### Program At - A - Glance

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<th>Track</th>
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<tbody>
<tr>
<td>Monday, February</td>
<td>3</td>
<td>3:00 PM to 5:00 PM</td>
<td>Regulatory Update</td>
<td>HCL Monitoring</td>
<td>Hg Control Demonstrations</td>
<td>Shale Gas (NG)/Natural Gas</td>
<td>Renewable Energy Mgmt &amp; Planning</td>
<td>Compliance Technologies &amp; Strategies</td>
<td>Carbon Footprint &amp; Green Projects</td>
<td>Fossil Fuel Innovations</td>
</tr>
<tr>
<td>Tuesday, February</td>
<td>4</td>
<td>8:30 AM to 10:30 AM</td>
<td>Regulatory Update - GfG</td>
<td>CEMS &amp; MATS</td>
<td>Hg Control &amp; Activated Carbon</td>
<td>Reducing Energy/Sizing Transmission</td>
<td>Demonstrating Power Plants</td>
<td>Tailoring Rule/NSR/GHG-BACI</td>
<td>Biosolids/ Landfill Gas</td>
<td>Sustainability Projects</td>
</tr>
<tr>
<td>Wednesday, February</td>
<td>5</td>
<td>1:00 PM to 3:00 PM</td>
<td>NAAQS</td>
<td>PM, Opacity &amp; Visibility</td>
<td>Control Technologies</td>
<td>Energy Policy &amp; Security</td>
<td>Renewable Development Analysis</td>
<td>Power Plant &amp; Boiler Optimization</td>
<td>GHG Strategies</td>
<td>Biomass &amp; Cap/Coling in Power Plants</td>
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<tr>
<td>Thursday, February</td>
<td>7</td>
<td>1:00 PM to 3:00 PM</td>
<td>CAA/Bisulfide Fed. Oversight</td>
<td>SO2, SO3, NOx &amp; Additives</td>
<td>Dry Sorbent Injection</td>
<td>Project Finance</td>
<td>Wind</td>
<td>Operations &amp; Management</td>
<td>CA Cap &amp; Trade/ GHG Strategies</td>
<td>Water &amp; Electric Utilities</td>
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<tr>
<td>Thursday, February</td>
<td>8</td>
<td>10:00 AM to 12:00 PM</td>
<td>Compliance Strategies</td>
<td>Cement &amp; PM</td>
<td>MATS</td>
<td>EHS &amp; Risk Management</td>
<td>Solar/PV/Battery/Storage</td>
<td>Coal Ash / CCP</td>
<td>Electric &amp; Natural Gas Vehicles</td>
<td>Water Management</td>
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<tr>
<td>Thursday, February</td>
<td>9</td>
<td>1:00 PM to 3:00 PM</td>
<td>Air Policy &amp; Regulations</td>
<td>Fabric Filters/FM/Opacity</td>
<td>Control Technologies</td>
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**EUEC Super Bowl Party & Welcome Reception**

**When:** Sunday Feb 2nd (3 to 10 pm)

**Where:** Hyatt Regency “Networks” Bar & Grill

Pick up your free drink tickets at Registration
What is EUEC?

The 17th Annual energy, utility & environment conference & expo is USA’s largest professional networking & educational event of its kind held Feb 3-5, 2014 at the Phoenix Convention Center, Phoenix, Arizona.

NETWORK MARKETING WITH 2,000 DELEGATES
at 11 lunches, receptions and breaks in 3-days in 200 company exhibit area.

Who Attended

<table>
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<tr>
<th>Year</th>
<th>Delegates</th>
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<tr>
<td>EUEC2013</td>
<td>1,705</td>
</tr>
<tr>
<td>EUEC2012</td>
<td>2,037</td>
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<tr>
<td>EUEC2011</td>
<td>1,830</td>
</tr>
<tr>
<td>EUEC2010</td>
<td>1,945</td>
</tr>
<tr>
<td>EUEC2009</td>
<td>1,783</td>
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</table>

REGISTRATION COST INCLUDES:

- 11 networking meals tickets for 3 days ( $300 value)
- EUEC Flash Drive with audio - (mailed after event) ($495 value)
- Attend all 600 presentations & exhibits for 3 days

REGISTRATION COST

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<tr>
<th></th>
<th>Nov 1</th>
<th>Dec 1</th>
<th>Jan 1</th>
<th>On-Site</th>
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<tr>
<td>Attendee Full</td>
<td>$795</td>
<td>$895</td>
<td>$995</td>
<td>$1,395</td>
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<tr>
<td>Speaker/Gov’t/VIP</td>
<td>$695</td>
<td>$795</td>
<td>$895</td>
<td>$1,295</td>
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<tr>
<td>One Day conference</td>
<td>$395</td>
<td>$495</td>
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<tr>
<td>Guest Pass</td>
<td>$495</td>
<td>$495</td>
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</table>

Program Agenda

- Preliminary Draft Program
- Track A: Air Policy & Regulations
- Track B: CEMS & Modeling
- Track C: Mercury Multi-Pollutant Control
- Track D: Energy Policy & Security
- Track E: Renewable Energy
- Track F: Operations & Mgmt
- Track G: GHG & Carbon Mgmt
- Track H: Alternative Fuel Technologies & CCS
- Track I: Sustainability & Water
- Track J: Energy Efficiency & Mgmt
- Sunday Workshops

Exhibits

- Exhibit Floorplan
- Exhibiting Companies

Exhibits Floorplan

- Hotels & Area Map
- Exhibit Reservation Form

Marketing Opportunities

Event Sponsorships

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What is EUEC?

Directors and Schedule

Program Agenda

Exhibits

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Exhibit Reservation Form
Directors

**John Kinsman - Senior director, environment, Edison Electric Institute**

The Edison Electric Institute (EEI) is the association of U.S. Shareholder-Owned Electric Companies. Its members serve 95 percent of the ultimate customers in the shareholder-owned segment of the industry, and represent approximately 70 percent of the U.S. electric power industry. EEI also has more than 70 international electric companies as Affiliate Members, and more than 200 industry suppliers and related organizations as Associate Members. Organized in 1933, EEI works closely with all of its members, representing their interests and advocating equitable policies in legislative and regulatory arenas.

**Prabhu Dayal - President, C Trade**

C TRADE is a global renewable energy project development company that has constructed nine turnkey Clean Development Mechanism (CDM) biogas to energy projects using waste manure and biomass to capture methane biogas to produce electricity and finance using carbon credits in the Philippines and India.

**Mike Miller - Director, environment, Electric Power Research Institute**

The Electric Power Research Institute (EPRI), is an independent, nonprofit center for public interest energy and environmental research. EPRI brings together member organizations, the Institute’s scientists and engineers, and other leading experts to work collaboratively on solutions to the challenges of electric power. These solutions span nearly every area of power generation, delivery, and use, including health, safety, and environment. EPRI’s members represent over 90% of the electricity generated in the United States. International participation represents nearly 15% of EPRI’s total R&D program.

**Mitchell Baer - Director, Office of Oil and Gas Analysis, U.S. Department of Energy**

The Department of Energy’s overarching mission is to advance the national, economic, and energy security of the United States; to promote scientific and technological innovation in support of that mission; and to ensure the environmental cleanup of the national nuclear weapons complex.

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**EUEC2014 Exhibit & Network Schedule**

**Sunday | Feb. 2nd**

- 7:00 am - 7:00 pm Registration
- 1:00 pm - 7:00 pm Exhibit Set-up

**Monday | Feb. 3rd**

- 7:00 am - 7:00 pm Registration
- 7:00 am - 10:00 am Carry in Set-up
- 9:00 am - 12:00 pm Plenary Session
- 12:00 pm - 1:00 pm Network Lunch 1
- 1:00 pm - 3:00 pm Tech Session 1
- 3:00 pm - 3:30 pm Network Break 2
- 3:30 pm - 5:30 pm Tech Session 2
- 5:00 pm - 7:00 pm Network Reception 3

**Tuesday | Feb. 4th**

- 7:30 am - 9:30 am Tech Session 3
- 9:30 am - 10:00 am Network Break 4
- 10:00 am - 12:00 pm Tech Session 4
- 12:00 pm - 1:00 pm Network Lunch 5
- 1:00 pm - 3:00 pm Tech Session 5
- 3:00 pm - 3:30 pm Network Break 6
- 3:30 pm - 5:30 pm Tech Session 6
- 5:00 pm - 7:00 pm Network Reception 7

**Wednesday | Feb. 5th**

- 7:30 am - 9:30 am Tech Session 7
- 9:30 am - 10:00 am Network Break 8
- 10:00 am - 12:00 pm Tech Session 8
- 12:00 pm - 4:00 pm Exhibit Tear Down

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**Mission Statement**

EUEC facilitates information exchange and fosters cooperation between industry, government, regulators, academia and stake-holders for the protection of our environment and energy security.

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**Keynote**

**Monday, February, 9:00 AM - 12:00 PM**

**UPDATE ON CLEAN AIR ACT ACTIONS**

Janel McCabe 9:00 AM - 9:30 AM

Acting Assistant Administrator | U.S. Environmental Protection Agency

**ELECTRIC UTILITY SOLUTIONS FOR REGULATORY CHALLENGES**

Alan R. Hodnik — 9:30 AM - 10:00 AM

Chairman, President & CEO | Alliete

**FOSSIL ENERGY AND AMERICA’S ENERGY SECURITY**

Hon. Chris Smith — 10:00 AM - 10:30 AM

Principal Deputy Assistant Secretary | Fossil Energy | U.S. Department of Energy

**PROSPECTS FOR CHANGES IN FEDERAL POLICY**

Phil Sharp — 10:30 AM - 11:00 AM

President | Resource for the Future

**THE CHALLENGE & PROMISE OF ENERGY SYSTEMS INTEGRATION**

Dr. Bryan Hannegan — 11:00 AM - 11:30 AM

Associate Laboratory Director | National Renewable Energy Lab

**HIGHLIGHTS OF EUEC2014**

Dr. Prabhu Dayal — 11:30 AM - 12:00 PM

Chairman | EUEC
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<th>Monday</th>
<th>February 3</th>
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<tr>
<td><strong>A1. REGULATORY UPDATE</strong></td>
<td><strong>A2. REGULATORY UPDATE - GHG</strong></td>
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<tr>
<td><strong>A1.1 CAA REGULATION OF POWER GENERATORS THROUGH 2020</strong></td>
<td><strong>A2.1 UPDATE ON GREENHOUSE GAS NSPS REGULATIONS</strong></td>
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<tr>
<td>(Chair) John Kinsman, Sr. Director - Environment, Edison Electric Institute</td>
<td>Tauna Szymanski, Senior Associate, Hunton &amp; Williams LLP</td>
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<tr>
<td><strong>A1.2 “ALL THE ABOVE” ENERGY POLICY: NOT REALLY</strong></td>
<td><strong>A2.2 MECHANISMS &amp; SCENARIOS FOR REGULATING EXISTING PLANTS UNDER SECTION 111D</strong></td>
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<tr>
<td>Black Andrews, Strategic Environmental Solutions Director, Burns &amp; McDonnell</td>
<td>(Chair) Andrew Byers, Project Manager, Black &amp; Veatch</td>
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<tr>
<td><strong>A1.3 WHERE ARE WE ON INTERSTATE TRANSPORT?</strong></td>
<td><strong>A2.3 UTILITY PERSPECTIVE ON REGULATION OF GHG EMISSIONS FROM EXISTING POWER PLANTS UNDER CAA SEC. 111(D)</strong></td>
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<tr>
<td>Daniel Charter, Director - Environmental Markets &amp; Air Quality Programs, EEI</td>
<td>(Chair) Nicholas Martin, Manager - Environmental Policy, Xcel Energy</td>
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<tr>
<td><strong>A1.5 IMMINENT DEATH OF COAL GENERATION?: AIR, WATER &amp; WASTE REGULATIONS DURING OBAMA’S SECOND TERM</strong></td>
<td><strong>A2.4 PLANTWIDE APPURPABILITY LIMITS &amp; GREENHOUSE GAS EMISSIONS</strong></td>
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<tr>
<td>Jay Holloway, Partner, Winston &amp; Strawn LLP</td>
<td>Ken Snell, Sr. Environmental Consultant, Sargent &amp; Lundy LLC; Laura Schwer</td>
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<tr>
<td><strong>A1.6 THE STATE OF THE NAAQS</strong></td>
<td><strong>A2.5 CLEAN AIR ACT &amp; GREENHOUSE GAS CONTROL COST IMPACTS ON THE REFINING &amp; PETROLEUM INDUSTRY</strong></td>
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<td><strong>A2.6 EPA’S BIOGENIC CO2 DEFERRAL RULE – THE IMPACT OF THE RECENT COURT VACATUR</strong></td>
<td><strong>A2.6 EPA’S BIOGENIC CO2 DEFERRAL RULE – THE IMPACT OF THE RECENT COURT VACATUR</strong></td>
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<td>Scott Osbourn, Practice Group Leader, Golder Associates</td>
<td>Scott Osbourn, Practice Group Leader, Golder Associates</td>
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<tr>
<th>Tuesday</th>
<th>February 4</th>
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<tr>
<td><strong>A3. NAAQS</strong></td>
<td><strong>A4. NSR</strong></td>
</tr>
<tr>
<td><strong>A3.1 DEALING WITH IMPLEMENTATION OF THE 1-HOUR SO2 NAAQS: CHALLENGES &amp; OPTIONS</strong></td>
<td><strong>A4.1 RECENT DEVELOPMENTS IN NSR</strong></td>
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<tr>
<td>(Chair) Robert Paine, Technical Director, AECOM</td>
<td>Gary McClatchen, Principal, RTP Environmental</td>
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<tr>
<td><strong>A3.2 UPDATE &amp; IMPLICATIONS OF THE PM2.5 NATIONAL AMBIENT AIR QUALITY STANDARD, REGULATIONS, &amp; MODELING GUIDANCE</strong></td>
<td><strong>A4.2 THE UTILITY NEW SOURCE REVIEW ENFORCEMENT INITIATIVE – MORE THAN A DECADE OLD &amp; IT KEEPS GOING, &amp; GOING, &amp; GOING</strong></td>
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<td>Robert McCann, Principal, Golder Associates Inc.</td>
<td>(Chair) Makram B. Jaber, Partner, Hunton &amp; Williams LLP</td>
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<td><strong>A3.3 INTERSTATE TRANSPORT IN THE SUPREME COURT: THE COURT CONSIDERS EPA V. EME HOMER CITY GENERATION, L.P.</strong></td>
<td><strong>A4.3 THE NEW ERA OF NEW SOURCE REVIEW SETTLEMENTS: UPDATE ON SETTLEMENTS &amp; CONSENT DEGREE IMPLEMENTATION</strong></td>
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<tr>
<td>E. Carter Chandler Clements, Esq., Associate, Hunton &amp; Williams LLP; Norman Fichthorn</td>
<td>(Chair) Liz Williamson, Partner, Winston &amp; Strawn LLP</td>
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<tr>
<td><strong>A3.4 1-HOUR NO2 MODELING &amp; THE EPA SIL</strong></td>
<td><strong>A4.4 NSR UPDATE 2014 – CONTINUING CHALLENGES TO ELECTRIC UTILITIES</strong></td>
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<tr>
<td>Everest Yan, Senior Engineer, PCR Services Corporation; Heidi Rous</td>
<td>Kenneth Weiss, Partner, ERM</td>
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<td><strong>A3.5 RECENT REDUCTIONS IN NAAQS – GOOD SCIENCE OR PERPETUATION OF DOGMA ON HEALTH CONSEQUENCES OF LOW-LEVEL AIR POLLUTANTS?</strong></td>
<td><strong>A4.5 NSR REFORM RULE-The NEW NSR ENFORCEMENT APPROACH: PRACTICAL CONSIDERATIONS TO AVOID THE NEXT ROUND OF ENFORCEMENT</strong></td>
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<td>(Chair) Lucy Fraser, Principal, Zephyr Environmental</td>
<td>Mark Thimke, Attorney, Foley &amp; Lardner LLP; Michael Zebell, ERM</td>
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<td><strong>A3.6 REGIONAL AIR QUALITY MODELING: ANALYSIS IN THE WEST - BACKGROUND &amp; TRANSPORT FOR NAAQS &amp; OTHER INDICATORS</strong></td>
<td><strong>A4.6 POLLUTION CONTROL PROJECT EMISSIONS INCREASES &amp; PERMITTING IMPLICATIONS</strong></td>
</tr>
<tr>
<td>Tom Moore, Air Quality Program Manager, WRAP/WESTAR</td>
<td>Dave Helm, Environmental Consultant, Sargent &amp; Lundy; Ken Snell</td>
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<td><strong>A5. CAA: STATES RIGHTS VS. FEDERAL OVERSIGHT</strong></td>
<td><strong>A6. COMPLIANCE STRATEGIES</strong></td>
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<td><strong>A5.1 EPA’S STARTUP, SHUTDOWN, &amp; MALFUNCTION SIP CALL TO STATES</strong></td>
<td><strong>A6.1 WHAT IS THE BACKGROUND CONCENTRATION?</strong></td>
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<tr>
<td>Randy Brogdon, Attorney, Troutman Sanders LLP</td>
<td>Gale Hoffnagle, Air Quality Consulting Practice Leader, TRC Environmental Corporation</td>
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<td><strong>A5.2 EPA DISAPPROVAL OF STATE REGIONAL HAZE PLANS</strong></td>
<td><strong>A6.2 SO2 AMBIENT MONITORING CASE STUDY FOR COAL-FIRED POWER PLANTS</strong></td>
</tr>
<tr>
<td>(Chair) Mack McGuffy, Partner, Troutman Sanders LLP</td>
<td>Many Kaplan, Senior Project Specialist, AECOM; Tom Weissinger, Raven Power; Frank Tingale &amp; Robert Paine, AECOM</td>
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<tr>
<td><strong>A5.3 EPA’S DISAPPROVAL OF ARIZONA’S REGIONAL HAZE PLAN</strong></td>
<td><strong>A6.3 HOW TO ADDRESS THE THREATS OF MANDATORY APRIL 2015 LOWER POST MATS SO2 EMISSION LIMITS</strong></td>
</tr>
<tr>
<td>Elic Massey, Air Director, Arizona Department of Environmental Quality</td>
<td>(Chair) Howard Ellis, President, Environmap Consulting; Aten Dittenthaler, Michael Hirtler, Julia Shannon &amp; Ganesh Srinivasan</td>
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<tr>
<td><strong>A5.4 GHG PERMITTING EXPERIENCE IN TEXAS</strong></td>
<td><strong>A6.4 UTILITY &amp; INDUSTRIAL BOILERS &amp; THE NEW COMBUSTION RULES</strong></td>
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<tr>
<td>Lary Moon, Principal, Zephyr Environmental Corporation</td>
<td>Lillian Woolley, Senior Environmental Engineer, Barr Engineering; Erik Boleman</td>
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<td><strong>A5.5 GHG REGULATIONS UNDER THE CLEAN AIR ACT</strong></td>
<td><strong>A6.5 CLOSING THE LOOP ON COMPLIANCE MANAGEMENT</strong></td>
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<tr>
<td>Brian Toth, Manager of Environmental Assessment, Southern Company</td>
<td>(Chair) Margery Moore, Dir. EHS Strategic Alliances, Bloomberg BNA</td>
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<td><strong>A5.6 BETTER THAN BART: AN ALTERNATIVE COMPLIANCE STRATEGY</strong></td>
<td><strong>A6.6 HOW TO GET A COMBUSTION TURBINE PERMITTED IN AN EXPEDITED MANNER – CASE STUDIES FROM RECENT LICENSING PROJECTS</strong></td>
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<tr>
<td>Elic Hiser, Partner, Jorden Bischoff &amp; Hiser, PLC</td>
<td>Anand Yegnan, Senior Consultant, ERM; Julie Ross &amp; Mark Garrison</td>
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**Preliminary Program - Subject to Change**
**A1. AIR POLICY & REGULATIONS**

**A1.1 MAJOR SOURCE BOILER MACT - ARE YOU READY?**
Danielle Musa, Project Engineer, ERMI; Daniel Goldstein

**A1.2 STRATEGIC ENVIRONMENTAL CONSIDERATIONS FOR EGU PROJECTS**
Deborah Walden-Hersh, Manager of Consulting Services - Austin, Trinity Consultants; Paul Greenway and Melissa Dakas

**A1.3 ACCELERATING THE NEPA PROCESS**
(Chair) Carolyn Dunmire, Sr. Project Mgr., Ecosphere Environmental Services; Richard Knox

**A1.4 CONTROLLING GAS EMISSIONS IN THE FUTURE**
(Chair) Sara J. Head, Vice President, AECOM; Bonnie Marin, PhD, Siemens Energy, Inc.

**A1.5 AIR PERMITTING CONSIDERATIONS FOR COMBUSTION TUBE GAS PATH UPGRADES FOR TO IMPROVE OUTPUT & EFFICIENCY**
Jon Perry, Senior Project Manager, ERMI; Robert Fraser & Merritt McGlynn

**A2. CEMS & MATS**

**A2.1 TRU, MACT, MATS**

**A2.1.1 THE FINAL MATS RULE: WHERE ARE WE NOW?**
(Chair) Michael Rosler, Manager - Environmental Programs, EEI

**A2.1.2 MERGENCY IN FUEL & STACK GASES**
Mary Archer, Project Manager, NextEra Energy; Vic Vickery & Roberto Garcia, Portnay Environmental, Inc.; (PEI); Ed Zilloux, Zilloux Environmental, LLC (2xEnv); John Hamp & Mary Archer, NextEra Energy / FPL

**A2.1.3 INTEGRATED ASSESSMENT OF TOXICS IN A SOUTHWESTERN REGIONAL WATERSHED**
Leonard Levin, Technical Executive, EPR; Krith Vijayaraghavan, ENVIRON; Joel Heit, Systech; Robert Goldstein, EPR

**A2.1.4 THE MATS CONUNDRUM**
(Chair) Peter Belmonte, Sr. Partner, ERM; Robert Fraser

**A2.1.5 TUNE-UPS & ENERGY ASSESSMENTS FOR MACT AT UTILITY PLANTS**
Brian Petermann, Manager - Air Quality Compliance, Segia Inc.

**A2.1.6 TRI 101**
Leah Binn, Client Program Manager - Environmental & Infrastructure, CB&I; Amanda Black

**A2.2.1 CEMS & MATS**

**A2.2.1.1 FTIR MEASUREMENTS OF HCL FOR UTILITY & CEMENT INDUSTRIES**
Matt Swanson, VP of Sales, California Analytical Instruments, Inc.; Kevin Ramazan

**A2.2.1.2 TUNABLE DIODE LASER (TDL) BASED HCL CEMS DEVELOPMENT CHALLENGES TO MEET EPA’S DRAFT PERFORMANCE SPECIFICATIONS**
Tim Kuiken, Midwest Regional Sales Manager, Cemtek Environmental; Keith Crabbe

**A2.2.1.3 HCL CONT. EMISSIONS MONITORING USING CAVITY RING-DOWN SPECTROSCOPY**
Curt Dvonch, Sales & Applications Engineer, Tiger Optics; Graham Leggett

**A2.2.1.4 CONTINUOUS MONITORING OF HCL USING FTIR**
(Chair) Sylvie Boschi-Charepenay, Senior Applications Scientist, KMS; P. Zernik & B. Marshik

**A2.2.1.5 MEASURING HCL USING HOT/WET EXTRACTIVE FTIR CEMS**
Luc Sevrette, Manager - CEM Products, Gasmet Technologies; Jim Carri

**A2.2.1.6 CHALLENGES WITH HCL MONITORING & HOW TO SOLVE THEM**
Steve Gibbons, Business Development Manager, ABB Inc.

**A2.3.1 PM2.5 EMISSIONS & COMPLIANCE**

**A2.3.1.1 PM2.5 EMISSIONS & COMPLIANCE CHALLENGES**
Dwain Kincaid, Senior Consultant, Air Quality Services, LLC

**A2.3.1.2 LOW EMITTING ELECTRIC UTILITY STEAM GENERATING UNIT (Lee) STATUS PRESENTS CHALLENGES & BENEFITS**
David L. Blam Jr, Principal, ERM Environmental Corporation

**A2.3.1.3 HG CEMS WITHOUT CALIBRATORS**
(Chair) Richard Hovan, Director Environmental Business Development, Durag Group

**A2.4.1 CEMs & MATS**

**A2.4.1.1 MACT RULE NOTIFICATION & REPORTING REQUIREMENTS**
Steve Norfleet, Project Manager, RMB Consulting & Research, Inc.

**A2.4.1.2 LOW EMITTING ELECTRIC UTILITY STEAM GENERATING UNIT (Lee) STATUS PRESENTS CHALLENGES & BENEFITS**
David L. Blam Jr, Principal, ERM Environmental Corporation

**A2.4.1.3 HG CEMS WITHOUT CALIBRATORS**
(Chair) Richard Hovan, Director Environmental Business Development, Durag Group

**A2.5.1 CEMs & MATS**

**A2.5.1.1 MACT RULE NOTIFICATION & REPORTING REQUIREMENTS**
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David L. Blam Jr, Principal, ERM Environmental Corporation

**A2.5.1.3 HG CEMS WITHOUT CALIBRATORS**
(Chair) Richard Hovan, Director Environmental Business Development, Durag Group

**A2.6.1 CEMs & MATS**

**A2.6.1.1 MACT RULE NOTIFICATION & REPORTING REQUIREMENTS**
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**A2.6.1.2 LOW EMITTING ELECTRIC UTILITY STEAM GENERATING UNIT (Lee) STATUS PRESENTS CHALLENGES & BENEFITS**
David L. Blam Jr, Principal, ERM Environmental Corporation

**A2.6.1.3 HG CEMS WITHOUT CALIBRATORS**
(Chair) Richard Hovan, Director Environmental Business Development, Durag Group

**A3. PM, OPACITY & VISIBILITY**

**A3.1.1 DIGITAL OPACITY MEASUREMENT THE 301 TEST**
(Chair) Shawn Dolan, President, Virtual Technology LLC

**A3.2.1 CONDENSABLE PM MITIGATION USING DSI**
Steve Bologa, V.P. Environmental Services, Novindra Corporation

**A3.3.1 ‘TIS THE SEASON: DRIVERS OF WINTERTIME FINE PARTICULATE POLLUTION IN PHX AZ**
(Chair) Ira Domsky, Planning Consultant to the Director, Maricopa County Air Quality Dept.

**A3.4.1 EXPERIENCE IN USING PCME 181WS (WET STACK PM-CEMS)**
Ed McCalla, General Manager, PCME; William Averbeck

**A3.5.1 USING PAM 2.5 MEASUREMENTS FROM COAL-FIRED BOILERS IN PERMITTING OR EMISSION CALCULATIONS**
Lilian Woolley, Senior Environmental Engineer, Barr Engineering

**A3.6.1 PM2.5 EMISSIONS UPDATE - THREE YEARS LATER DO WE KNOW ANY MORE?**
Bob Farmer, Program Director - Air Quality, ERMI; Jeff Twaddle & Larry Hottenstein
**Tuesday | February 4**

**Track B**

**10AM - 12PM**

**Session Sponsor and Co-Chairs**

James Wacker

**B4. SF6 & EMISSIONS MONITORING**

**B4.1 INTERFERENCE-FREE PLASMONIC MERCURY SENSING IN SIMULATED FLUE GAS**
Joy James, Founder, Picoysune

**B4.2 NEW SULFUR HEXAFLUORIDE MEASUREMENT METHOD**
Bob Mueller, Director - Process Chemicals, Argus Specialty Gases

**B4.3 CONTINUOUS EMISSIONS MONITORING OF SUBSTANTIAL ASSETS**
(Cair) James Wacker, Director of Business Development, INCON

**B4.4 SF6 LEAK DETECTION PROGRAM**
Laura Brewer, Associate Compliance Specialist, Burns & McDonnell; Jerry Bauer

**B4.5 EPRI VEE STUDY**
Allison Dulan, Visible Emissions Consultant, Virtual Technology LLC; Destinee Mack, Mack Inc.

**B4.6 DEMONSTRATION OF A DIFFERENTIAL ABSORPTION LIDAR FOR EMISSIONS MEASUREMENT**
Michael Wojcik, Senior Scientist, Space Dynamics Laboratory; B. Crowther & R. Lemon, Space Dynamics Laboratory Prasad Valupandas; L. Fu, B. Leung, Q. Huda & Z. Yeng, Alberta Environment Environmental Sustainable Resource Development; A. Chambers, Alberta Innovates Technology Futures

**1PM - 3PM**

**Session Sponsor and Co-Chairs**

Deborah Padwater

**B5. SO2, SO3, NOx & ADDITIVES**

**B5.1 SCR BYPASS SYSTEM FOR NOx MEASUREMENTS**
(Cair) Deborah Padwater, Strategic Industry Manager, SICK AG

**B5.2 POWDER-SORBENT ALTERNATIVES TO SO2 FOR ESP CONDITIONING**
Thomas Gale, Director of Technology Development, Novinda Corporation

**B5.3 PSD CRITICAL PROCESSES - MEASURING YOUR PERFORMANCE ON-LINE & IN REAL TIME**
Jeff DeNigris, Sales Mgr - Process, Malvern Instruments Inc.

**B5.4 SELECTION OF A PROPER METHOD FOR MEASUREMENT OF SULFUR TRIOXIDE - SULFURIC ACID MIST EMISSIONS FROM SOLID FUEL & NATURAL GAS-FIRED GENERATION FACILITIES**
Kevin Crosby, VP, Technical, The Avogadro Group, LLC

**B5.5 A MEASUREMENT METHOD FOR ACCURATE DETERMINATION OF H2SO4/SO3 IN COLD FLUE GAS EXHAUST**
(Cair) Curtis Laush, Senior Scientist, Geosyntec

**B5.6 INACCURACIES OF NOx MONITORS & USE OF FUEL FLOW OVER STACK GAS FLOW**
Robert Mullowney, President, Monitor Tech Corporation

**3:30PM - 5:30PM**

**Co-Chairs**

Robert John Schreiber & Robert Baxter

**B6. CEMENT & PM**

**B6.1 USING A NIST-TRACEABLE QUANTITATIVE AEROSOL GENERATOR FOR PM CEMS CALIBRATION**
Jamie Berg, Research Scientist, Cooper Environmental Services; Troy Pittenger & John A Cooper, Cooper Environmental Services; Chuck Dene, EPRI

**B6.2 DIOXIN EMISSION FROM CEMENT KILNS - LESSONS LEARNED**
(Cair) Robert John Schreiber, President, Schreiber Yonley & Associates

**B6.3 CLINKER SUBSTITUTION & THE ROLE OF FLYASH**
John Kline, Principal, Kline Consulting; Charles Kline

**B6.4 IN THE ABSENCE OF DATA, HOW TO ESTIMATE PM2.5 EMISSIONS FOR CEMENT, COAL, AND LIQUEFIED MATERIAL HANDLING**
Mike Riemenschneider, Managing Director, Trinity Consultants; Deborah Walden-Hersh & Kate Gross

**B6.5 A COMPARISON OF PROPOSED PM CPMS LIMITS**
(Cair) Robert Baxter, President, B3 Systems, Inc.

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**Wednesday | February 5**

**Track B**

**7:30AM - 9:30AM**

**Session Sponsor and Co-Chairs**

George Schewe

**B7. MODELING I**

**B7.1 COLLECTING ON-SITE METEOROLOGICAL DATA IS MORE THAN JUST A GOOD IDEA**
Jared Anderson, Senior Air Dispersion Modeler, Wenck Associates, Inc.

**B7.2 ANALYSIS OF REAL-TIME & FORECAST AIR QUALITY MODELING SYSTEM**
(Cair) Jesse The, President, Lakes Environmental Software; B. Matthews & M. Hammer

**B7.3 EVALUATION OF NON-DEFAULT OPTIONS IN AERMOD FOR REPRESENTATIVE INDUSTRIAL EMISSIONS SOURCES**
Idania Zamora, Senior Associate, ENVIRON; Ted Bowie & Snetu Karania

**B7.4 DISPERSION MODELING AS A TOOL FOR NONATTAINMENT STUDIES FOR SO2 - A CASE STUDY FOR UTILITIES IN NORTHEAST OHIO**
(Cair) George Schewe, Principal Consultant, Trinity Consultants; Dr. Abhishek Bhat

**B7.5 VARIABLE EMISSIONS IN AIR QUALITY MODELING**
Richard Harnell, Air Quality Meteorologist, ERMI; Beth Barfield & Mark Garrison

**B7.6 INVESTIGATION OF BORON BEHAVIOR IN COAL-FIRED POWER PLANT**
Naoki Niida, Research Scientist, Central Research Institute of Electric Pwr. Industry; Shigeki It

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**8:15AM - 10AM**

**Session Sponsor and Co-Chairs**

Vishal Bansal

**B8. MODELING II**

**B8.1 MACT, MATS, & MODELING: ONE "M" LEADS TO ANOTHER**
Richard Harnell, Air Quality Meteorologist, ERMI

**B8.2 USING DISPERSION MODELING & THERMAL RADIATION MODELING FOR AN LNG STORAGE FACILITY SAFETY STUDY**
John Hinckley, Senior Consultant, RSG, Inc.

**B8.3 EVALUATION OF NO2 PREDICTIONS BY THE PLUME VOLUME MOLAR RATIO METHOD (PVMMR) & OZONE LIMITING METHOD (OLM) IN AERMOD USING NEW FIELD OBSERVATIONS**
Vincent Tino, Senior Consultant, Epsilon Associates, Inc.; E. Hendrickx, S. Hanna & B. Egan

**B8.4 BACKGROUND CORRECTED AMBIENT NO2 MEASUREMENTS**
(Cair) Thomas McKarns, President & Owner, ECO PHYSICS; W. Moser, ECO PHYSICS AG

**B8.5 AIR QUALITY IMPACT MANAGEMENT SYSTEMS FOR INDUSTRIAL UTILITIES USING COMPREHENSIVE AIR QUALITY MODELS**
Roberto San Jose, Professor, UPV; J. Pérez, R. González, A. Zamora, A. Yoldí & N. Clifuentes

**10AM - 12PM**

**Co-Chairs**

Vishal Bansal & Shulong Li

**B9. FABRIC FILTERS/PM/OPACITY**

**B9.1 NOVEL FABRIC FILTER FOR SUSTAINED REDUCTION OF HG EMISSION**
(Chair) Shulong Li, Senior Scientist, Milliken and Company

**B9.2 DESIGN CONSIDERATIONS FOR FABRIC FILTERS W/ EXTREMELY LOW EMISSION RATES**
Michael Widico, Vice President, KC Coffrel Inc.

**B9.3 DSI IMPACT ON VISUAL OPACITY**
Anthony Silva, Advisory Engineer, Babcock & Wilcox; Robert Snyder

**B9.4 FABRIC FILTER MEDIA INNOVATION FOR COAL-FIRED POWER PLANTS**
(Chair) Vishal Bansal, Principal Engineer, CLARCOR Industrial Air, Formerly GE Power & Water’s Air Filtration; Jeff Ladwig

**B9.5 NEW CONTINUOUS OPACITY MONITORING SYSTEM QA/QC & OPERATIONAL REQS**
Dave Ostaszewski, Senior Managing Engineer, O’Brien & Gere

**B9.6 REDUCING EMISSIONS WITH DONALDSON MEMBRANE’S TETRATURE® EPTFE FILTER MEDIA**
Edward Ricketts, Account Manager, Donaldson Membranes; Jim Griffin

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**Preliminary Program - Subject to Change**
C1. HG CONTROL DEMONSTRATIONS

C1.1 FLEXIBLE FEED SYSTEMS COMPATIBLE W/ A RANGE OF ENV. CONTROL REAGENTS
Cliff Brown, VP Applied Engineering, Novinda Corp.; James Bux & Benjamin Bernardo, Novinda; Andrés Orlando, Jeniikie & Johanson

C1.2 AUTOMATING MERCURY COMPLIANCE ON EGUS WITH WFGDS
(Chair) Bruce Keiser, Research Fellow, Nalco; John Meier, JerryYuan & Tommy Chen

C1.3 MERCURY COMPLIANCE WITHOUT CO-BENEFITS ACHIEVED USING ACI
(Chair) Noah Weeks, Research Engineer, Southern Company; Brad Donat

C1.4 BASF’S MERCURY SORBENT HX(TM) - A MERCURY MATS COMPLIANT TECHNOLOGY
William Hinz, Technical Projects Manager, BASF; Fabien Roiuel PhD & XiaoLin Yang PhD

C1.5 KILL TWO POLLUTANTS W/ ONE SORBENT - COMBINED HG & SO3 CTRL USING SBS INJECTION
Stefing Gray, Business Development Manager, URS Corporation; Ramsay Chong, EPRI; Carl Richardson & John Curie, URS

C1.6 RE-EMISSION DRIVERS & OPTIONS
Philip Elliott, Business Unit Manager - Engineering Services, STEAG Energy Services LLC

C2. HG CONTROL & ACTIVATED CARBON

C2.1 MORE THAN “JUST CARBON.” HOW ADVANCED ACTIVATED CARBON PRODUCTS & TECHNOLOGIES & ENHANCED VALUE FOR SPECIFIC CUSTOMER NEEDS
Richard Minna, Senior Research Associate, Calgon Carbon Corporation

C2.2 EMO ©
(Chair) Bobby Chen, Client Program Manager, CB&I; Randall Moore

C2.3 MATS HG COMPLIANCE WITH TEXAS LIGNITE & PRB BENDS
Marcus Sylvestre, Vice President of Sales, Midwest Energy Emissions Corp.

C2.4 MAXIMIZING MERCURY OXIDATION BY SCR FOR MATS COMPLIANCE
Bruce Keiser, Research Fellow, Nalco, an Ecolab Company; Stephen Potter, Duke Energy; John Meier, Bradley Bartz & EdGRADEck, Nalco

C2.5 ASSESSING FGD CORROSION RISK FOR BROMINE-BASED HG CONTROL TECH.
Gary Byrthe, Project Manager, URS Corporation; John Grocki, Advantage Resources Consulting, LLC; Ben Bayer, URS Corporation; Casey E. Smith, LCBRA

C2.6 LATEST RESULTS IN ADVANCED POWDERED ACTIVATED CARBON MERCURY CONTROL
(Chair) Joe Wong, CTO, ADA Carbon Solutions; Robert Huston & Sheila Glemsmann

C2.7 HOLISTIC PERSPECTIVE ON MERCURY REMOVAL FROM FLUE GAS
Barna Heidel, Head of Dept., U of Stuttgart, IFC; T. Schwartzmeil, F. Silvio & G. Schellknecht

C3. CONTROL TECHNOLOGIES

C3.1 IMPROVED DSI PERFORMANCE WITH OPTIMIZED HYDRATED LIME
(Chair) Jim Dickerman, Director Flue Gas Treatment, Lhoist N. America; Melissa Sewell

C3.2 DDS SCRUBBER HUMIDIFICATION SYSTEM – KEY ASPECTS IN THE DESIGN, O&M
Robert Van Durme, P.E., Market Manager - FGD, Lechler Inc.

C3.3 AMENDED SILICATES AS-HG AS A COST-EFFECTIVE OPTION FOR MERCURY CONTROL IN FOIL FREDING UNITS
Jim Bux, Vice President - Product Management, Novinda

C3.4 REACT MULTIPOLLUTANT CONTROL FOR WPS/WESTON 3
H. James Peters, EVP Business Development, Hamon Corporation

C3.5 INNOVATIVE IN-DUCT SCR SOLUTION ACHIEVES NOX REDUCTION TARGET
Keith Morris, Operations Director, Doosan Power Systems Americas; Robert Taylor, Doosan Babcock, UK

C3.6 HCLEAR® TECHNOLOGY: A SOLUTION BASED ALTERNATIVE TO DRY SORBENT INJECTION FOR HCl ABATEMENT

C4. BAR T CASE STUDIES

C4.1 ASHWORTH GASIFIER – COMBUSTOR FOR CRAWFORDSVILLE, INDIANA POWER PLANT
Thomas Heywood, CEO, ClearSky Power LLC; Robert Ashworth, ClearSky Power; Bill Harrington, Sterling Energy Group

C4.2 MOVING BEYOND THE MERCURY RE-EMISSION -- ACHIEVING RELIABLE & ECONOMIC HG EMISSION REDUCTION IN YOUR WET FGD
Joe Sturul, Director of Commercial Development, TDC; a division of Genesis Energy Limited; Steve Feeney, Babcock & Wilcox

C4.3 LIMESTONE SLURRY PROCESS TECHNOLOGY FOR FGD PROJECTS
Jeff Doherty, President, Semi-Bulk Systems, Inc.; Charles Alack

C4.4 REGIONAL HAZE RULE IMPLEMENTATION - UPDATE & CHALLENGES
Kenneth Snell, Sr. Env. Consultant, Sargent & Lundy LLC; Bernard Mount, Sargent & Lundy

C4.5 CASE STUDY - OPTIONS FOR HCl & SO2 REMOVAL IN CF SR BOILERS
(Chair) Pat Mongoven, Business Development Mgr. Mississippi Lime, Inc; Mark DeGenova

C4.6 THE REGIONAL HAZE PROGRAM - IMPLEMENTATION DURING THE FIRST PLANNING PERIOD & WHAT COMES NEXT
Aaron Flynn, Associate, Huntton & Williams LLP

C5. DRY SORBENT INJECTION (DSI)

C5.1 NEVER TOO MUCH DATA: USE OF ADVANCED STACK TESTING TECHNOLOGIES TO SUPERIOR MERCURY CONTROL INJECTION EVALUATION STUDIES
Thomas Dunfee, Lead Field Engineer, TRC Environmental Corporation

C5.2 ELEMENTS OF A SUCCESSFUL DRY SORBENT INJECTION TRIAL
(Chair) Joshua Allen, Applications Engineer, Natronx Technologies

C5.3 A CASE STUDY OF BICARBONATE DSI AT A BASELOAD PRB STATION
(Chair) Michael Atwell, Market Development Manager, Solvay Chemicals; Marco Riccio

C5.4 COAL FIRED UTILITY EMISSION COMPLIANCE WITH DRY SORBENT INJECTION
Geoffrey Urwin, Product Mgr.-Sorbent Injection, Clyde Bergemann Pwr Gp; James Fisher

C5.5 OPTIMIZING THE DSI/ESP INTERACTION
Timothy Fuller, Tech. MGR., Babcock & Wilcox Power Generation Group; Anthony Silva

C5.6 PERFORMANCE IMPROVEMENTS FOR DSI SYSTEMS
Jon Norman, DSI Terminology Manager, United Conveyor Corporation; Michael Atwell

C6. MATS

C6.1 DSI & ACI - MEETING MATS STANDARDS
(Chair) Michael Thiel, Technical Services Manager, Nol-Tec Systems

C6.2 THE MATS REPORTING DILEMMA: TWO SYSTEMS IS TOO MANY
John Downs, Environmental Manager, B&W Power Generation Group

C6.3 FUEL QUALITY & MATS FOR COAL-FIRED PLANTS: THE RIPPLE EFFECT
Connie Senior, Director-Technology Development, ADA-ES, Inc.; Greg Filippelli

C6.4 MATS BEST PRACTICES: UNDERSTANDING THE DETAILS
Peter Spinney, Director - Market & Technology, NeuCo, Inc.

C6.5 MATS COMPLIANCE CHALLENGES
Stephanie Sebor, Associate Attorney, Winston & Strawin LLP

C6.6 CUSTOMIZED ELEX ELECTRODE EXPERIENCE WITH COAL-FIRED BOILERS
(Chair) Gary Oteicoe, Consultant, Air Consulting Associates Mick Chambers, Southern Env.

C6.7 DEMONSTRATION OF SO2 CONTROL WITH BOILER MODELING & FURNACE INJECTION
Noah Weeks; Research Engineer, Southern Company; Mark Pastore, EES, Inc.; Robert Santangeli, Step Combustion; Jerrod Radway, ClearChem, Inc.

C6.8 MERCURY OXIDATION IN THE SCR – LAYER BY LAYER PERFORMANCE
Kyle Neilidig, SCR Systems and Catalyst Product Manager, Hitachi Power Systems America
MATS/MACT regulations… Some clear, straightforward answers!

It’s the New Year. And while regulations may not be a priority at the moment, eventually MATS/MACT will become a fact, and Solutions enabling regulatory compliance will need to be considered.

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7:30AM - 9:30AM
C7. ACTIVATED CARBON
C7.1 PERFORMANCE ADVANTAGES OF WOOD-BASED ACTIVATED CARBON FOR HG CONTROL
(Chair) James Mennell, CEO, Biogenic Reagents; Erin Heupel
C7.2 DEVELOPMENT OF A KINETIC MERCURY CAPTURE TEST FOR ACTIVATED CARBONS
Nicholas Lentz, Associate Director, U of North Dakota; Joe Wong & Chris Vizzcaino, ADA-CS
C7.3 NON-HALOGENATED ACTIVATED CARBON FOR MERCURY CAPTURE FROM COAL-FIRED POWER PLANT FLUE-GAS
David Mazycz, CEO, Carbonxt; Heather Byrne & Jack Drwiega
C7.4 PILOT SCALE IN-FLIGHT MERCURY CAPTURE USING CABOT NORIT NOVEL SORBENTS
(Chair) Brian Tucker, Director -Product Dev., Cabot Norit Activated Carbon; M.Xin, P. Adams
C7.5 COMPUTATIONAL MODELING OF ELECTROHYDRODYNAMICALLY-INFLUENCED MERCURY ADSORPTION WITHIN ESPS
Herek Clack, Research Associate Professor, University of Michigan
C7.6 UNDERSTANDING OF MERCURY (HG) BREAKTHROUGH ISSUE & APPLICATION OF SORBENT TRAP METHOD FOR HG SAMPLING & ANALYSIS
Sung Jun Lee, Director of Analytical Division, Apex Instruments Inc.; William H. Howe

10AM - 12PM
C8. SCR
C8.1 HIGH TEMP. SCR DESIGN & FIELD EXPERIENCE WITH A COAL-FIRED UTILITY BOILER
(Chair) Larry Czarnecki, Principle Process Engineer, Alstom Power; T. Ekman & L. Spagnolo
C8.2 EMERGING CHALLENGES & DESIGN STRATEGIES FOR SCR SYSTEMS
(Chair) Paulo Oliveira, Product Marketing Manager, Alstom Power; Larry Czarnecki
C8.3 CFD MODELING FOR SCR PERFORMANCE OPTIMIZATION
C8.4 ADVANCED TECHNOLOGY MULTI-FUNCTIONAL SCR CATALYST PERFORMANCE FOR HIGH NOX IN MODERN TURBINE POWER PLANTS
Chris Bertole, Catalyst Development Manager, Cormetech, Inc.; Scot G. Pritchard & Mike Close, Cormetech; Katsumi Nochi, MHI
C8.5 SCR CATALYST SELECTION & MANAGEMENT FOR IMPROVED HG OXIDATION
Christopher Reeves, Development Project Manager, Cormetech, Inc.; Chris Bertole, Chris DiFrancisco & Scot Pritchard, Cormetech, Inc.; Katsumi Nochi, MHI
C8.6 HG CONTROL STRATEGIES IN THE PRESENCE OF SO3 USING THE MERSIM MODEL
Brad Adams, President, Reaction Engineering; Brydger Van Otten

1PM - 3:30PM
C9. CONTROL TECHNOLOGIES
C9.1 MEETING THE NEXT LEVEL OF WASTEWATER QUALITY FOR METALS & SELENIUM
(Chair) Mark Ehnhswender, VP - Business Development & Eng. Svcs., STEAG
C9.2 SELENIUM CONTROL USING COMBUSTION ADDITIVE
Manoar Gadhgil, AQCS Engineer, Babcock & Wilcox Company; Gregory Bielawski
C9.3 PILOT SCALE IN-FLIGHT TESTING OF SO3 RESISTANT CABOT NORIT NOVEL SORBENTS
(Chair) Brian Tucker, Director -Product Dev., Cabot Norit Activated Carbon; M. Xin, P. Adams
C9.4 UPDATES ON THE PERFORMANCE OF SELECTED CIRCULATION DRY SCRUBBERS
Shiaw Tseng, Mcnoling & Technical Manager, Graymont
C9.5 IMPACT OF PAC INJECTION UPSTREAM OF APH ON BASKETS CORROSION...
Jon Miller, Technology Manager - Mercury Control, Albemarle; E. Zhou, D. Royer & G. Lambeth, B. Ghorishi
C9.6 BROMINE ADDITION ON LOW-TEMP CORROSION IN AIR & OXY-FIRED COAL
Jacob Beutler, Senior Engineer, Reaction Engineering; Brad Adams, Tim Shurtz & Kevin Davis
C9.7 ENHANCED MERCURY CONTROL FOR BOILERS THAT REQUIRE ESP FGC
Richard Miller, Vice President Business Development, ADA-ES, Inc.; Ken Baidrey
C9.8 TAKING THE MYSTERY OUT OF ESP POWER SUPPLIES
John Knapik, Applications Engineer, Babcock & Wilcox

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**D1. SHALE GAS/LNG/NATURAL GAS**

**Session Sponsor and Co-Chair**

Stephen Slocumb, Associate, Epstein Associates

**D1.2 THE GAS-ELECTRIC SYSTEM INTERFACE IN PJM**

Gary Helm, Lead Market Strategist, PJM Interconnection

**D1.3 ADEQUACY OF NATURAL GAS INFRASTRUCTURE TO SUPPORT THE ELECTRIC INDUSTRY**

Sebastian Mankowski, Consultant, NERA Economic Consulting; Sugandha D. Tuladhar, Paul Bernstein & David Montgomery

**D1.5 LNG EXPORTS: ECONOMIC CONTRIBUTIONS TO THE US ECONOMY & IMPACTS ON US NATURAL GAS PRICES**

Todd Schatzki, Vice President, Analysis Group

**3:30PM - 6:00PM**

**D2. FRACKING & SUSTAINABLE DEVELOPMENT**

**Co-Chairs**

Daniel Klein

**D2.1 FRACKING - IMPACT ON U.S. ENERGY, TRADE, & CO2 EMISSIONS**

(Chair) Daniel Klein, President, Twenty-First Strategies

**D2.2 TBD**

Phil Sharp, President, Resource for the Future

**D2.3 OIL & WATER, GAS & TSCA: EPA LOOKS AT HYDRAULIC FRACTURING**

Charles Franklin, Senior Counsel, Akin Gump Strauss Hauer & Feld

**D2.4 HYDRAULIC FRACTURING & FINANCIAL RESPONSIBILITY REQUIREMENTS, A CASE STUDY OF THE REGULATORY FRAMEWORKS IN NY & PA & POTENTIAL PATHS FORWARD**

Elizabeth Kurz, Senior Associate, ICF International; Eric Reeves

**D2.5 ASSESSING POTENTIAL UPWARD MIGRATION OF HYDRAULIC FRACTURING FLUID & BRINE THROUGH FRACTURES, FAULTS, & INTACT ROCK**

Sam Flewelling, Senior Hydrologist, Gradient; Matt Tymchak & Manu Sharma

**D2.6 AN INNOVATIVE LOW-TEMPERATURE WATER RECYCLE & RECOVERY PROCESS FOR TREATMENT OF FLOWBACK & PRODUCED WATER**

(Chair)Sayayan Chakraborti, Sr. Program Mgr., MRIGlobal; Ozgu Capan, Hiltite Solar Energy

**D2.7 REUSE OF PRODUCED & FLOW BACK WATER FOR HYDRAULIC FRACTURING FLUIDS**

James Fajt, Senior Scientist, M-I SWACO a Schlumberger Co.; Tor Palmgren, Alan McKee

**D3. ENERGY POLICY & SECURITY**

**Co-Chairs**

Jeffrey Michel & Kelly Daly

**D3.1 GAS - ELECTRIC COORDINATION, IS THE TIMING FINALLY RIGHT?**

(Chair) Kelly Daly, Chair - Energy & Environmental Division, Stinson Morrison Heckler LLP

**D3.2 THE STATUS OF GERMANY’S ENERGY TRANSITION**

(Chair) Jeffrey Michel, Principal, Ing.-Büro Michel

**D3.3 BRAZIL’S ENERGY POLICY & REGULATION**

Stephen Sewalk, Asst Professor, Ph.D./J.D., U of Denver- Burns School of Mgmt; Laura Newman

**D3.4 DEVELOPING & ASSESSING ECONOMIC, ENERGY, & CLIMATE SECURITY & INVESTMENT OPTIONS FOR THE US**

Thomas Peterson, President & CEO, The Center for Climate Strategies; Pat Delaquil & Gary Goldstein, DecisionWare Group; Hal Nelson, Claremont Graduate University; Stephen Roe & Jeff Wennberg, The Center for Climate Strategies; Adam Rose, USC

**D3.5 WHAT THE WORLD CAN LEARN FROM NUCLEAR SECURITY**

Piravena Hales, CEO, Total Protection Services Global

**D3.6 GRID CYBERSECURITY**

John Finnegan, Senior Regulatory Attorney, Environmental Defense Fund

**D4. ENERGY & CLIMATE**

**Session Sponsor and Co-Chair**

Avril Edwards, Associate, Winston & Strawn LLP

**D4.1 EPA’S PWR PLANT GHG STANDARDS - NEW DEVELOPMENTS & ENERGY IMPLICATIONS**

(Chair) Averil Edwards, Associate, Winston & Strawn LLP

**D4.2 POWER MARKET PRICES, NUCLEAR GENERATION & GHG POLICY**

Marc Chupka, Principal, The Brattle Group

**D4.3 EPA REGULATIONS & CARBON TAXES - EVALUATING RELATIVE ECONOMIC IMPACTS**

Sebastian Mankowski, Consultant, NERA Economic Consulting; Scott J. Bloomberg, Mei Yuan & Anne Smith

**D4.4 NUCLEAR ENERGY POLICY**

(Chair) Stephen Sewalk, Asst Professor, Ph.D./J.D., U of Denver - Burns School; Laura Newman

**D4.5 CO2 STNDS FOR EXISTING GENERATION SOURCES - WHAT WILL MOVE THE NEEDLE?**

Chris MacCracker, Principal, ICF International

**D4.6 CLIMATE POLICY CHOICES – RPS, CAP-AND-TRADE & THE IMPLICATIONS FOR ACTIONS (AND EXISTS) THAT AFFECT EMISSIONS**

Todd Schatzki, Vice President, Analysis Group

**D5. PROJECT FINANCE**

**Session Sponsor and Co-Chair**

William Stark

**D5.1 THE EQUATOR PRINCIPLES III: IMPACTS TO PROJECT FINANCE IN THE US & ABROAD**

(Chair) William Stark, Senior Consultant, Leidos

**D5.2 FINANCING INTERNATIONAL RENEWABLE ENERGY PROJECTS**

Craig O’Connor, Director - Office of Renewable Energy, Export-Import Bank United States

**D5.3 CARBON TAX W/ REINVESTMENT ELIMINATES NEED FOR ALTERNATIVE ENERGY SUBSIDIES**

Stephen Sewalk, Asst Professor, Ph.D./J.D., U of Denver - Burns School of Mgmt; Laura Newman

**D5.4 STRESS-FREE ON-TIME COMPLETION OF REFINERY TURNAROUNDS**

Harinarasu Gudalurb, Project Manager, Tech Mahindra; Vishal Chikhalikar, Deborah Devadason & Prithi Kanagalekar

**D5.5 ENERGY COMPANIES & ARCHAEOLOGISTS: COOPERATION OR CHAOS?**

Robert Rowe, Primary Investigator, Atkins

**D6. EHS & RISK MANAGEMENT**

**Session Sponsor and Co-Chair**

Richard Koskis

**D6.1 RISK MANAGEMENT & ITS IMPACT ON ENVIRONMENTAL HEALTH & SAFETY**

Tom Barlow, Channel Manager, EQIQ

**D6.2 A SYSTEMS APPROACH TO MANAGING ENV., HEALTH. & SAFETY PROGRAMS**

(Chair) Nick Steinke, Principal, Tellevent; Joseph Tell

**D6.3 USING PROBABILISTIC DYNAMIC SIMULATION TO MANAGE RISKS & OPTIMIZE DESIGN**

(Chair) Richard Koskis, Principal, GoldSim Technology Group; Jason Lillywhite

**D6.4 INNOVATIVE WAY TO MANAGE YOUR RISK – IRMAAS**

Vishal Chikhalikar, AVP, Tech Mahindra; Harinarasu Gudalurb, Twitchet Bubu Desviest

**D6.5 EFFECTIVE ASSET IDENTIFICATION FOR POWER PLANTS**

Jason Hanry, Industrial Sales Manager, Marking Services, Inc.
**E1. RENEWABLE ENERGY MGMT & PLANNING**

**E1.1 “STAYING APART AT THE SEAMS”**
Rodney Lentoft, Executive VP - Business Development, Boundless Energy; E. John Tompkins

**E1.2 AN UNCERTAIN PLANNING FUTURE**
Danielle Osborn Mills, Project Manager, Atkins

**E1.3 BIG DATA = BIG GAINS ENERGY MARKETS**
(Chair) Mark DeSantis, CEO, kWanterra; Dr. Steve Lettieri

**E1.4 GREEN PRICING PROGRAMS: BEST PRACTICES**
Michael Leschke, Green-e Energy Associate, Green-e Energy/Center for Resource Solutions

**E1.5 EMERGING REC MARKETS**
(Chair) Bert Spaeth, Senior Energy Engineer, Lynx Technologies Inc.

POSTER PAPER - NEARLY NET ZERO ENERGY BUILDING USING INTEGRATED PV BUILDING
Ahmad Ahasan, Associate Professor, College of Technological Studies; Adel Ghoneim

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**E2. RENEWABLE ENERGY/SITING/TRANSMISSION**

**E2.1 NEPA FOR TRANSMISSION LINE PROJECTS**
Antonette Alberth, Sr. Vice President, Haley & Aldrich

**E2.2 GRID TRACKER: A NEW POWER & TRANSMISSION ANALYSIS APPLICATION FOR THE WESTERN INTERCONNECTION**
(Chair) Suzanne Leta Liou, Project Director - Clean Energy & Transmission, Atkins

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**J1.3 ESTIMATION OF ENERGY SAVING EFFECT OF ELECTRIC PROPULSION SHIP EQUIPPED WITH SUPERCONDUCTING SYSTEM BASED ON ACTUAL NAVIGATION DATA**
Masayoshi Numano, Research Specialist, National Maritime Research Institute of Japan

**J1.4 PREPARATION OF PARAMAGNETIC CLINIC NANOPIERCES**
H. Paul Wang, Professor, National Cheng Kung University; Y.-M. Chiu & C.-L. Wong, Department of Environmental Engineering, National Cheng Kung University

**J1.5 COATINGS AND ENERGY CONVERSATION**
Michael Eberbach, Senior Consultant, Measurement & Verification Engineering

**J1.6 MARKETING ENERGY EFFICIENCY WITH RENEWABLE ENERGY**
Aiden Hathaway, SVP Business Development, Stirling Planet

**J2. ENERGY MANAGEMENT**

**J2.1 PERSUADING CONSUMERS TO UNDERTAKE DEMAND REDUCTION ACTIONS**
V. Rory Jones, President, PlanetEcosystems, Inc.; Steve Malloy

**J2.2 HOME AREA NETWORKS - CONSTRUCTIVE OR COSTLY?**
Dale Pennington, Managing Director, UtilityWorks Consulting, LLC.

**J2.3 ENVIRONMENTAL LIFE CYCLE ASSESSMENT OF UTILITY DISTRIBUTION POLES**
Mark Thimons, Director, Construction Sustainability, American Iron and Steel Institute; Keith Killpack, SCS Global Services

**J2.4 COMMUNITY SOLAR: THE NEXT GENERATION OF UTILITY GREEN PRICING PROGRAMS**
Dan Lieberman, Senior Manager - Utility Partnerships, 3Degrees Inc.

**J2.5 RIGHT PORTFOLIO OF RENEWABLE, DEMAND RESPONSE & ENERGY EFFICIENCY**
Prateek Saxena, VP - Utilities, Tech Mahindra

**J2.6 USING BIG DATA TO ACHIEVE BOTH BREAD & DEPTH SAVINGS**
Steven Meyers, President, EnerPath

**J2.7 A FRESH TAKE ON DEMAND RESPONSE**
Scott McGaraghan, Business Development, Nest Labs

**J3. SMART GRID**

**J3.1 BUILDING A “SMART GRID” - HOW TO GET IT DONE**
Dale Pennington, Managing Director, UtilityWorks Consulting, LLC.

**J3.2 THE SMART GRID IS COMING: WHY HOURLY PRICING IS KEY**
David Becker, Director of Dynamic Pricing, CNT Energy

**J3.3 OPTIMIZING GENERATION, DISTRIBUTION, RENEWABLES, & DEMAND RESPONSE**
(M) John Dirkman, Senior Product Manager, Schneider Electric

**J3.4 MANAGING GRID DYNAMICS WHILE MINIMIZING GHG EMISSIONS & WATER USAGE**
Matthew Fisher, Sales Manager, Wartsila; Mikael Backman

**J3.5 RETHINKING UTILITY CYBER SECURITY**
Eamonn McCormick, Senior Director, Alvarez and Marsal; Brian Lenane

**J4. ENERGY EFFICIENCY & MGMT**

**J4.1 COMMERCIAL BUILDINGS: SMART GRID, DEMAND RESPONSE & ENERGY MGMT**
(C) Mike Zimmerman, Founder & CEO, BuildingIQ

**J4.2 AGGRESSIVE BUILDING STANDARDS ACROSS THE US**
Michael Scott, Senior Staff Economist, Pacific Northwest National Laboratory; DS Daly, C. Lansing, HC McJean, PL Patel, M. Peterson, JS Rice, Y. Zhou

**J4.3 CREATING WEALTH FROM EFFICIENCY**
Wilden Lange, Director - Utility Market Development, WaterFurnace International

**J4.4 DO 5 THINGS: ENGAGING CUSTOMERS IN ENERGY EFFICIENCY BEHAVIOR CHANGE**
Suzanne Shilton, CEO, Shelton Group

**J4.5 THE PSYCHOLOGY OF SAVING ENERGY**
Joel Cervelloni, Engagement Manager, Opower

**J4.6 SHIFTING PEAK ENERGY DEMAND: LAX TO LAGUARDIA**
Brock Treece, Staff Scientist, AECOM; Michael Conrado

**J5. DEMAND RESPONSE/ENERGY EFFICIENCY**

**J5.1 DEMAND SIDE MANAGEMENT & THE SMART GRID**
Dale Pennington, Managing Director, UtilityWorks Consulting, LLC.

**J5.2 OPENADR - STANDARDIZE, AUTOMATE & SIMPLIFY DEMAND RESPONSE**
Barry Haaster, Managing Director, OpenADR Alliance

**J5.3 HEAT BALANCE IMPACTS OF WALL CLEANING, COMBUSTION MODIFICATIONS, & HEAT TRANSFER SURFACE MODIFICATIONS IN COAL-FIRED BOILERS**
(Chair) Marc Cremer, VP - Engineering Analysis, Reaction Engineering Intl.; Andrew Chiodo

**J5.4 ADVANCED DMS FOR FORECASTING, RENEWABLES, DISTRIBUTED ENERGY RESOURCES, & MICROGRID MANAGEMENT**
John Dirkman, Sr. Product Manager, Schneider Electric

**J5.5 EFFECT OF THERMAL BRIDGES IN INSULATED WALLS ON AIR-CONDITIONING LOADS USING WHOLE BUILDING ENERGY ANALYSIS**
Mohamed Fouad Zedan, Professor, King Saud University; Sami AL-SANEA, King Saud University, Saudi Arabia

**J5.6 “THIRD MILLENNIUM SCORE CARD” - GREEN, LEAN AND CLEAN**
Vishal Chikhalkar, AVP, Tech Mahindra; Harisharathun GB, M. Kartik & D. Devadason

**J6. ENERGY MANAGEMENT II**

**J6.1 AUTOMOTIVE THERMOELECTRIC GENERATORS & HVAC**
John Fairbanks, Technology Development Manager, US Dept of Energy

**J6.2 REAL TIME DATA CENTER COOLING SYSTEMS**
Darrell Richardson, CEO, R4 Ventures LLC; Mike Reyblat

**J6.3 INNOVATION METHODS**
Shridar Ayer, President, Ambreen and Associates; N. Joyce

**J6.4 UTILITY-CONTRACTOR PARTNERSHIP INCREASE CONVERSION RATES**
Jason Hanleybrown, CEO, First Water Heater Company
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Sunday Workshops

Workshop 1 - Room 221A (9am - 12pm)
Permitting & Compliance CANCELLED
Eric Hiser, Jorden, Bischoff & Hiser
Phone: 480-905-3927
Email: ehiser@jordenbischoff.com
This seminar will provide participants with critical information on new developments in clean air regulation, including recent developments in NAAQS, new source review, NESHAP regulation and GHG reporting. The seminar will also address current EPA enforcement priorities, planning and preparing for an inspection, and using the permit process to minimize your enforcement exposure.

Workshop 2 - Room 221B (9am - 12pm)
Challenges for Compliance With Short-term PM2.5, NO2, and SO2 Ambient Standards
Robert Iwanchuk, CCM (AECOM)
Robert Paine, CCM, QEP (AECOM)
Phone: 978-905-2352
Email: bob.paine@aecom.com
This workshop will provide an overview of SO2, NO2, and PM2.5, NAAQS regulatory implementation and dispersion modeling procedures, with AECOM-suggested refinements as appropriate.

Workshop 3 - Room 221C (10am - 2pm)
Emerging Air Quality, Greenhouse Gas and Energy Requirements
Rich Pandullo, Trinity Consultants
Email: rpandullo@trinityconsultants.com
This workshop will review and assess the regulatory and stakeholder impacts of the new regulations and provide attendees with tools and response strategies to improve the chances for survival.

Workshop 4 - 222A (1pm - 5pm)
Designing and Implementing a Cost-effective MATS Filterable Particulate Matter Compliance Demonstration Strategy
TRC Solutions
Our four-hour workshop will be divided into two sessions to address critical issues governing the design and implementation of emission testing programs for Mercury Air Toxics Standards (MATS) compliance. The first session will focus on filterable particulate matter (FPM) measurement, helping participants understand the various FPM compliance demonstration options allowed by MATS. The second session will focus on emission test program design for dry sorbent injection (DSI) systems, helping participants understand how to design test programs that optimize DSI system placement and operation.

Workshop 5 - 222C (8am - 5pm) CANCELLED
AERMOD Air Dispersion Modeling Course
Lakes Environmental
The AERMOD Air Dispersion Modeling Course provides attendees with a full understanding of the AERMOD modeling system by balancing theory with actual presentation of real world case studies. At the end of this course, participants should be able to understand the basics of AERMOD the US EPA regulatory air dispersion mode for permit applications and risk assessment. This course is intended for air quality professionals working, or planning to work, in the assessment of air pollution impact.
Exhibit Reservation
Sign Up On-Site $500 Discount

STEP 1. SELECT TYPE OF EXHIBIT BOOTH

- Bronze Booth on Red Carpet (10'x10')
  $5,000
- Silver Double Booth (20'x10')
  $10,000
- Gold Booth (20'x20')
  $20,000

STEP 2. ENTER CHOICE OF BOOTH NUMBER FROM FLOOR PLAN

STEP 3. LIST NAMES OF EXHIBIT COMPANY ATTENDEES:

- One free registration per 10' x 10' booth

Full Name
Email
(Free):
($695):
($695):

STEP 4. CONTACT INFORMATION:

Name:
Company Name:
Address:
City: State: Zip:
Email:
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Comment:
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