednesday, April 23 10:30 am - 12:00 pm Columbia B

Moderator: Andrei Marcu, International Emissions Trading Association, Toronto, Ontario, Canada

Companies are operating in an emerging greenhouse gas emissions trading market. This session will explore the choices and the issues involved in corporate trading.

Rich Rosenzweig, Natsource, Washington, DC

Nick Campbell, ATOFINA, Paris, France
European Emissions Trading Directive

David Findlay, DuPont, Toronto, Ontario, Canada

Sumie Nakayama, J Power, Japan

Tom Kerr, U.S. Environmental Protection Agency, Washington, DC
Business Development of Carbon Risk Management Strategies

■ **Climate Change: Transacting in Greenhouse Gas Markets**

Wednesday, April 23 1:30 pm - 3:00 pm Columbia B

Moderator: Andrei Marcu, International Emissions Trading Association, Toronto, Ontario, Canada

This session will address the current activities and practical issues in the greenhouse gas emissions trading market.

Corinne Boone, CO2E, Toronto, Ontario, Canada

Rich Rosenzweig, Natsource, Washington, DC

Mike Walsh, Chicago Climate Exchange, Chicago, IL

Andrew Ertel, New York, NY

Melissa Chan, Department of Energy National Energy Technology Laboratory, Pittsburgh, PA
A Review of Existing Greenhouse Gas Market and Other Incentives for Climate Change Mitigation

-
- **Climate Change: Trading Emission Credits Across Different Systems: Voluntary, Mandatory, Absolute, and Relative**
Thursday, April 24 8:00 am - 9:30 am Ticonderoga

Moderator: Andrei Marcu, International Emissions Trading Association, Toronto, Ontario, Canada

Jonathan Pershing, International Energy Agency, Paris, France

Tom Jacob, Dupont, Wilmington, DE

Andrei Marcu, International Emissions Trading Association, Toronto, Ontario, Canada

Paul Fauteux, Environment Canada, Ottawa, Ontario, Canada

Bruce Brain, American Electric Power

-
- **Climate Change: Post-Kyoto: Next Steps in the Climate Change Debate**
Tuesday, April 22 2:00 pm - 3:30 pm Columbia A

Moderator: Jonathan Pershing, International Energy Agency, Paris, France

David Drake, Department of Foreign Affairs and International Trade, Ottawa, Ontario, Canada

Sarah Hendry, Department for Environment, Food, and Rural Affairs, London, United Kingdom

Ken Okaniwa, Ministry of Foreign Affairs, Tokyo, Japan

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- **Climate Change: U.S. Legislation to Address Climate Change**
Tuesday, April 22 4:00 pm - 5:30 pm Columbia A

Moderator: Tom Cortina, International Climate Change Partnership, Arlington, VA

Speakers will address proposed climate change legislation that is under consideration in the U.S. Congress.

Tim Profeta, Staff of Senator Joseph Lieberman (D-CT), Washington, DC

David Goldston, Staff of Representative Sherwood Boehlert (R-NY), Washington, DC

Bob Meyers, U.S. House Energy and Commerce Committee, Washington, DC

■ **Climate Change: Developing and Verifying Greenhouse Gas Inventories**

Wednesday, April 23

10:30 am - 12:00 pm

Columbia A

Moderator: Kjell Oren, World Business Council for Sustainable Development, Geneva, Switzerland

Mahua Acharya, World Business Council for Sustainable Development, Geneva, Switzerland
Accounting and Reporting Guidance for Greenhouse Gas Reduction Projects

Pankaj Bhatia, World Resource Institute, Washington, DC
GHG Protocol Corporate Accounting and Reporting Standard for Greenhouse Gas Emissions

Karin Ritter, American Petroleum Institute, Washington, DC
Examining Greenhouse Gas Emission Reductions through Estimation Methodologies

Lisa Nelowet Grice, CH2M HILL, Englewood, CO
Obstacles to an Efficient Nexus Between Effective Corporate GHG Inventories and Successful GHG Registries

Rebecca Eaton, World Wildlife Fund, Washington, DC
The Climate Savers Program

■ **Climate Change: Voluntary Greenhouse Gas Reporting and Crediting under the U.S. Department of Energy's 1605(b) Program:**

Wednesday, April 23

3:30 pm - 5:00 pm

Columbia B

Moderator: Reid Harvey, U.S. Environmental Protection Agency, Washington, DC

Margot Anderson, U.S. Department of Energy, Washington, DC
Process for Voluntary Reporting under 1605(b)

Bill Hohenstein, U.S. Department of Agriculture, Washington, DC
Development of Greenhouse Gas Accounting Rules and Guidelines for Agriculture and Forestry Activities

Bill Fang, Edison Electric Institute, Washington, DC
Key Policy Issues in Revising the 1605(b) Guidelines

Harry Kauffman, Johnson & Johnson, Brunswick, NJ
Corporate Views on 1605(b)

David Doniger, Natural Resources Defense Council, Washington, DC
From a Dead End to a New Start

■ **Climate Change: Clean Development Mechanism (CDM)**

Wednesday, April 23

8:30 am - 10:00 am

Ticonderoga

Moderator: Tom Jacob, DuPont, Wilmington, DE

Lex de Jonge, Ministry of Housing, Spatial Planning and the Environment, The Hague, The Netherlands
CDM Implementation: An Attractive Challenge

Kjell Oren, World Business Council for Sustainable Development (WBCSD), Geneva, Switzerland
Engaging the Private Sector in CDM

John Garrison, Business Council for Sustainable Energy, Washington, DC
Getting Started with Small-Scale Projects

Jay Wintergreen, First Environment, Business Council for Sustainable Energy, Boonton, NJ
Validation and Verification Considerations for CDM Projects

Andrew Keck, International Resources Group, Silver Spring, MD
Financial Barriers to Emission Reduction Projects: Expectations and Limits of Using the Clean Development Mechanism

■ **Climate Change: Sinks and Carbon Sequestration**

Thursday, April 24 8:00 am - 9:30 am Columbia B

Moderator: Tom Morehouse, Institute for Defense Analyses, Alexandria, VA

Ben DeAngelo, U.S. Environmental Protection Agency, Washington, DC
Identifying Cost-Effective and Credible Greenhouse Gas Mitigation Activities in U.S. Forestry and Agriculture

Bill Stanley, The Nature Conservancy, Washington, DC
Measuring the CO2 Impacts of Tropical Forest Restoration and Conservation

John Kinsman, Edison Electric Institute, Washington, DC
Electric Power Generators and Terrestrial Carbon Sequestration

■ **Climate Change: Financial Performance - How the Investment Community Can Address Climate Change**

Thursday, April 24 9:45 am - 11:15 am Columbia B

Moderator: Blaine Collison, U.S. Environmental Protection Agency, Washington, DC

Roger Ballentine, Green Strategies, Washington, DC
How the Investment Community Can Tackle Our Greatest Environmental Challenge

Frank Dixon, Innovest Strategic Value Advisors, New York, NY
Strong Energy Management Equals Strong Financial Performance

Blaine Collison, U.S. Environmental Protection Agency, Washington, DC
ENERGY STAR: Helping Investors Improve Corporate Energy Performance

Chris Walker, Swiss Re, Zurich, Switzerland
The Reinsurance Industry's Perspective on Climate Change

Ingrid Dyott, Neuberger Berman, New York, NY
Climate Change as a Critical Investment Issue

■ **Climate Change: Reducing Greenhouse Gas Emissions and Improving Air Quality: Capturing, Quantifying, and Communicating Co-Benefits in Developing Countries**

Wednesday, April 23

8:30 am - 10:00 am

Concord

Moderator: Katherine Sibold, U.S. Environmental Protection Agency, Washington, DC

Many countries are facing what are perceived as conflicting goals — improving air quality and reducing greenhouse gas emissions. Not only is it possible to “integrate” air quality and greenhouse gas mitigation measures, often the combined effect is greater than if they were addressed separately. Studies have shown that there are multiple “co-benefits” associated with clean energy technologies. This session will focus on EPA’s Integrated Environmental Strategies (IES) Program that assists key developing countries to take an integrated approach to addressing local and global issues.

Collin Green, National Renewable Energy Laboratory, Washington, DC

Approach and Framework of the Integrated Environmental Strategies (IES) Program

Mark Heil, U.S. Environmental Protection Agency, Washington, DC

Integrated Environmental Strategies (IES) Case Study: Evaluating Co-Benefits in Seoul

Patricia Osnaya, Instituto Nacional de Ecología, Mexico City, Mexico

Integrated Environmental Strategies (IES) Case Study: Evaluating Co-Benefits in Mexico City

Jayant Sathaye, Lawrence Berkeley Laboratory, Berkeley, CA

Economic Impacts of Technology Options in India

■ **Climate Change: Information Systems That Support Business Efforts to Transfer Technology**

Wednesday, April 23

10:30 am - 12:00 pm

Concord

Moderator: Susan Wickwire, U.S. Environmental Protection Agency, Washington, DC

The session will address how information systems support business efforts to transfer technology. It will include partner company and finance institution representatives.

Tim Conner, Global Environment and Technology Foundation, Annandale, VA; **Ko Barrett**, U.S. Agency for International Development, Washington, DC; **Simone Brant**, U.S. Environmental Protection Agency, Washington, DC

The U.S. Climate Technology Cooperation Gateway

Irving Mintzer, Pacific Institute, Silver Spring, MD

Developing Country Perspectives: Regional Workshops in Asia and Africa

Florin Vladu, United Nations Framework Convention on Climate Change (UNFCCC) Secretariat, Bonn, Germany

TT: CLEAR – The UNFCCC Information Systems for Technology Transfer

Susan Simon, U.S. Department of Commerce, Washington, DC

Information Systems to Promote U.S. Commercial Sales and Investments in Emerging Markets

Joe Romm, Center for Clean Energy Solutions, Annandale, VA

How can Information Systems Effectively Support Business Efforts to Transfer Technology?

■ **Climate Change: International Technology Market Transformation Results**

Wednesday, April 23

1:30 pm - 3:00 pm

Columbia A

Moderator: Richard Bradley, U.S. Department Of Energy; Vice Chair, Expert Group on Technology Transfer, United Nations Framework Convention on Climate Change, Washington, DC

A panel discussion will follow relating to the keys to successful public-private partnerships in developing countries.

Gerald Stokes, Pacific Northwest National Laboratory and University of Maryland, College Park, MD
Energy Efficiency Centers in Eastern Europe and China

Paul Schwengels, U.S. Environmental Protection Agency, Washington, DC
EPA International Partnership Programs – Results and Plans

Eric Martinot, Global Environment Facility (GEF), Washington, DC
GEF Energy Efficiency Market Transformation Programs and Results

Shelley Cohen, AMERESCO, Washington, DC; **Michael Eckhart**, Solar International Management, Washington, DC; **Peter Garforth**, Consultant, Ohio
Keys to Successful Public-Private Partnerships in Developing Countries

■ **Climate Change: Efforts in Developing Countries that Integrate Greenhouse Gas Mitigation with Sustainable Development**

Thursday, April 24

9:45 am - 11:15 am

Concord

Moderator: Alan Miller, World Bank, Washington, DC

Eric Larson, Princeton University, Princeton, NJ
Experience Developing Biomass Power Generation Technology in Brazil

Russ Sturm, International Finance Corporation, Washington, DC
Accelerating The Market for Efficient Lighting: An IFC/GEF Initiative

Mac Cosgrove-Davies, World Bank, Washington, DC
Supporting a Market for Household Solar Systems in Sri Lanka

■ **Climate Change: Impacts of Climate Change in Developing Countries**

Wednesday, April 23

3:30 pm - 5:00 pm

Columbia A

Moderator: Rajendra Shende, United Nations Environment Programme (UNEP), Paris, France

Neil Leary, Assessments of Impacts and Adaptation to Climate Change in Multiple Regions and Sectors (AIACC), Washington, DC
Research and Capacity Building Needs to Support Adaptation to Climate Change in Developing Countries

Jonathan Patz, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD
Health Impacts of Climate Change in Developing Countries

Joan Aron, Science Communications Studies, Columbia, MD
Small Island Developing States: Climate and Health Effects

■ **Climate Change: State Emissions Reduction Activities**

Thursday, April 24

9:45 am - 11:15 am

Ticonderoga

Moderator: Steve Dunn, U.S. Environmental Protection Agency, Washington, DC

Chris James, Connecticut Department of Environmental Protection, Hartford, CT
State and Regional Climate Change Actions

Paul DeCotis, New York State Energy Research and Development Authority (NYSERDA), Albany, NY
The New York Greenhouse Gas Task Force and Plan

David Hurlbut, Texas Public Utility Commission, Austin, TX
The Texas Renewable Portfolio Standard

Jill Gravender, California Climate Action Registry, Los Angeles, CA
The California Climate Action Registry

■ **Climate Change: Urban Heat Island Effect**

Thursday, April 24

11:30 am - 1:00 pm

Ticonderoga

Moderator: Elizabeth Stasiak, International City/Country Management Association, Washington, DC

Eva Wong, U.S. Environmental Protection Agency, Washington, DC
Cooling the Urban Heat Island Overview

Misha Sarkovich, Sacramento Municipal Utility District, Sacramento, CA
Encouraging Action Through Incentives: The Cool Roof Rebate and Shade Tree Planting Program

David Hitchcock, Houston Advanced Research Center, Houston, TX
A Large Scale Heat Island Reduction Action Plan: Lessons from the Houston-Galveston Experience

Steven Walter, Chicago Department of Environment, Chicago, IL
Chicago's Experience

■ **Ozone Protection: Implementation of the Montreal Protocol**

Tuesday, April 22

2:00 pm - 3:30 pm

Concord

Moderator: Dave Stirpe, Alliance for Responsible Atmospheric Policy, Arlington, VA

Tom Land, U.S. Environmental Protection Agency, Washington, DC
U.S. HCFC Allocation System

Melanie Miller, GTZ Proklima, Eschborn, Germany
Progress in Methyl Bromide Phaseout and Remaining Challenges

Pam Wexler, The Cadmus Group, Arlington, VA
Transitioning to CFC-Free Treatments for Respiratory Disease

Duncan Yellen, Enviro, Manchester, UK
HFCs and Their Alternatives in The Reduction of CFC Usage in Metered Dose Inhalers: A Case Study in the European Union

■ **Ozone Protection: EPA's Significant New Alternatives Policy (SNAP): Recent and Future Actions**

Tuesday, April 22

4:00 pm - 5:30 pm

Capitol Room

Moderator: Scott Monroe, U.S. Environmental Protection Agency, Washington, DC

Scott Monroe, U.S. Environmental Protection Agency, Washington, DC
Overview and Future Directions

Bella Maranion, U.S. Environmental Protection Agency, Washington, DC
Fire Suppression

Margaret Sheppard, U.S. Environmental Protection Agency, Washington, DC
Solvents and Adhesives

Suzie Kocchi, Anhar Karimjee, U.S. Environmental Protection Agency, Washington, DC
Foams

Dave Godwin, U.S. Environmental Protection Agency, Washington, DC
Refrigeration and Air Conditioning

■ **Ozone Protection: Ending Illegal Trade in Ozone-Depleting Substances**

Tuesday, April 22

4:00 pm - 5:30 pm

Concord

Moderator: Tom Werkema, ATOFINA, Philadelphia, PA

A video presentation will be included on this panel showing the work of the Environmental Investigation Agency and illegalities they have uncovered.

Bruce Pasfield, United States Department of Justice, Washington, DC
With Demand for CFCs Diminishing, Will HCFC Smuggling be Next?

Ezra Clark, Environmental Investigation Agency, London, United Kingdom
Global Perspective on Illegal Trade

Julius Banks, U.S. Environmental Protection Agency, Washington, DC
New U.S. Petition System for Imports of Ozone-Depleting Substances

■ **Ozone and Climate Protection: Achievements of the Montreal Protocol Multilateral Fund: Successes of Industries in the Developing Countries**

Thursday, April 24

11:30 am - 1:00 pm

Concord

Moderator: Rajendra Shende, United Nations Environment Programme (UNEP), Paris, France

Chinese Industry Representative, Assisted by **Steve Gorman**, World Bank, Washington, DC
China's Mobile Air Conditioning Sector Phaseout: Key Achievements

Brazil Industry Representative, Assisted by **Suely Carvalho**, United Nations Development Programme (UNDP), New York, NY
Foam Sector Phaseout: Polyurethane Industria e Comercio

Iran Industry Representative, Assisted by United Nations Industrial Development Organization (UNIDO), Vienna, Austria
Appliance Sector Phaseout

Suresh Wadhwa, Refrigerant Gas, Manufacturers Association (REGMA), New Delhi, India;
Assisted by **Jim Curlin**, United Nations Environment Programme (UNEP), Paris, France
Customs Training by UNEP: Helping Industry Phaseout Strategy

■ **Ozone and Climate Protection: Estimating Greenhouse Gas Emissions in CFC Replacement Sectors**

Wednesday, April 23

3:30 pm - 5:00 pm

Concord

Moderator: Katie Smythe, Rand, Arlington, VA

Mark Cisneros, Great Lakes, West Lafayette, IN
The Greenhouse Gases Emissions Estimating Consortium (GGEEC)

Denis Clodic, Center for Energy Studies - Ecole des Mines de Paris, Paris, France
Refrigerant Inventories in all Refrigerating and Air-Conditioning Applications

Paul Ashford, Caleb Management Services, Almondsbury, Bristol, United Kingdom
Emissions Modeling Challenges in the Foam Sector

Dan Verdonik, Hughes Associates, Baltimore, MD
Emissions Modeling in the Fire Protection Sector

Dave Godwin, U.S. Environmental Protection Agency, Washington, DC; **Marian Martin Van Pelt**, ICF Consulting, Washington, DC
Modeling Emissions of High Global Warming Potential Gases from Ozone-Depleting Substance Substitutes

Debbie Ottinger, U.S. Environmental Protection Agency, Washington, DC
Needs for Voluntary Data Submissions to Provide Complete Forecasts

■ **Ozone Protection: Worldwide Government Attention Concerning Use and Restriction on Ozone-Depleting Substances**

Wednesday, April 23

3:30 pm - 5:00 pm

Yorktown

Moderator: Julius Banks, U.S. Environmental Protection Agency, Washington, DC

Warren Heeley, Heating, Refrigerating and Air Conditioning Institute (HRAI), Ontario, Canada
Canada's CFC Collection Program

Jan Suurland, Embassy of The Netherlands, Washington, DC
Dutch Programme on the Collection and Treatment of Halon

Peter Johnson, Dascem Europe, Oxfordshire, United Kingdom
Collection and Destruction of Halon in Europe

Eric Kennedy, University of Newcastle, Callaghan, Australia
A Novel, Non-Destructive Process for Treatment of Halon-1211

Fred Arnold, Eco Logic International, Rockwood, Ontario, Canada
CFC Recovery, Recycling and Destruction: Processes to Enhance Environmental Stewardship of CFC Management

■ **Ozone Protection: Refrigerant Management and Compliance**

Wednesday, April 23

1:30 pm - 3:00 pm

Yorktown

Moderator: Josee Trudel, Environment Canada, Hull, Quebec, Canada

Julius Banks, U.S. Environment Protection Agency, Washington, DC
Refrigerant Management and Emissions Reduction: U.S. EPA Regulations

Charlie Garlow, U.S. Environmental Protection Agency, Washington, DC
Voluntary Partnership for Decreasing Emissions in a Specific Sector: A Case Study in Bakeries

Stephan Sicars, GTZ-Proklima, Konigstein, Germany
Refrigerant Emissions in India and Means of Reduction

Jabeen Akhtar, U.S. Environmental Protection Agency, Washington, DC
Prohibition on Converting CFC-11 to CFC -12

Gheorghe Lazanu, Research and Processing Institute for Food and Refrigeration Industries, Cluj-Napoca, Romania
Romania's Refrigerant Management Program

■ **Energy Efficiency: Energy Saving Technologies and Japan's "Top Runner" Energy Saving Regulation**

Tuesday, April 22

11:00 am - 12:30 pm

Concord

Moderator: Yuichi Fujimoto, Japan Industrial Conference on Ozone Layer Protection, Yokohama, Japan

In Japan, the "Top Runner" standard is regulated as a target of energy efficiency or energy saving for several kinds of equipment. The target is set higher than the best-performing level among the current commercialized products for categories of passenger vehicles, trucks, air conditioners, refrigerators, freezers, fluorescent lamps, TV receivers, copiers, computers, magnetic disk drivers and video recorders. Presentations will include manufacturers' technological developments for saving energy from air conditioners and refrigerators.

Yuichi Fujimoto, Japan Industrial Conference on Ozone Layer Protection, Yokohama, Japan
"Top Runner" Standard and Energy Efficiency Improvements in Japan

Shigehiro Uemura, Japan Industrial Conference on Ozone Layer Protection, Tokyo, Japan
Japanese Activities for Global Warming Prevention and Ozone Layer Protection

Masayuki Nonaka, Hitachi Home & Life Solutions, Shimotsuga, Tochigi
Development of Room Air-Conditioner with R410A

Hitoshi Hattori, Toshiba-Carrier Co., Fuji, Shizuoka
Development of Retail Facility & Office Air-Conditioner with R-410a

Kenji Takaichi, Matsushita Refrigeration Company, Kusatsu, Shiga
Development of High Efficiency Freezer-Refrigerator using a Non-Fluorocarbon Refrigerant

Ryuuzaburo Yajima, Daikin Industries, Sakai, Osaka
New Products for Energy Conservation in HFC Applications

■ **Motor Vehicle Air Conditioning: Technical Innovations**

Tuesday, April 22

2:00 pm - 3:30 pm

Capitol Room

Moderator: Erin Birgfeld, U.S. Environmental Protection Agency, Washington, DC

Rob Farrington, National Renewable Energy Laboratory, Golden, Co

Fuel Savings from Efficient Mobile Air Conditioners

Stephen O. Andersen, U.S. Environmental Protection Agency, Washington, DC

Enhanced HFC-134a: Immediate Relief to Greenhouse Gas Emissions

Ward Atkinson, Sun Test Engineering, Scottsdale, AZ

Status of CO₂ and HFC-152a Alternatives to HFC-134a

Denis Clodic, Center for Energy Studies - Ecole des Mines de Paris, Paris, France

Fuel Consumption of Mobile Air Conditioning: Method of Testing and Results

Fred Science, General Motors, Detroit, MI

Reducing Emissions from Mobile Air Conditioners

■ **Motor Vehicle Air Conditioning: Regulatory Innovations**

Wednesday, April 23

3:30 pm - 5:00 pm

Ticonderoga

Moderator: Lambert Kuijpers, Eindhoven University, Eindhoven, The Netherlands

Phil Callaghan, European Commission, Brussels, Belgium

European Commission Poised for Action on HFC-134a Used in MACs: Results of the MAC 2003 Summit

Kevin Nesbitt, California Air Resources Board (CARB), Sacramento, CA

CARB Approach to HFC Greenhouse Gas Reductions in MACs

Erin Birgfeld, U.S. Environmental Protection Agency, Washington, DC

Risk Analysis for CO₂, HFC-152a, and Hydrocarbon Refrigerants in MACs

David Doniger, Natural Resources Defense Council, Washington, DC

Public Interest Partners Can Speed Enhanced and Next Generation MACs

■ **Air Conditioning and Refrigeration: Environmental Friendliness, Energy Efficiency and Technological Innovation**

Wednesday, April 23

10:30 am - 12:00 pm

Ticonderoga

Moderator: Dave Lewis, Lennox International, Dallas, TX

Ken Hickman, York International, York, PA

Assessment of Comparative Testing of HFC and Hydrocarbon Refrigerants

Mark Spatz, Honeywell, Buffalo, NY

HFC-245fa: A Refrigerant Option for Centrifugal Chillers

Akira Sekiya, National Institute of Advanced Industrial Science and Technology, Ibaraki, Japan

Climate-Friendly Alternative Refrigerants: New Evaluations for Sustainability

Mark Spatz, Honeywell, Buffalo, NY
An Evaluation of Options for Replacing HCFC-22 in Commercial Refrigeration Systems

Souhel Stanbouly, Lennox International, Dallas, TX
Feasibility Examination of Hydrocarbon Use in Unitary Products

-
- **Alternative Compounds: HFPEs, HFCs, HFEs, and Other Alternatives**
Wednesday, April 23 8:30 am - 10:00 am Columbia A

Moderator: Steve Bernhardt, Honeywell, Morristown, NJ

John Owens, 3M Performance Materials Laboratory, St. Paul, MN
Greenhouse Gas Emission Reductions Through Use of Sustainable Alternatives

Gary Zyhowski, Honeywell, Buffalo, NY
HFC-245fa in Organic Rankine Cycle Applications

Dean Milbrath, 3M Performance Materials Division, St. Paul, MN
Technology to Replace SF6 as a Cover Gas Agent Over Molton Magnesium

-
- **Foams: Transition to Next Generation Blowing Agents**
Wednesday, April 23 10:30 am - 12:00 pm Yorktown

Moderator: Paul Ashford, Caleb Management Services, Almondsbury, Bristol, United Kingdom

Suzie Kocchi, U.S. Environment Protection Agency, Washington, DC
Regulatory Developments on Foam Issues in the U.S.

David Williams, Honeywell, Buffalo, NY
Environmental, Safety, and Economic Benefits of New Blowing Agents for Insulating Foams

Mason Knowles, Spray Polyurethane Foam Alliance, Arlington, VA
Field Study on Next Generation Blowing Agents

Nancy Seymour, Environment Canada, Hull, Quebec, Canada
Challenges to the Replacement of HCFCs in Spray Foam

Bradford Beauchamp, Stepan Company, Northfield, ILL
Water Blown Rigid Polyurethane Foam and Its Role in the Phaseout of HCFC-141b and HCFC-22

-
- **Foams: Blowing Agents in the Next Generation and Past Generations**
Wednesday, April 23 8:30 am - 10:00 am Yorktown

Moderator: Larry Wethje, Association of Home Appliance Manufacturers, Washington, DC

Ken Wilkes, Oak Ridge National Laboratory, Oak Ridge, TN
Aging of Polyurethane Foam Insulation in Simulated Refrigeration Panels: Four-Year Results with Third Generation Blowing Agents

Peter Kjeldsen, Technical University of Denmark, Lyngby, Denmark
Attenuation of Alternative Foam Blowing Agents in Landfills

Koichi Mizuno, Industrial Technology Center, Nagasaki, Japan
Estimation of Total Amount of CFCs Banked in Building Insulation Foams in Japan

Lionel Palandre, Center for Energy Studies - Ecole des Mines de Paris, Paris, France
Measurement of Remaining Quantities of CFC-11 in Polyurethane Foams of Refrigerators and Freezers at End of Life

Jinhuang Wu, ATOFINA, Philadelphia, PA
Coblown Foams For Improved Fire Performance

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- **Fluorochemicals: Implications of Including HFCs in the Kyoto Protocol While Achieving the Goals of the Montreal Protocol**
Tuesday, April 22 11:00 am - 12:30 pm Capitol Room

Moderator: Mack McFarland, DuPont, Wilmington, DE

Leo Meyer, Intergovernmental Panel on Climate Change (IPCC), Bilthoven, The Netherlands
IPCC Special Report on Alternatives to Ozone-Depleting Compounds: Information and Status

Steve Andersen, U.S. Environmental Protection Agency, Washington, DC
IPCC Special Report on Alternatives to Ozone-Depleting Compounds: Input by the Montreal Protocol Technology and Economic Assessment Panel (TEAP)

Susan Solomon, National Oceanic and Atmospheric Administration (NOAA); and Co-Chair
Working Group I, Intergovernmental Panel on Climate Change (IPCC), Boulder, CO Science and HFCs: IPCC Assessment

Steve Bernhardt, Honeywell, Morristown, NJ
The Climate Change Impact of HFC Technology

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- **Fluorochemicals: HFCs Are Energy Efficient, Cost-Effective and Safe Alternatives**
Thursday, April 24 8:00 am - 9:30 am Yorktown

Moderator: Dave Stirpe, Alliance for Responsible Atmospheric Policy, Arlington, VA

Rich Brown, Dow, Midland, MI
The HFC Advantage in Foam Insulation

Bob Johnson, Whirlpool, Evansville, IN
The Effect of Blowing Agent Choice on Energy and Environmental Impact of a Refrigerator in Europe: A Basic Life Cycle Analysis

James Wolf, American Standard, Arlington, VA
The HFC Advantage in Air Conditioning

John Mandyck, Carrier, Farmington, CT
The HFC Advantage in Commercial Refrigeration

Jim Mullen, Lennox International, Dallas, TX
Energy Consumption and Emission Equivalents: Life Cycle Climate Performance for a 10.5 Kilowatt HFC Heat Pump

■ **Fluorochemicals: International Programs Addressing HFCs, PFCs, and SF6: Part I**
Thursday, April 24 9:45 am - 11:15 am Yorktown

Moderator: Sally Rand, U.S. Environmental Protection Agency, Washington, DC

Phil Callaghan, European Commission, Brussels, Belgium
European Union Regulation on HFCs, PFCs, and SF6

Frank Jensen, Danish Environmental Protection Agency, Copenhagen, Denmark
Effective Implementation of the First European Laws Taxing and Restricting Fluorocarbons

Josée Trudel, Environment Canada, Hull, Quebec, Canada
HFC Emission Reduction Measures in Canada

Jan Suurland, Embassy of The Netherlands, Washington, DC
Dutch Programme on Non-CO2 Greenhouse Gases

Greg Picker, Australian Greenhouse Office, Canberra, Australia
Australian Approach to Addressing High GWP Gases

■ **Fluorochemicals: International Programs Addressing HFCs, PFCs, and SF6, Part II**
Thursday, April 24 11:30 am - 1:00 pm Yorktown

Moderator: Greg Picker, Australian Greenhouse Office, Canberra, Australia

Sally Rand, United States Environmental Protection Agency, Washington, DC
U.S. Approach to Control of HFCs, PFCs, and SF6

Katja Schwaab, German Environment Ministry, Bonn, Germany
German Environment Ministry Consideration of HFC Restrictions

Koichiro Kakee, Ministry of Economy, Trade, and Industry, Tokyo, Japan
Fluorocarbon Policies in Japan

Daniel Lauzon, Solvay Fluorides, St. Louis, MO
The SF6 ReUse Program - A Case Study

Steve Anderson, Australian Fluorocarbon Council, Manuke, Australia
Responsible Use Strategies for Fluorocarbon Use in Australia: An Integrated Approach

HOTEL ACCOMMODATIONS

The host hotel for the conference is the Hyatt Regency on Capitol Hill. The hotel is located three blocks from the U.S. Capitol building and two blocks from historic Union Station. Conference participants can enjoy all of the amenities of this outstanding hotel for the special rate of \$195. Conference participants may make their hotel accommodations directly by calling the Hyatt Regency on Capitol Hill at (202) 737-1234. To ensure receiving the special conference rate, please identify yourself as a participant of the Earth Technologies Forum.

Please make your reservations prior to March 24, 2003. Reservations received after March 24 cannot be guaranteed the special rate and will be accepted on a space-available basis.

EXHIBIT HOURS

Exhibits will be open Tuesday, April 22 and Wednesday April 23. All refreshment breaks and receptions will take place on the exhibit floor.

BADGES

Conference attendees must wear their badges at all times to be admitted into any conference event.

PROGRAM CHANGES

Please refer to the on-site program, available at the registration counters, for changes in speakers and other conference activities. The Conference program will also be updated weekly on the Forum's web site: www.earthforum.com

UNAUTHORIZED SOLICITATIONS

The Earth Technologies Forum (ETF) prohibits business solicitations on the premises of the Hyatt Regency Washington on Capitol Hill by anyone other than the official conference exhibitors.

EPA AWARDS DINNER

The 2003 Climate and Stratospheric Ozone Protection Awards Dinner will be held on Tuesday, April 22 at 7:00 pm at the Hyatt Regency. For information, please call Colleen Morton at (202) 862-1107 or e-mail epaawards@icfconsulting.com.

REGISTRATION HOURS	
Monday, April 21	4:00 pm – 9:00 pm
Tuesday, April 22	7:00 am – 5:00 pm
Wednesday, April 23	7:00 am – 5:00 pm
Thursday, April 24	7:00 am – 12:00 pm

PRE-REGISTRATION

Conference attendees are encouraged to pre-register before the April 8 deadline. Upon arrival to the conference, please pick up your badge, revised program and proceedings CD-ROM at the registration booth in the Regency Ballroom Lobby.

CANCELLATION POLICY

Registration cancellations must be received in writing by April 8, 2003 and are subject to a \$75.00 processing fee. After April 8, payments are non-refundable.



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Please use a separate form for each registrant. Duplicate as needed.

Name: _____
Company/Affiliation: _____
Address: _____
City: _____ State: _____ Country: _____ Zip: _____
Phone: _____ Fax: _____
E-Mail: _____

REGISTRATION FEE:

Pre-registration (until April 8, 2003).....	\$495
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Registration after April 8, 2003.....	\$595

TOTAL ENCLOSED \$ _____

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Registration cancellations must be received in writing by April 8, 2003 and are subject to a \$75.00 processing fee. After April 8, 2003, registration fees are not refundable.

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