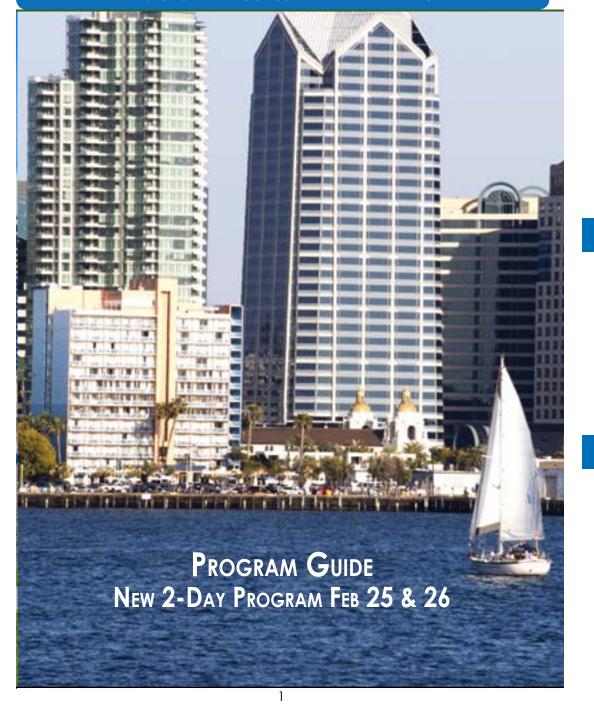


www.euec.com

#### **EUEC 2019 HELD CONCURRENTLY WITH TE-EXPO**



# What is EUEC & TE-EXA

**EUEC 2019:** The 22nd Annual Energy, Utility & Environment Conference, is the USA's largest professional networking and educational event of its kind, held February 25-26, 2019 at the Convention Center, San Diego, CA, with 1,500 attendees, 400 speakers and 200 exhibits.

**The TE-EXPO** is held across the hall from EUEC concurrently, in the 100,000 sq.ft. Sails Pavilion of the San Diego Convention Center. The TE-EXPO is free and open to public. TE-EXPO registrants can upgrade to attend all the TF and FUFC sessions and exhibits at a discounted rate.

TE-EXPO provides speaking and exhibit opportunities for suppliers of EV charging stations and infrastructure, batteries & storage, utility fleet, as well as ZEV & AFV, to showcase advanced technologies and strategies for compliance and implementation of SB-350 and for the transition of the transportation sector nationally. SB-350 directs California regulators (CPUC, ARB, CEC, AQMD) to electrify buses, trucks, fleet and off-road equipment, with \$1 billion funded by investor owned utilities SDG&E, SCE and PG&E.

## SCHEDULE

The conference starts with the Keynote Session held in EUEC meeting room 1, from 8 am to 11:30 am on Monday, February 25, 2019.

There are a total of eleven breakout technical tracks (A to K) held in EUEC meeting rooms 1 to 11.

EUEC has nine technical tracks (A to I) held in meeting rooms 1 to 9. TE-EXPO has two technical tracks (J & K) held in meeting rooms 10 &11.

## **EXHIBITS & RECEPTIONS**

Lunches (12 to 1 pm) and Receptions (5 to 7 pm) are held in the EUEC exhibit hall on both days.

Tables and chairs are set up in the exhibit aisles to facilitate networking during the breaks. Beverage, Coffee and Snack Counters are open from 7 am to 6 pm on both days in the EUEC exhibit hall. No food is allowed in the meeting rooms.

> Exhibitors tear down is at 7 pm after the show ends on Tuesday Feb 26th at 7 pm.

## SCHEDULES & EVENTS

# CHAIRMAN'S WELCOME RECEPTION BY THE WATERFRONT Sun, Feb 24th | 5 pm to 7 pm



# 8th Annual EUEC Golf Event

Torrey Pines Golf Course Wed, Feb. 27, 2019 | 8:00AM



# 12 pm - 7:00 pm Exhibits Open

8:00 am -12:00 pm KEYNOTE

Sunday | February 24

7:00 am - 7:00 pm Reaistration

Monday | February 25

7:00 am - 7:00 pm Registration

12:00 pm - 6:00 pm Exhibit Set-up

5:00 pm - 7:00 pm Welcome Reception

12:00 pm - 1:00 pm Networking Lunch 1

**EUEC 2019 & TE-EXPO SCHEDULE** 

1:00 pm - 3:00 pm Tech Session 1 3:00 pm - 3:30 pm Networking Break 2

3:30 pm - 5:30 pm Tech Session 2

5:00 pm - 7:00 pm Networking Reception 3

## Tuesday | February 26

9:00 am - 7:00 pm Exhibits Open

7:30 am - 9:30 am Tech Session 3

9:30 am - 10:00 am Networking Break 4

10:00 am - 12:00 pm Tech Session 4

12:00 pm - 1:00 pm Networking Lunch 5

1:00 pm - 3:00 pm Tech Session 5

3:00 pm - 3:30 pm Networking Break 6

3:30 pm - 5:30 pm Tech Session 6

5:00 pm - 7:00 pm Networking Reception 7

7:00 pm - 10:00 pm Exhibit Tear Down

Wednesday | February 27

8:00 am - GOLF at Torrey Pines

8:00 am - 12:00 pm Exhibit Tear Down

#### 2-DAY EXHIBIT SHOW HOURS

Sun.	Setup	12 pm	to	6 pm
Mon.	Feb 25	12 pm	to	7 pm
Tues.	Feb 26	9 am	to	7 pm
Tues.	Feb 26	7 pm	Tear	Down
Wed.	Feb 27	8am	Tear	Down

## NETWORK RECEPTIONS

AM Breaks	9:30 am	to	10 am
Lunches	12 pm	to	1 pm
PM Breaks	3 pm	to	3:30 pm
Receptions	5 pm	to	7 pm

#### SPEAKER FORMAT

Speakers introduce themselves.

Each session is 2 hours long with 6 speakers and 2 co-chairs.

#### Session Chair Guidelines

Moderate Session & remind speakers not to exceed their time limited to 20 minutes. Do not rearrange speakers in published program.

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# 2019 Keynote Speakers Monday, February 25th, 2019 Meeting Room 1

Meeting Room 1



#### **ELECTRIC SECTOR HELPING LEAD THE ENERGY TRANSFORMATION**

Robert C. Rowe — 8:00AM - 8:30AM

President and CEO, Northwestern Energy

NorthWestern

#### THE FUTURE FOR CARBON FREE FOSSIL ENERGY

Lou Hrkman — 8:30AM - 9:00AM

Deputy Assistant Secretary, Clean Coal & Carbon Management, U.S. Department of Energy

ENERGY



#### **EPA AIR PROGRAM PRIORITIES MOVING FORWARD**

Reid Harvey — 9:00AM - 9:30AM

Director Clean Air Markets Division, U.S. Environmental Protection Agency

SEPA United States Environmental Protection Agency

#### TRANSPORTATION ELECTRIFICATION



#### SDG&E PROGRAMS FOR TRANSPORTATION ELECTRIFICATION & EVS

Michael M. Schneider — 9:30AM - 10:00AM

Vice President, Clean Transportation and Asset Management San Diego Gas & Electric (SDG&E)

 $SDG_F$ 



#### TRANSPORTATION ELECTRIFICATION

RICHARD COREY — 10:00AM - 10:30AM

Executive Officer, California Air Resources Board



#### DRIVING TOWARDS CLEANER AIR IN SOUTHERN CALIFORNIA

**LAURA RENGER - 10:30AM - 11:00AM** 

Principal Manager of Air Quality & Climate, Southern California Edison

EDISON



#### STRATEGIES FOR ACCELERATING ELECTRIC TRANSPORTATION NATIONALLY

JOHN BOESEL - 11:00AM - 11:30AM

President & CEO, CALSTART



#### **HIGHLIGHTS OF EUEC2019 & TE-EXPO**

Prabhu Dayal — 11:30AM - 11:45AM

Chairman, Energy, Utility, Environment Conference

#### MISSION STATEMENT

EUEC facilitates information exchange and fosters cooperation between industry, aovernment, and regulators for the protection of our environment and energy security.

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# **ELECTRIC UTILITIES ATTENDING EUEC**

Alabama Power Company Alliant Energy Corporation Ameren Corporation American Electric Power American Municipal Power, Inc. Arizona Electric Power Cooperative Arizona Public Service Company Associated Electric Cooperative, Inc.

Bia Rivers Electric Calpine Corporation

Catawba County Government Utilities

Central Iowa Power Cooperative

Central Minnesota Municipal Power Agency

Clarke Public Utilities

Commonwealth Edison

Con Edison

Con Edison Clean Energy

Connecticut Natural Gas

Constellation Energy

Consumers Energy

**CPS Energy** 

Deseret Power

**Dominion Generation** 

DTE Energy

**Duke Energy** 

Dynegy

East Kentucky Power Cooperative

FDF Inc.

Edison Electric Institute

**Empire District Electric Company** 

**Encina Power Station** 

**ENGIE North America** 

Entergy

Eversource Energy

**Exelon Nuclear** 

**Exelon Power** 

Florida Power & Light Company

Georgia Power

Grand Bahama Power Company

Great River Energy

Guam Power Authority

Guam Public Utilities Commission

Hawaiian Electric

Hoosier Energy

Independence Power & Light

Intermountain Power Service Corporation

Kansas City Board of Public Utilities

Kansas City Power & Light

KU Energy,LLC

Lafayette Utilities System

Lansing Board of Water & Light

Lhoist North America

Los Angeles Department of Water and Power

Louisville Gas & Electric

Luminant

Madison Gas & Electric

Michigan South Central Power Agency

Minnesota Power

Minnkota Power Cooperative, Inc.

Montana-Dakota Utilities Company

Muscatine Power and Water

Nebraska Public Power District

NextEra Energy

NiSource

Northern Indiana Public Service Co.

Northern Star Generation

NorthWestern Energy

**NRECA** 

NRG Energy

NV Energy OGE Energy Corp

Oklahoma Gas & Electric Company

Old Dominion Electric Cooperative

Omaha Public Power District

Oncor Electric Delivery

Oneta Power, LLC

Pacific Gas & Electric

**PCPS Energy** 

PECO Energy

Platt River Power

Portland General Electric

PPL EnergyPlus LLC
PPL Montana Power Company

Prairie State Generating Co.

Puget Sound Energy - PSE

Rodan Energy Solutions Inc. Rural Electric Cooperative

Sacramento Municipal Utility District

Salt River Project

San Diego Gas & Electric

Santee Čooper

**SCANA** 

Seattle City Light

Sempra Utilities

Sierra Power Company

SoCal Gas Co.

Southern California Edison

Southern Company

Southern Connecticut Gas

Southern Power Company

SUEZ

Sunflower Electric Power Corporation

Tenaska

Tennessee Valley Authority

Texas Municipal Power Agency

TransCanada

Tri-State Generation and Transmission

Tucson Electric Power

Twin Oaks Power

Vectren Corp.

WEC Energy Group

Westar Energy

Xcel Energy Alcoa Inc.

Associated Electric Cooperative, Inc.

Bear Valley Electric Service

Brazos Electric Power Cooperative

**Buckeye Power** 

Central Maine Power Company

Clay Electric Cooperative, Inc.

Colorado Springs Utilities

Corix Utilities

Dairyland Power Cooperative

Duquesne Light Company

Ethiopian Electric power

Liberty Utilities

Massachusetts Water Resources Authority

Matanuska-Susitna Borough

Nashville Electric Service

Nicor Gas

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Northline Utilities LLC

Ohio Valley Electric Corp

Sudanese Hydro Generation and Renewable Energy Company.



# **SCHEDULE AT-A-GLANCE**

Track	Α	В	С	D	Е	F	G	Н		J	K
Room #	Room 1	Room 2	Room 3	Room 4	Room 5A	Room 5B	Room 7B	Room 8	Room 9	Room 10	Room 11
Sessions	Regulatory Update	CEMS & EMISSION TESTING	SO <sub>2</sub> , NO <sub>X</sub> , Hg & SCR	POWER GEN & ENERGY SERVICES	Solid Waste, Landfill Gas, Biofuels	RENEWABLE ENERGY	O&M, DDD & EHS	ELG, CCR, CCS & FGD	Water & 316(b) Cooling Tower		Battery, Storage & Charging
Monda	Monday   February 25th										
1:00PM to 3:00PM	REGULATORY UPDATE - AIR	CEMS & PEMS	SO <sub>2</sub> , NO <sub>x</sub> , Hg, Compliance	ENERGY POLICY & POWER PLANTS	WASTE TO ENERGY - CASE STUDIES	RENEWABLE ENERGY	DECOMMIS- SIONING OF POWER PLANTS	CCR & ELG COMPLIAN CE MGMNT.	WASTEWATER, GROUND WATER, REMEDIATION, ELG, FGD	TE, ELECTRIC UTILITIES & EV CHARGING	BATTERY & ENERGY STORAGE SYSTEMS
3:30PM to 5:30PM	& COMPLIANCE	MONITORING, TESTING & INSTRUMENTATION	CONTROL	PLANT PERFORMANCE & MATERIAL HANDLING	BIOGAS, BIOFUELS, BIODIESEL, ALGAE	RENEWABLE ENERGY PROJECT DEVELOPMENT	POWER PLANT O&M	COAL ASH, CCR & FGD	316(B), ELG, FGD, WASTEWATER	ADVANCE CLEAN TRUCKS - AFV & ZEV FLEETS	EV CHARGING
Tuesd	ay   February	26th									
<b>3</b> 7:30AM to 9:30AM	CAA, BACT, NESHAP, NEPA	MONITORING, TESTING & INSTRUMENTATION	SO <sub>2</sub> , NO <sub>X</sub> , Hg CONTROL TECH.	ENERGY & Cybersecurity	LMOP - LANDFILLS & LANDFILL GAS	RE SMARTGRID & MICROGRID	O&M, PLANT MANAGEMENT	CCR RULE	316(B), ELG & WASTEWATER	EV, PHEV, HYBRID, FLEET SUSTAINABILITY	RESIDENTIAL & COMMERCIAL CHARGING
10:00AM to 12:00PM	NSR	MONITORING, TESTING & SPECTROMETRY	CARBON	T&D, POWER PLANT TECHNOLOGIES	RNG & BIOFUEL PROJECT STRATEGIES	GHG & GREEN PROJECTS	EHS, EMIS & SAFETY	COAL ASH, CCR	316(B), COOLING TOWER	ULTRA CLEAN LD/MD/HD	BATTERY, STORAGE & CHARGING SYSTEMS
<b>5</b> <sub>1:00PM</sub> to 3:00PM	REGIONAL HAZE & SUSTAINABILITY	MODELING & SATELLITE DATA	CONTROL & OPTIMIZATION	ENERGY POLICY & POWER PLANT STRATEGIES	LANDFILL MANAGEMENT & COMPLIANCE	STORAGE	OPERATIONS & OPTIMIZATION	CCS & RARE EARTH ELEMENTS	WATER SUPPLY & SECURITY	UTILITY FLEET	FUEL CELLS, LI-ION, H2, BATTERIES
3:30PM to 5:30PM	ENVIRONMENTAL SUSTAINABILITY & UTILITIES	DRONES, DATA MGMNT & MONITORING		PROJECT FINANCE & RISK MANAGEMENT		PV, SOLAR & SUSTAINABLE RE	EHS, RISK & ENERGY MGMT	FGD, ELG, CCR & CCS	WASTEWATER & WATER TREATMENT	CARB REGS, EV CHARGING PROJECTS	EV BATTERY, SUPPLY & CHARGING

## TRACK | A | REGULATORY UPDATE

Monday | 1PM - 3PM

## A1. REGULATORY UPDATE - AIR



EEI Elson Electric A1.1 ENERGY INDUSTRY REGULATIONS, 2019 - 2020

Co-Chair - John Kinsman, Sr. Director - Environment, Edison Electric Institute



A1.2 ACE RULE: ISSUES THAT EPA MUST ADDRESS

Session Sponsor - Co-Chair - Jay Holloway, Partner, Williams Mullen



A1.3 EPA CONSOLIDATES ITS MODELING POSITIONS

Gale Hoffnagle, Senior Vice President, TRC



A1.4 THE AFFORDABLE CLEAN ENERGY RULE: EVERYTHING YOU NEED TO KNOW Allison Wood, Partner, Hunton Andrews Kurth LLP



A1.5 AFFORDABLE CLEAN ENERGY RULE: CHANGES IN EPA'S BENEFIT-COST ANALYSIS Kate Shouse, Analyst in Environmental Policy, Congressional Research Service



A1.6 MOVING INTO THE 21ST CENTURY

Bill Smalling, Attorney, The Law Office of C. William Smalling, PC

#### Monday | 3:30PM - 5:30PM



#### A2. PERMITS REGS & COMPLIANCE

A2.1 AIR REGULATORY CHALLENGES FACING THE NATION'S ELECTRIC COOPERATIVES Session Sponsor - Co-Chair - Daniel Chartier, Regulatory Director, Environ. Policy, Nat'l Rural Electric Coop. Assoc.



A2.2 CALIFORNIA CAP AND TRADE MARKET AND POST 2020 UPDATE

Mike Taylor, President, Emission Advisors, Inc.



**A2.3 UTILITY LEVEL ADAPTATION IN A POST-MITIGATION ENVIRONMENT** 

Co-Chair - Jesse Frederick, Vice President, WZI, Inc.



FSA A2.4 WHAT DOES CALIFORNIA'S AB 617 MEAN FOR REGULATED SOURCES? Chris Easter, Director, ESA: Heidi Rous, Anitra Rice



POWER A2.5 AIR QUALITY COMPLIANCE LESSONS DURING A UNIVERSITY CHP COMMISSIONING Brian Petermann, Senior Project Manager, POWER Engineers, Inc.



A2.6 NEW FOSSIL FUEL-FIRED GENERATION UNITS - FEASIBILITY CONSIDERATIONS Thomas Pritcher, Vice President/National Air Quality Service Line Director, ECT

#### Tuesday | 7:30AM - 9:30AM



## A3. CAA, BACT, NESHAP, NEPA



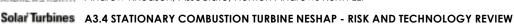


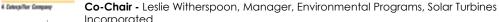


A3.2 BATTERY STORAGE AS BACT - ANALYSIS OF EAB PSD PERMIT CHALLENGES Matthew Dobbins, Senior Associate, Vinson & Elkins



A3.3 EMERGING ISSUES IN BACT DETERMINATIONS FOR GHG EMISSIONS Andrew Knudsen, Associate, Hunton Andrews Kurth LLP

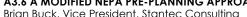




Incorporated



A3.5 ENERGY AND UTILITY SECTOR IMPLICATIONS OF NEPA REFORM Stacey VanBelleghem, Partner, Latham & Watkins LLP



#### A3.6 A MODIFIED NEPA PRE-PLANNING APPROACH TO SHORTEN EIS TIMEFRAMES Brian Buck, Vice President, Stantec Consulting

## TRACK | A | REGULATORY UPDATE

#### A4. NSR



A4.1 NSR REFORM - SHOULD WE EXPECT RMRR RELIEF?

Scott Osbourn, Principal, Trinity Consultants



**A4.2 NSR REFORM RECENT CHANGES** 

Gurinder Saini, Sr. Environmental Engineer, RTP Environmental Associates, Inc.



A4.3 NEW SOURCE REVIEW REFORM (REDUX)

Andrew Knudsen, Associate, Hunton Andrews Kurth LLP; Makram Jaber



A4.4 THE CONTINUED EVOLUTION OF NSR UNDER THE TRUMP ADMINISTRATION David Jordan, Partner, ERM



A4.5 A DIVE INTO EPA'S SOURCE SPECIFIC ACTIONS: CONTINUITY OR CHANGE? Session Sponsor - Co-Chair - Eric Hiser, Partner, Jorden, Hiser & Joy, PLC



A4.6 RECENT GUIDANCE & PROPOSED CHANGES TO NSR APPLICABILITY DETERMINATIONS

Michael Rinkol, Environmental Engineer, Black & Veatch

#### Tuesday | 1:00PM - 3:00PM

## **A5. REGIONAL HAZE & SUSTAINABILITY**



A5.1 LATEST DEVELOPMENTS IN 2ND DECADAL REVIEW FOR THE REGIONAL HAZE RULE

Co-Chair - Robert Paine, Associate Vice President, AECOM; Jeff Connors



A5.2 PLANNING FOR REGIONAL HAZE ROUND 2

Rvan Templeton, Environmental Engineer Specialist, Arizona DEQ



A5.3 STRATEGY FOR THE REGIONAL HAZE RULE 2ND PLANNING PERIOD Jeremy Jewell, Principal Consultant, Trinity Consultants; Christine Chambers, Neelesh Sule

> A5.4 REASONABLY DEFINING REASONABLE PROGRESS Megan Berge, Partner, Baker Botts, LLP



A5.5 "ENVISION" IMPROVEMENTS IN SUSTAINABILITY Dusty Miller, Environmental Scientist, Black & Veatch

## Tuesday | 3:30 PM - 5:30 PM

# Kleinschmidt

# A6. ENVIRONMENTAL SUSTAINABILITY & UTILITIES

A6.1 IMPROVED REGULATORY RESULTS THROUGH ENVIRONMENTAL SUSTAINABILITY Co-Chair - Nicholas Morgan, Project Manager, Kleinschmidt Associates; Kimberly Long



A6.2 A STRATEGIC APPROACH TO CONSERVATION STEWARDSHIP



Exelon Kimberly Long, Environmental Performance Improvement Manager, Exelon Corp.



A6.3 UTILIZING PUBLIC-PRIVATE CONSERVATION PARTNERSHIPS TO RECOVER SPECIES AND MAINTAIN OPERATIONAL FLEXIBILITY Joe Drumm, Natural Resources and Stewardship Manager, Southern Company



A 6.4 SUSTAINABLE PERFORMANCE AT TVA: CUSTOMER IMPACT AND ECONOMIC DEVELOPMENT

Monte Matthews, Sr. Mgr & Deputy Chief Sustainability Officer, Tennessee Valley **Authority** 



A6.5 LADWP... ADDRESSING ENERGY-WATER NEXUS AND SUSTAINABLE WATER

Delon Kwan, Manager of Resources Development, L.A.Department of Water &



A6.6 PRAIRIES TO POLLINATORS:DAIRYLAND POWER COOPERATIVE'S SEEDS OF CHANGE

Brad Foss, Senior Environmental Biologist, Dairyland Power Cooperative

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## TRACK | B | CEMS & EMISSION TESTING

Monday | 1PM - 3PM

#### **B1. CEMS & PEMS**



**B1.1 SMART SAMPLE HANDLING SYSTEMS FOR CEMS AND PMS** Session Sponsor - Co-Chair - Philipp Zimmel, Area Sales Manager, JCT

Analysentechnik GmbH



B1.2 ENHANCED MEASUREMENT OF LOW-CONCENTRATION FORMALDEHYDE EMISSIONS Co-Chair - Kevin Crosby, VP Technical, Montrose Environmental, Inc.



**B1.3 STACK GAS ANALYSIS BY TUNABLE DIODE LASER (TDL) ANALYSIS** 

Frank DeThomas, Vice President Process & Environmental, HORIBA Instruments, Inc.



B1.4 IMPLEMENTING A SUCCESSFUL START-UP PERFORMANCE TESTING PROGRAM Dan Grabowski, Project Director, TRC Environmental Corporation; Anthony Sakellariou



Richard Hovan, Director-EIS Business Development, Wunderlich-Malec; Jennifer Fantich B1.6 SIMULTANEOUS MEASUREMENT OF NO & NOX FOR ACCURATE NO2 DETERMINATION

Tom McKarns, Principal, ECO PHYSICS, Inc.

Monday | 3:30PM - 6:00PM

## **B2. MONITORING, TESTING & INSTRUMENTATION**



B2.1 INTRODUCTION OF THE PTR-TOF-MS INTO COMPLIANCE TESTING

Peter Zemek, SVP Emerging Technologies, Montrose Environmental, Inc.



#### **B2.2 RICE & CT UNITS PERFORMANCE TESTING CONSIDERATIONS**

Holly Hills, Senior Environmental Envineering Associate, Sargent & Lundy, Emily Kunkel



**B2.3 CEMS: DESIGN, BUILD AND INSTALLATION CONSIDERATIONS** 

Phaneendra Uppalapati, Air Quality Engineer, AECOM, Frank Tringale, Larry La France



B2.4 SOURCES OF SO2 ANALYSIS INACCURACY IN LOW-SO2, HIGH-HUMIDITY SAMPLING Craig Sunada, Vice President, Product Development, Perma Pure, LLC.



## B2.5 EPA'S ELECTRONIC REPORTING TOOL (ERT)

Kathleen (Katie) Shonk, Quality Manager, Air Quality Services, LLC.



**B2.6 ALTERNATIVE PORTABLE SOLUTION FOR REFERENCE METHOD TESTING** 

Dr. Dietmar Doll, Head of Research and Development, MRU Instruments, Inc.



**B2.7 LASER UPDATE FOR CROSS DUCT AND OPEN PATH MEASUREMENT** Co-Chair - Bernadette Shahin, National Applications Manager, M&C TechGroup North America



**B2.8 INTRODUCTION TO PART 75 CEMS DATA VERIFICATION AND DATA USE** Travis Johnson, Clean Air Markets Division, U.S. EPA

Tuesday | 7:30AM - 9:30AM

## **B3. MONITORING, TESTING & INSTRUMENTATION**



## **B3.1 FLOW MONITOR K-FACTOR CALCULATIONS**

Cindy Whitaker, Manager, Air Monitoring & Testing, Environmental Affairs, Louisville Gas & Electric - Kentucky Utilities; Matt Gentry, Airflow Sciences



**B3.2 ADVANCES IN CONDENSABLE PARTICULATE MATTER MEASUREMENT** Co-Chair - David Elam, Vice President & Project Director, TRC



**B3.3 TUNABLE DIODE LASER (TDL) FOR STACK GAS ANALYSIS** 

Frank DeThomas, VP Process and Environmental, Horiba Instruments, Inc.



#### **B3.4 A STATE'S DILEMMA - REGULATING NH3 CEMS SYSTEM**

SERVOMEX Barbara Marshik, Global Power & Emissions Market Segment Manager, Servomex



B3.5 IMPACTS OF EPA REGION 6 GUIDANCE ON CMS DOWNTIME & DATA CALCULATION Co-Chair - JP Kleinle, Project Manager, ALL4



Perma pure B3.6 FACTORS AFFECTING PERFORMANCE OF NAFION DRYERS WITH SO2 AND NOX Gene Bohensky, Director, Application/Partner Learning, Perma Pure, LLC.; Craig Sunada

## TRACK | B | CEMS & EMISSION TESTING

#### Tuesday | 10AM - 12PM

## **B4. MONITORING, TESTING & SPECTROMETRY**



B4.1 NEW DEVELOPMENTS IN PROTON TRANSFER REACTION MASS SPECTROMETRY (PTR-MS) Steve LaZar, Business Development Consultant, The RJ Lee Group



**B4.2 UTILIZING TUNABLE LASER SPECTROSCOPY (TDLS) FOR NH3 COMPLIANCE** Gary Cacciatore, Midwest Regional Sales Manager, Cemtek KVB-Enertec



ThermoFisher B4.3 LOW LEVEL NOX MONITORING ON FAST START TURBINES AND 7E PERFORMANCES SCIENTIFIC Chris Hall, Manufacturing Planning Manager, Thermo Fisher Scientific; Joe Vaglio



Irinity B4.4 STRATEGIES TO MINIMIZE CEMS DOWNTIME

Consultants Eric Wiley, Managing Consultant, Trinity Consultant



ThermoFisher B4.5 SPECIATED HG EMISSION AS A FUNCTION OF FUEL TYPE AND CONTROL DEVICE SCIENTIFIC Co-Chair - Jeremy Whorton, Business Development Manager, Thermo Fisher Scientific; Jeff Socha



**B4.6 TIPS FOR MANAGING A CEMS AND DAHS WITH LIMITED RESOURCES** 

Co-Chair - Matt Swanson, District Manager, West, VIM Technologies, Inc.; Brad Blase

#### Tuesday | 1:00PM - 3:00PM

## **B5. MODELING AND SATELLITE DATA**



Tripity B5.1 DISPERSION MODELING FOR STRATEGIC ANALYSIS OF SO2 COMPLIANCE

Co-Chair - George Schewe, Principal Meteorologist/Consultant, Trinity Consultants

Richard Hamel, Air Quality Meteorologist, ERM; Milena Borissova, Carlos Szembek



B5.2 BUOYANT LINE SOURCE IMPLEMENTATION ISSUES IN AERMOD

B5.3 ANALYSIS OF UPDATES TO AERMOD'S PRIME AND BPIP DOWNWASH ALGORITHMS Jeff Connors, Manager, Air Quality Engineering and Studies, AECOM; Mary Kaplan,



B5.4 ADVANCED SATELLITE ATMOSPHERIC MONITORING IS NO LONGER PIE IN THE SKY Philip Father, CEO, Scepter, Inc.



**B5.5 MONITORING METHANE EMISSIONS AT THE SOURCE FROM SPACE** Jean-Francois Gauthier, Director, Business Development, GHGSat; Stephane Germain

**B5.6 PRIME2 BUILDING DOWNWASH ENHANCEMENTS** 

Robert Paine, Olga Samani

Co-Chair - Sergio Guerra, Senior Environmental Engineer, GHD; Ron Petersen, Petersen Research and Consulting, LLC

Tuesday | 3:30PM - 6:00PM

## **B6. DRONES, DATA MGMNT & MONITORING**



**B6.1 DRONES, SENSORS USE IN DENIED ENVIRONMENTS AND UTILITIES** Bruce Arvizu, Sr. Partner, Airworks Productions; Eric Pacheco



**B6.2 NEW FLEXIBLE CROSS PLATFORM SOLUTION FOR DAHS & OPERATOR WORKPLACE** Nadezhda Semeniaka, CEO, LLC LOGOSGRUP



**B6.3 THE EVOLUTION OF PART 75 - DATA MANAGEMENT AND REPORTING** 

Co-Chair - Katie Lindblom, Business Development, Trace Environmental Services; David



**B6.4 APPLICATION OF CEMS: AUTOMATED EMISSIONS REDUCTION** Grace Mitchell, Data Analyst, WattTime

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**B6.5 AIR QUALITY MONITORING SYSTEM FOR CHALLENGING LOCATIONS** Roland Zepeck, Sales Director, JCT Analysentechnik GmbH



B6.6 DATA MANAGEMENT FOR EMISSIONS, FENCELINE AND COMMUNITY MONITORING Andrew Montz, Owner, DR DAS Ltd.



B6.7 ADVANCES AND NEW DIRECTION IN AMMONIA SLIP MONITORING IN CALIFORNIA Bhaskar Chandan, Supervising Air Quality Engineer, South Coast Air Quality Management District; Dipankar Sarkar © **EUEC2019** 

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## TRACK | C SO<sub>2</sub>, NO<sub>2</sub>, Hg, SCR, CONTROL & OPTIMIZATION

Monday | 1PM - 3PM



## C1. SO2, NOX, HG, COMPLIANCE



Kayla Olson, Senior Process Engineer, Tri-Mer Corporation



#### C1.2 USE OF HALOGEN ADDITIVES TO INCREASE FUEL FLEXIBILITY

Co-Chair - J. Duncan Kish, Sales Account Manager, ADA-ES, Inc.; Alyssa Fuller



#### **C1.3 DITCHING YOUR MAJOR SOURCE MACT REQUIREMENTS**

Kim Alfonsi, Senior Environmental Consultant, Barr Engineering Co.; Tony Widboom



## C1.4 REACT® SYSTEM CHEMISTRY FOR MULTI-POLLUTANT CONTROL OF SOX, NOX, HG

Co-Chair - Domenic Contrino, Solutions Developer, Carbonxt; Regina Rodriguez, David Mazyck, Christine Valcarce



#### C1.5 ATLAS CARBON AND THE PNEUMATIC FLASH CALCINER

Michael Jones, CTO, Atlas Carbon, LLC

#### Monday | 3:30PM - 5:30PM



#### C2. EMISSION CONTROL TECH. & STRATEGIES

C2.1 A CASE STUDY: ENHANCED SO3 TOLERANT PAC WITHOUT THE USE OF HALOGENS Co-Chair - Curt Larson, Vice President - Sales, Carbonxt; Regina Rodriguez, David Mazyck, Lindsey Costin



#### C2.2 NEW TECHNOLOGY IMPROVEMENTS FOR RETROFITS AND SYSTEM UPGRADES

Co-Chair - Sean Dooley, Environmental Solutions, Nol-Tec Systems, Inc.



C2.3 SIMULATIONS OF TRAFFIC EMISSION REDUCTION STRATEGIES: MADRID EPISODE Roberto San Jose, Professor, Technical University of Madrid (UPM); Rosa Gonzalez, UCM; Juan Perez, Libia P'erez, UPM



#### C2.4 MERCURY ADSORPTION TESTS USING ACTIVATED CARBONS

Sang-Sup Lee, Associate Professor, Chungbuk National University; Tanveer Ahmad, Sinang Choi, Jeong Min Park

#### Tuesday | 7:30AM - 9:30AM

## C3. SO2, NOX, HG CONTROL TECH.



C3.1 NEW FINDINGS IN HG CONTROL THROUGH FGD & HYDROCLONE IMPROVEMENTS



## C3.2 NOVEL TREATMENT SYSTEM FOR MERCURY AND SELENITE REMOVAL

Co-Chair - Vladimir Dozortsev, Development Manager Trace Metals, Agua Metrology Systems, Ltd.



#### **C3.3 TREATING TAIL GASES IN THE ENERGY SECTOR**

Co-Chair - Scott Bayon, Director of Sales, Anguil Environmental Systems, Inc.



#### C3.4 APPROACH TO APPLY BATS TO CONTROL MERCURY EMISSION FOR ENERGY UTILIZATION Eun-Song Lee, Student, Yonsei University; Hana Jang, Yong-Chil Seo, Jin-Ho Sung

C3.5 NOX REDUCING CONTROL IN 870MW PC BOILER WHICH HAS OPPOSITE BURNERS Youngjun Ham, Supervisor, Korea South-East Power Co.; Inchan Park, Sooseok Kim

# 05P

# TRACK | C SO<sub>2</sub>, NO<sub>3</sub>, Hg, SCR, CONTROL & OPTIMIZATION

Tuesday | 10AM - 12PM

## C4. DSI, ACI, ACTIVATED CARBON, SCR & SNCR

C4.1 USING MERCURE AND OTHER IMPROVEMENTS TO REDUCE PAC CONSUMPTION Jon Norman, Manager-Sales/Technology, United Conveyor Corp; William Clark, GE Power

#### C4.2 SODIUM SORBENTS FOR HIGHER EFFICIENCY

Session Sponsor - Co-Chair - Michael Atwell, Sales Dylpmnt Mngr, Solvay Chemicals, SOLVAir Solutions; Cornelia Cretiu



C4.3 PRE-SCR INJECTION OF HYDRATED LIME FOR PLANT OPERATIONAL BENEFITS Eric Fairbairn, Product Manager - Flue Gas Treatment, Mississippi Lime Company



## C4.4 EMISSION SOLUTIONS VIA DISPERSION AND DISTRIBUTION

Sean Dooley, Environment Solutions, Nol-Tec Systems, Inc.



#### C4.5 MERCURY CAPTURE IN THE WET SCRUBBER WITH WETJECT™

Domenic Contrino, Solutions Developer, Carbonxt; Reginia Rodriguez, David Mazyck, Lindsey Costin

#### Tuesday | 1:00PM - 3:00PM

## C5. CONTROL & OPTIMIZATION



C5.1 SO2, HG, NOX MODULAR PROCESSES FOR ADDRESSING SCRUBBER EMISSIONS Brian Traylor, VP, Sales and Marketing, Semi-Bulk Systems, Inc.; Charles Alack



C5.2 EFFICIENCY/OPTIMIZATION FEEDBACK CONTROL IMPLEMENTATION USING PEMS Richard Hovan, Director, EIS Business Development, Wunderlich-Malec; Mark McKee



C5.3 IMPROVING HG CONTROL WHILE REDUCING PAC INJECTION RATES Brad Radl, Chief Technology Officer, Griffin Open System, LLC



C5.4 ESP PERFORMANCE IMPROVEMENTS BY REDESIGN OF ANTIQUATED COMPONENTS Co-Chair - Robert Mastropietro, Sales, Nol-Tec / Lodge-Cottrell; Chris Roglieri



C5.5 BUSINESS INTELLIGENCE AND DATA LITERACY FOR UTILITY PROFESSIONALS

David Cox, Founder, FirmoGraphs, LLC

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1.5

## TRACK | D | POWER GEN & ENERGY SERVICES

Monday | 1:00PM - 3:00PM

#### D1. ENERGY POLICY & POWER PLANTS

Edison Electric

D1.1 THE ELECTRIC POWER INDUSTRY: TRANSFORMING THE FUTURE

Jason Smith, Manager, Environmental Policy and External Affairs, Edison Electric Institute

SIEMENS

D1.2 DECARBONIZING POWER GENERATION BY USING HYDROGEN AS A GAS TURBINE FUEL Michael Welch, Industry Marketing Manager, Siemens Industrial Turbomachinery Ltd.



D1.3 WHY ENERGY MASTER PLANNING?

Kristen Parkhurst, Mechanical Engineer, Black & Veatch



D1.4 UTILITIES SECURITY AND OT CHALLENGES OF TODAY AND TOMORROW

Charlie Von Stetten, V.P. National Accounts, Unlimited Technology, Inc.; Oscar Herbosa Co-Presenter: Paulo Silva, Chief System Architect, Security Limits



**D1.5 OLD SMOKEY POWER - TRANSFORMING AGING POWER PLANTS** Co-Chair - Peter Belmonte, Vice President, TRC; Ed Malley, Michael Keller



**D1.6 NYS REV - OUR CLEAN ENERGY FUTURE** 

Lori Lybolt, Utility of Future Team, Consolidated Edison

#### Monday | 3:30PM - 6:00PM

## D2. PLANT PERFORMANCE & MATERIAL HANDLING



D2.1 COST AND PERFORMANCE BASELINE FOR FOSSIL ENERGY PLANTS: BIT. COAL/NG Co-Chair - Alexander Zoelle, Senior Chemical Engineer, Leidos; Mark Woods,

KeyLogic; R.J. James, Travis Shultz, Timothy Fout, USDOE/NETL; Marc Turner, Leidos



D2.2 MANAGING LOGISTICS FOR SCHEDULED OUTAGES IN POWER AND ENERGY Angela Eliacostas, President and Founder, AGT Global Logistics



D2.3 GENERATOR MODEL VALIDATION USING NONTRADITIONAL GENERATOR MSRMNTS

Tarig Rahman, Principal Engineer, SDG&E; Isaac West, Kamal Garg, Schweitzer Enaineering Laboratories: Hassan Ghoudiehbaklou, SDG&E



D2.4 ADVANTAGES OF ANNUAL CRITICAL PUMP FIELD TESTING

Kurt Schumann, President, ProPump Services, LLC; Bob Morgenstern



D2.5 DEVELOPING BEST PRACTICES FOR LONG-TERM RELIABILITY

Gongle Power Co-Chair - Johnny Howze, Plant Manager, Georgia Power



CYPRESS D2.6 INTERNET OF THINGS - DEPLOYMENT FOR EXISTING POWER PLANTS

Harry Sim. CEO. Cyprose Environment For Existing Power Plants

Harry Sim, CEO, Cypress Envirosystems



HYTORC D2.7 HARDWARE UPGRADES FOR OPTIMIZING GT MAINTENANCE Michael Dolan, Chief Engineer, HYTORC Corporation

#### Tuesday | 7:30AM - 9:30AM

#### D3. ENERGY AND CYBERSECURITY



D3.1 THE NATION'S FIRST CYBER-SECURE UTILITY MICROGRID AT AMEREN Emily LeJeune, Microgrid Applications Manager, S&C Electric Company



D3.2 IDENTIFYING AND MITIGATING CYBER RISK

Timothy Corbett, Founder and President, Cyber Security Service



D3.3 IGNORANCE IS NO EXCUSE: COMBUSTION SYSTEMS STANDARDS AND CODES 101 Dave Baxter, Senior Managing Director - Western US, Relevant Solutions



D3.4 BRIDGING THE DIVIDE BETWEEN OT & IT SECURITY IN THE UTILITIES INDUSTRY Co-Chair - Amy Williams, Vice Pres. of Cyber Services, Unlimited Technology, Inc.



D3.5 EFFECTIVE SECURITY AWARENESS TO PROTECT THE POWER GRID

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Jeffrey Struik, Principal Cyber Security Engineer / Owner, Cyber Strike Solutions, LLC



D3.6 INFORMATION VS INTELLIGENCE-THE HUMAN FACTOR THAT MAKES IT ALL WORK Co-Chair - John Bryk, Cyber and Physical Threat Intelligence Analyst, DNG-ISAC

## TRACK | D | POWER GEN & ENERGY SERVICES

Tuesday | 10:00AM - 12PM

## D4. T&D, POWER PLANT TECHNOLOGIES



**D4.1 SUBSURFACE INVESTIGATION METHODOLOGY** 

Co-Chair - Josh Dotson, Energy Division Manager, GPRS



D4.2 LEAK DETECTION 101: THE HISTORY OF NATURAL GAS LEAK DETECTION Bryan Chambers, International Sales Manager, Heath Consultants Incorporated



**D4.3 CHALLENGES IN ENVIRONMENTAL PERMITTING** 

Benjamin Becker, Environmental Compliance Specialist, Black & Veatch



**D4.4 MITIGATING IMPACTS TO BIRDS FROM TRANSMISSION LINES** 

Tom Hamer, Senior Wildlife Ecologist, Hamer Environmental



D4.5 ADAPTING TO A NEW WORLD: THE CHANGE FROM BASELOAD TO CYCLING OPS Co-Chair - Una Nowling, Technology Leader, Fuels and Reliability, Black & Veatch



D4.6 REDUCE OR ELIMINATE DRY-ICE CLEANING WITH INFRASOUND TECHNOLOGY Michael Ware, President, SCR Solutions, LLC

## Tuesday | 1PM - 3PM

## **D5. ENERGY POLICY & POWER PLANT STRATEGIES D5.1 INCLUDING CUSTOMER NEEDS IN RATE DESIGN**



Co-Chair - Ted Kelly, Principal & Senior Project Manager, Burns & McDonnell

D5.2 IS GREEN THE NEW BLACK... THE RISE AND FALL OF NATURAL GAS? A≣COM Anthony Cirillo, Senior Project Director, AECOM



D5.3 THE EFFECT OF ARCTIC BLASTS & GLOBAL WARMING SOLUTIONS ACT ON ISO-NE Stephen Slocomb, Principal, Epsilon Associates



D5.4 CLIMATE ACTION AND ADAPTATION FOR THE CITY OF SAN ANTONIO

Angela Rodriguez, Director, Climate & Sustainability, CPS Energy; Doug Melnick, City of San Antonio; Danielle Vitoff, Navigant Consulting, Inc.



D5.5 THE BENEFITS OF GAS TURBINES AND ORC FOR DISTRIBUTED POWER GENERATION Michael Welch, Industry Mkta Mar, Siemens Industrial: Jeremy Zamzow, Opero Energy



D5.6 REAL TIME MONITORING OF NATURAL GAS COMPOSITION FOR POWER GENERATION Sylvie Bosch-Charpenay, Senior Applications Scientist, MKS Instruments, Inc.; Roberto Bosco

#### Tuesday | 3:30PM- 6:00PM

# **D6. PROJECT FINANCE & RISK MANAGEMENT**

D6.1 APPLICATION OF HAZARD AND OPERABILITY (HAZOP) ANALYSIS IN POWER PLANTS Session Sponsor - Co-Chair - Daniel Azukas, Project Associate, Sargent & Lundy; Jason Gerol, Ryan Krone



D6.2 BUILDING A SMARTER TOMORROW: RESILIENT BUILDING, RESILIENT GRID Douglas Kot, Head of Section, Sustainable Buildings and Communities, DNV GL



D6.3 ANALYTICAL RESULT AUTOMATION FOR PROACTIVE RISK MANAGEMENT Paul Banfer, Chief Technology Officer/Vice President, EISC



**D6.4 A COMPREHENSIVE APPROACH TO RISK MANAGEMENT** Brian Payer, Strategic Operation Program Manager, Sphera



D6.5 IMPACT OF SOCIAL MEDIA ON RISK COMMUNICATIONS Joab Ortiz, Public Involvement Manager, Burns and McDonnell; Adam Renz, Pattern Energy

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D6.6 STANDARDIZING RISK-BASED PROJECT MANAGEMENT - RISK ASSESSMENT PROFILER Carlos Mendizabal, President, ARETE Consulting Services, Inc.



D6.7 VIRTUAL INSTALLATION TO REDUCE CONSTRUCTION RISK Lee Borthwick, Power Service Leader, Borton-Lawson

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## TRACK | E | SOLID WASTE, LANDFILL GAS, BIOFUELS

Monday | 1PM - 3PM

#### E1. WASTE TO ENERGY - CASE STUDIES



ARIES E1.1 GASIFICATION FOR WASTE WATER FACILITIES - PART 1: PROCESS BENEFITS Bernard Brown, Director, Business Development West Coast, Aries Clean Energy; Sara

Head, Yorke Eng., Jeff Snyder, Aries Clean Energy



E1.2 GASIFICATION FOR WASTE WATER FACILITIES - PART 2: PERMITTING CASE STUDY Co-Chair - Sara Head, Principal Scientist, Yorke Engineering, LLC; Jeffrey Snyder, Aries

Clean Energy

E1.3 PLASMA GASIFICATION OF WASTE IN THE U.S.: A CASE STUDY ON LARGE-SCALE Richard Fish, President and CEO, AlterNRG Corp.



E1.4 FOOD WASTE TO RENEWABLE NATURAL GAS: TECHNICAL AND ECONOMIC OPTIONS Co-Chair - Mark McDannel, Mgr, Energy Recovery Section, Los Angeles County Sanitation Districts



E1.5 RENEWABLE DIESEL - RISK FREE CARBON FOOTPRINT REDUCTION

Matt Leuck, Technical Manager, North America, Neste

#### Monday | 3:30PM - 5:30PM



E2. BIOGAS, BIOFUELS, BIODIESEL, ALGAE

CATAWBA E2.1 CATAWBA COUNTY ECOCOMPLEX, A STUDY OF INDUSTRIAL SYMBIOSIS EMPLOYING Barry Edwards, Director of Utilities & Engineering, Catawba County

■ E2.2 BIOMASS TO DIESEL, A NEW WAVE IN RENEWABLE FUELS



E2.3 OXYGEN REFORMING OF TAR AND METHANE IN BIOMASS-DERIVED SYNGAS Co-Chair - Dr. Bradley Damstedt, Development Specialist, Praxair; Larry Bool



**E2.4 CFD STUDY ON GASIFICATION CHARACTERISTICS OF BIO-OIL** 

Hang Seok Choi, Professor, Yonsei University; MyungKyu Choi, Jae Gyu Hwang, YONSEL UNIVERSITY HoonChae Park

#### Tuesday | 7:30AM - 9:30AM

#### E3. LMOP - LANDFILLS & LANDFILL GAS



E3.1 CONVERSION OF BIOGAS RENEWABLE TO POWER TO RNG - A VALUE PROPOSITION Jeffrey Pierce, Senior Project Director, SCS Energy / SCS Engineers



Rob Ricciardi, Loan Officer, Live Oak Bank: Max Vernier



E3.3 COVAP: COGENERATION FOR INDUSTRIAL WASTE WATER EVAPORATION Co-Chair - Ben Laurent, Senior Process Engineer, Heartland Water Technology, Inc.



E3.4 ENCAPSULATOR TECHNOLOGY USEFUL FOR ODOR MITIGATION IN LANDFILLS Ron Lowrey, Regional Manager, Hazard Control Technologies, Inc.; Jeffrey Bonkoski



**E3.5 SIOUX FALLS PIPELINE PROJECT - DELIVERING SUCCESS** 

Dustin Hansen, Landfill Manager, City of Sioux Falls



E3.6 SIOUX FALLS LANDFILL GAS TO POET ETHANOL

Rachel Kloos, Plant Manager, Poet; Dustin Hansen, Landfill Superintendent, City of Sioux Falls, SD

## TRACK | E | SOLID WASTE, LANDFILL GAS, BIOFUELS

Tuesday | 10AM - 12PM

#### E4. RNG & BIOFUEL PROJECT STRATEGIES



E4.1 HOW TO MEET RULE 30 AND RULE 21 REQUIREMENTS FOR RENEWABLE NATURAL GAS Dave Church, VP Operations, Guild Associates, Inc.



DOUGLAS E4.2 RENEWABLE GAS PIPELINES: WHAT REGULATIONS APPLY AND HOW TO OPERATE Co-Chair - Ryan Estabrook, President, Douglas Pipeline Company



**BOLDT** E4.3 BIFURCATING A CENTRAL LEAST FOR REDUCED. The Boldt Company Co-Chair - Jay Ehrfurth, Director - Power / Industrial, The Boldt Company E4.3 BIFURCATING A CENTRAL PLANT FOR REDUNDANCY AND RELIABILITY



**E4.4 SELF-PERPETUATING ENVIRONMENTAL CLEANUP SYSTEM** 

Peter Schubert, Director, Indiana University - Purdue University Indianapolis (IUPUI)



E4.5 PROSPECTS OF BIODIESEL USAGE AS AN ALTERNATIVE FUEL WITH LOW EMISSIONFOR DIESEL ENGINES

Mohamed Aboabboud, Faculty of Marine Resources, El-Merghib University; Hesham Ibrahim, Al-Asmarya Islamic University

#### Tuesday | 1PM - 3PM

#### **E5. LANDFILL MANAGEMENT & COMPLIANCE**





**E5.2 AIR PERMITTING PROJECTS AT HIGH SULFUR LANDFILLS** 

Co-Chair - Wes Younger, Managing Consultant, Trinity Consultants



**E5.3 VERIFICATION TESTS WITH EMISSION MEASUREMENTS OF AIR POLLUTANTS** 

Dr. Ha-Na Jang, Research Professor, Yonsei University; Yong-Chil Seo, Eun-Song Lee



**E5.4 INNOVATION IN LFG GENERATION MODELING** 

John Carlton, Solid Waste Program Lead, HDR



E5.5 ENGINEERED BIOMASS PROJECTS: FINALLY TIME FOR THEIR DAY IN THE SUN?
Una Nowling, Technology Leader, Black & Veatch

Tuesday | 3:30PM - 5:30PM



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## TRACK | F | RENEWABLE ENERGY

Monday | 1PM - 3PM

#### F1. RENEWABLE ENERGY

Miaoli Wind Company

F1.1 ECONOMIC AND SOCIAL ASPECTS OF OPERATING A COMMERCIAL WIND FARM Hal Falls, Commercial Manager, Miaoli Wind Company



F1.2 LIFECYCLE OF A RENEWABLE ENERGY PROJECTS DEVELOPMENT

Rob Bates, Senior Project Scientist, NTH Consultants, Ltd.



F1.3 MAXIMUM GEOTHERMAL HEAT HARVESTING VIA DOWNHOLE LOOP CIRCULATION Co-Chair - Robert Pilko, Director, Blade Energy Partners



F1.4 THE END OF BIG IRON: HOW WIND AND SOLAR BECAME CHEAPER THAN HYDRO Robert McCullough, Principal, McCullough Research; Zachary Campbell, Louis Benatson, Eric Shierman



F1.5 THE RENEWABLE ENERGY BUSINESS CASE FOR NERC COMPLIANCE Mark Rabuano, Dir. of Regulatory Compliance, Grid Subject Matter Experts (GridSME)



F1.6 NEAR-TOTAL DECARBONIZATION: GLOBAL CLIMATE CHANGE INCLUDE H2, NH3 FUEL Co-Chair - Bill Leighty, Director, The Leighty Foundation

#### Monday | 3:30PM - 6:00PM



## F2. RENEWABLE ENERGY PROJECT DEVELOPMENT

F2.1 PREPARING FOR OFFSHORE WIND DEVELOPMENT IN THE U.S.





F2.2 DIRECT RENEWABLES OFFERINGS - COMMUNITY AND SOLAR Drew Robinson, Manager, Renewables, Evergy (KCP&L / Westar Energy)



F2.3 FIELD TEST OF A POISON RESISTANT SOUR WATER GAS SHIFT CATALYST Girish Srinivas, Vice President, TDA Research, Inc.; S. Schwab, S. Gebhard, B. Gebhard



AMERICAN F2.4 RAMPING PERFORMANCE OF A GIGAWATT HYDRO COMPLEX

GOVERNOR Roger Clarke-Johnson, Western Region Manager, American Governor Company

F2.5 ARTILITY: AN ARTISTIC ILLUSTRATION OF RENEWABLE ENERGY AND UTILITY Nick Hartrich, Outreach Manager, Puget Sound Energy



F2.6 KEY CONSIDERATIONS FOR VOLUNTARY RENEWABLE ENERGY PURCHASING IN THE U.S. Michelle McGinty, Manager, Program Outreach, Center for Resource Solutions / Green-e

F2.7 RENEWABLE ENERGY IN THE UTILITY AND TRANSPORT SPACE Rob Threlkeld, Global Manager-Renewable Energy, GM

#### Tuesday | 7:30AM - 9:30AM

## F3. RE SMARTGRID & MICROGRID



F3.1 MICROGRIDS USING ONSITE RENWABLES - RESILIENT SUSTAINABILITY Co-Chair - Alden Hathaway, SVP Business Development, Sterling Energy Assets



F3.2 UTILITY-SCALE MICRO-GRID

Darr Hashempour, President / CEO, DH Green Energy, Inc.



F3.3 FLOW BATTERY TECHNOLOGY REVIEW

Jason Barmann, Electrical Engineer, Burns & McDonnell

F3.4 BEST PRACTICES AT UC SAN DIEGO'S MICROGRID W/ 150 ADVANCED EVCHARGERS



San Diego Byron Washom, Director, Strategic Energy Initiatives, UC San Diego



F3.5 REGULATIONS SUPPORTING FUEL CELL DEPLOYMENT IN CALIFORNIA Clark Crawford, Director, Business Development, FuelCell Energy

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F3.6 STAYING 100% OPERATIONAL DURING MULTI-DAY GRID OUTAGES WITH RESILIENT AND HIGHLY-EFFICIENT CHP

Gene Kogan, Director, DOE Western CHP TAP

TRACK | F | RENEWABLE ENERGY Tuesday | 10AM - 12PM

## F4. GHG & GREEN PROJECTS

51EMENS F4.1 GAS TURBINE/SOLAR ENERGY HYBRIDS FOR REDUCED CO2 ENERGY PRODUCTION
Michael Welch Industry Marketing Administration Michael Welch, Industry Marketing Manager, Siemens Industrial Turbomachinery Ltd.



F4.2 RENEWABLE NATURAL GAS COMMODITY TRACKING Benjamin Gerber, Executive Director, Midwest Renewable nergy Tracking System (M-RETS)



F4.3 LOW-COST FINANCING & TECHNOLOGY MATCHMAKING FOR GHG REDUCTIONS Derrick Tang, Manager, Bay Area Air Quality Management District



F4.4 GHG AND ENVIRONMENTAL JUSTICE Co-Chair - Mark Hauenstein, Partner, UC Won



MIND F4.5 GROW MARKET SHARE WITH A PROVEN SUSTAINABILITY MESSAGING STRATEGY Carolyn Parrs, CEO, Mind Over Markets



F4.6 ZERO WASTE WEEK AND REDUCING CARBON FOOTPRINT AT NYU Dr. Bapanaiah Penugonda, Associate Professor / Group Practice Director, New York University, College of Dentistry; Megha Rao, Yunah Caroline Chun

#### Tuesday | 1PM - 3PM

## F5. MICROGRID & ENERGY STORAGE



F5.1 CON EDISON CASE STUDY: HOW FUEL CELLS SOLVE DEMAND GROWTH CHALLENGES Asim Hussain, Vice President, Marketing, Bloom Energy



F5.2 ENERGY STORAGE AS PART OF DER GROWTH: REGULATORY SNAPSHOT Walker Wright, VP of Policy, ENGIE Storage



F5.3 PERCS: POWERED EMERGENCY RESPONSE CENTERS Ted Flanigan, President, EcoMotion



**Solar Turbines**F5.4 GAS TURBINES DRIVING FLEXIBLE MICROGRIDS
Session Sponsor - Co-Chair - Vivek Khanna, Manager Product Engineering, Solar



F5.5 THE ELECTRIC GRID AND THE BENEFITS OF MODULAR AND MICROGRID SYSTEMS Nathan Goodman, Chief Executive Officer, Hamer Environmental



F5.6 FUEL CELL MICROGRID CASE STUDY: HOW THE CITY OF HARTFORD CREATED AN **ELECTRIC POWER SAFE HAVEN** 

Asim Hussain, Vice President, Marketing, Bloom Energy

#### Tuesday | 3:30PM - 6:00PM



F6. PV, SOLAR & SUSTAINABLE RE F6.1 SITING SOLAR - ZONING AND ORDINANCE CONSIDERATIONS Nikki Payne, Principal Consultant - Impact Assessment & Planning, ERM



F6.2 SOLAR PV FEASIBILITY STUDY COMP: CLOSED ASH POND VS GREENFIELD SITE Neal Kochis, Senior Project Manager, Haley & Aldrich; Steven Putrich, Lee Saunders



F6.3 SOLAR ENERGY ASSESSMENT OF PENN STATE CAMPUSES USING ARCGIS AND ATSV Mesude Bayrakci-Boz, Assistant Teaching Professor of Engineering, Penn State Hazleton; Paulo Henrique Soares, Simon Miller



F6.4 PROMOTING SUSTAINABLE ENERGY INFRASTRUCTURE ON AN ACADEMIC INST. Co-Chair - Jin Jo, Associate Professor, Illinois State University; Matt Aldeman



F6.5 FROM DATA TO INSIGHTS TO STORIES TO REACH YOUR AUDIENCE Stephen Groner, President, S. Groner Associates, Inc.



F6.6 ELECTRICAL ENERGY MANAGEMENT IN HOUSEHOLD REFRIGERATORS AND FREEZERS Co-Chair - Seyed Mojtaba Sadrameli, Professor, Tarbiat Modares University; L.Abdolmaleki, A. Pirvaram



F6.7 RENEWABLE ENERGY IS RENEWABLE EFFICIENCY Shreepal Dangol, President, Grace Business Solution



F6.8 GROUND MOUNT RACK: GREEN IN/GREEN OUT WITH LIFT & SHIFT CAPABILITIES Greag Klana, Vice President of Business Devlpmnt & Strategy, Nuance Energy Group



## TRACK | G | O&M, DDD & EHS

Monday | 1PM - 3PM

#### G1. DECOMMISSIONING OF POWER PLANTS

ENVIRONMENTAL

**G1.1 HOW TO TRANSFER ENVIRONMENTAL LIABILITIES DURING POWER PLANT CLOSURES** Randall Jostes, CEO, Environmental Liability Transfer, Inc.

BURNS MEDONNELL

G1.2 PLANNING DECOMM & DEMOLITION & IN-PLACE RETIREMENT OF POWER PLANTS Jeffrey Pope, Manager, Facility Decommissioning & Demolition Svcs, Burns & McDonnell



G1.3 SOLVING NON-LIQUID PCB IMPEDIMENTS TO DECOMMISSIONING Stephen Mitchell, Senior V.P., Weston Solutions, Inc.; Robert Appelt, J.D. Groesbeck



**G1.4 FUNDAMENTALS OF DEMOLITION PROJECT MANAGEMENT OF POWER PLANTS** Co-Chair - Tim Barker, D4 Program Director, AECOM



G1.5 DECOMMISSIONING AND THE CHALLENGES WITH SYSTEM AND UTILITY RELOCATION Andrew Schaaf, Project Manager, APTIM, Inc.; Gene Scott



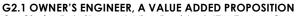
**G1.6 ESTIMATING YOUR D&D PROJECT** 

Joe Vendetti, VP of D&D, Remedial Construction Services LP (RECON)

#### Monday | 3:30PM - 6:00PM



## G2. O&M, CHP, ENERGY MANAGEMENT



Co-Chair - Rob Shepard, Vice President, IEM Energy Consultants, LLC.; Jeff Fassett



G2.2 MAXIMIZING SITE VALUE AND ULTIMATE FUTURE USE FOR POWER PLANT D&D SITE MEDONNELL Jeffrey Pope, Manager, Facility Decommissioning & Demolition Svcs, Burns & McDonnell



G2.3 REGAINING LOST MW THROUGH HIGH PRESSURE TURBINE FOAM CLEANING Robert Betz, Career Engineer, Ameren; Chris Taylor



**G2.4 ENERGY RESILIENCE IN THE BROADER BUSINESS ENVIRONMENT** 

Patrick Castro, Senior Commercial & Business Sales Manager, Centrica Business Solutions; Bill Kenworthy



G2.5 ESTIMATING BUILDING ENERGY USE

Steven French, Professor, Georgia Institute of Technology; William Drummond



**G2.6 OPTIMIZE ENGINE CHP WITH WASTE HEAT** 

Rob Emrich, Director, ElectraTherm



G2.7 IMPACT OF CYCLING BETWEEN FULL & PART LOAD IN 2 300MW S/C STEAM UNITS Co-Chair - Dr. Majed Togan, CEO, Creative Power Solutions; Dr. Prabhat Neradi, Omar Shami, Salim Masharga

#### Tuesday | 7:30AM - 9:30AM



## G3. O&M, PLANT MANAGEMENT





G3.2 IMPROVING LOW LOAD OPERATION AND FLEXABILITY WITH IGNITION STABILITY Dennis Barlow, Senior Product Manager, General Electric



**G3.3 BEST PRACTICES IN OUTAGE MANAGEMENT** 

Co-Chair - Rob Shepard, Vice President, IEM Energy Consultants, LLC; Jeff Fassett



G3.4 EVALUATION OF AN ALT. TREATMENT FOR BOILER CHEMICAL CLEANING WASTE Todd Whiting, VP Operations, Purestream Services: Brad Burns, EPRI

## TRACK | G | O&M, DDD & EHS

Tuesday | 10AM - 12PM

#### G4. EHS. EMIS & SAFETY



G4.1 THE NEXT GENERATION OF STANDARDIZED CLOUD-BASED EHS SOLUTIONS Co-Chair - Kyra Sharp, Director of Services, Perillon Software, Inc.; John Niemoller



G4.2 A TECHNOLOGY-DRIVEN, SYSTEMS APPROACH TO MANAGING EHS PROGRAMS Joseph Tell, Owner, Tellevate, LLC



G4.3 KEY COMPONENTS FOR A ROBUST REFRIGERANT MANAGEMENT PROGRAM Mark Harbin, Senior Consultant, Sphera



**G4.4 APPLICATION OF SAFETY INTEGRITY LEVEL (SIL) ANALYSIS IN POWER PLANTS** Daniel Azukas, Project Associate, Sargent & Lundy; Ryan Krone, Jason Gerol



**G4.5 ENABLING DISTRIBUTED ENVIRONMENTAL COMPLIANCE MANAGEMENT** Brent Allred, Program Manager, Northrop Grumman Technology Services



G4.6 INDUSTRY 4.0 & EHS: HOW IT AFFECTS UTILITIES & HOW TO PREPARE James Jensen, Director of Customer Success, Enablon

#### Tuesday | 1PM - 3PM

## **G5. OPERATIONS & OPTIMIZATION**



G5.1 ENERGY SAVINGS AND POWER FACTOR IMPROVEMENT WITH MEDIUM VOLTAGE VFD'S Session Sponsor - Co-Chair - Manish Verma, Senior Sales Application Engineer, TMEIC



G5.2 IMPROVING MAINTENANCE, SAFETY AND ROI USING FUEL ADDITIVES Joe Spahn, Business Development Manager, Imerys Performance Minerals; Dr. Adam Campen Co-Presenter - Joseph Harris, Business Development Eng., Imerys Performance Materials



G5.3 CREATING VALUE: MANAGED CORPORATE ENVIRONMENTAL COMPLIANCE SERVICES Co-Chair - David Shotts, Partner, ERM



G5.4 ADVANTAGES OF CONTRACTOR PARTNERSHIPS IN TODAY'S MARKET Edwin David Bittner, Executive Director, Allied Power Services, LLC



G5.5 AFFORDABLE CLEAN ENERGY RULE: USEFUL LIFE AND HEAT RATE IMPROVEMENTS Kyle Kropf, Engineering Manager, Black & Veatch

#### Tuesday | 3:30PM - 6:00PM

### **G6. EHS & RISK & ENERGY MANAGEMENT**



**G6.1 MANAGING CHANGE - FROM VISION TO REALITY** Co-Chair - Angela Johnson, Manager, DTE Energy



G6.2 PFAS 101: WHAT ARE THEY? HOW DID THEY GET HERE? WHAT ELSE IS COMING? Ward Swanson, Vice President, Senior Environmental Scientist, Barr Engineering Co.



G6.3 A NEW SEASON - COPING WITH SMOKE FROM WILD FIRE IMPACTS ON OPEATIONS Brian Berndt, Environmental Health and Safety Manager, Calpine



G6.4 SAFETY CONSIDERATIONS WHEN PLANNING FOR PLANT DECOMMISSIONING & DEM Jeffrey Pope, Manager, Facility Decommissioning & Demolition Svcs, Burns & McDonnell



G6.5 INSULATED BUILDING TECHNOLOGY FOR RE-BUILDING FIRE-RAVAGED HOUSING Co-Chair - Roderick Robinson, Director of Operations, Super Insulated Green Building Technologies, LLC



G6.6 DIGITAL SOLUTIONS FOR MUNICIPAL SERVICES, VIA AUGMENTED REALITY Dimitris Agouridis, CEO, INTUS Group



**G6.7 MAKING DUMB BUILDINGS SMART** David Roberts, VP of Marketing, Cypress Envirosystems; Harry Sim

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## TRACK | H | ELG, CCR, CCS & FGD

#### Monday | 1PM - 3PM



## H1. CCR & ELG COMPLIANCE MGMT.

H1.1 "LIGHT AT THE END OF THE TUNNEL" - SOUND STRATEGIES FOR CM/CA

Session Sponsor - Co-Chair - Steven Putrich, VP - CCR & Industrial Waste Segment Lead, Haley & Aldrich



H1.2 WATER AND ASH COMPLIANCE: WHAT ELSE IS NEW?

Co-Chair - Jason Eichenberger, CCR Business Unit Manager, Burns & McDonnell



H1.3 CASE STUDY FOR CCR AND ELG COMPLIANCE AT A 4 UNIT 1370 MW STATION

Kelly Aita, Sales Engineer, United Conveyor Corporation; Gerald Long



H1.4 CREATIVE SOLUTION FOR PROCESS AND CONTACT WATER STORAGE Steve Kiser, Vice President, Wood Environment & Infrastructure Solutions, Inc.



H1.5 ASSESSING CCR DATA QUALITY FROM PLANNING THROUGH USE Rock Vitale, Technical Dir. - Chemistry/Principal, Environmental Standards; Jennifer Gable



H1.6 RECLAIMING AND RECYCLING COAL FLY ASH FOR BENEFICIAL USE Bill Fedorka, Vice President, Engineering & Projects, The SEFA Group

#### Monday | 3:30PM - 5:30PM

## H2. COAL ASH, CCR & FGD



H2.1 REGULATORY & POLICY DRIVERS CONTINUE TO IMPACT CCR RESOURCE MARKETS Co-Chair - Danny Gray, Executive VP - Government & Environmental Affairs, Charah Solutions, Inc.



H2.2 FROM ASH TO GRASS: DECOMMISSIONING TWO CCR SURFACE IMPOUNDMENTS Cedric Ruhl, Associate Engineer, Wood



**H2.3 THE EFFECTS OF FLY ASH QUALITY ON BRINE ENCAPSULATION** 

Clark Harrison, Director - Business Development, Purestream



H2.4 DEMONSTRATING "NO MIGRATION" ALTERNATIVE PERFORMANCE STANDARD FOR CCR James Aiken, Vice President, Barr Engineering; Katy Lindstrom, Justin Soberaski



H2.5 CONSTRUCTION OF A MIDWEST UNDER-BOILER BOTTOM ASH SYSTEM Ed Storrs, VP Operations, Bowen Engineering



H2.6 HOW ECONOMICS ON CARBON CAPTURE SYSTEMS ON COAL POWER PLANS IN

Harshit Chatur, Director, Finance, NRG Energy, Inc.

#### Tuesday | 7:30AM - 9:30AM

#### H3. CCR RULE



H3.1 COAL COMBUSTIONS RESIDUALS RULE - WHERE DOES A FACILITY GO FROM HERE? Christine Harris, Power Generation Regulatory Compliance Practice Leader, HDR



H3.2 CONCEPTUAL SITE MODEL AND ITS BENEFITS FOR CLOSURE OF CCR UNITS Martin Reif, Waste Facility Containment Practice Leader, Jacobs



H3.3 DEWATERING AND CONTAINMENT OF COAL ASH USING GEOTEXTILE TUBES Co-Chair - Bryan Hamilton, Market Manager, TenCate Geosynthetics; Tom Stephens, Chris Timpson



**H3.4 CASE STUDY - CCR RULE UNSTABLE AREA DEMONSTRATIONS** Gary Pendergrass, Principal, GeoEngineers, Inc.



H3.5 IMPACTS TO OPERATIONS AND CLOSURES DUE TO CCR RULE REGULATORY CHANGES Jason Pokorny, Senior Project Manager, Haley & Aldrich



H3.6 BENCHMARKING THE CCR INDUSTRY - AN UPDATE FOR TOMORROW Mark Rokoff, Vice President, AECOM; David Cox, FirmoGraphs

# TRACK | H | ELG, CCR, CCS & FGD

#### Tuesday | 10AM - 12PM

## H4. COAL ASH, CCR



H4.1 DESIGN CONSIDERATIONS FOR COAL ASH BASIN WATER TREATMENT

Charles McCloskey, Market Manager-Power Industry, Evoqua Water Technologies



H4.2 ENVIRONMENTALLY FRIENDLY ASH BENEFICIATION TECHNOLOGY Michael Varner, Director - Business Development, SCB International; Chris Poling

HAYWARD H4.3 GROWING GEOSTRUCTURAL AND STABILIZATION NEEDS FOR ASH POND CLOSURE Ryan Smith, Project Executive, Hayward Baker; Anita Perry, Southern Company; Anthony Sak, Hayward Baker



H4.4 THE ROLE OF WORK AREA QUANTIFICATION FOR CCR CONSTRUCTION PROGRAMS Dale Evans, Senior Director of Technology & Strategy, Remedial Construction Services



H4.5 LEACHING REE FROM COAL FLY ASH USING ORGANIC ACIDS

Co-Chair - David Reed, Senior Scientist, Idaho National Laboratory; Yoshiko Fujita, INL; Jacob Fisher, BYU-Idaho, Dan Park, Yongqin Jiao; Livermore National Laboratory; Margaret Lencka, Andrew Anderko, OLI Systems; Lili Wu, Alexandra Navrotsky, University California-Davis



H4.6 FINDING BALANCE: HOW FUTURE USE GUIDES ASH POND CLOSURE STRATEGIES

Session Sponsor - Co-Chair - Eric Nelson, Vice President, SCS Engineers

#### Tuesday | 1PM - 3PM

#### **H5. CCS & RARE EARTH ELEMENTS H5.1 POLICY PARITY FOR CARBON CAPTURE**



Co-Chair - Will Polen, Senior Director, USEA



H5.2 CCUS - UTILIZINE FTIR MEASUREMENT TECHNOLOGY TO CONTROL THE PROCESSES Jim Cornish, Sales & Support Manager, Gasmet Technologies

# EERC

**H5.3 REGIONAL ECONOMIC IMPACTS OF CCUS** 

Joshua Stanislowski, Principal Process Engineer, Energy Systems Development, Energy & Environmental Research Center, University of North Dakota; Steven Schlasner, Bruce Folkedahl, Michael Swanson, Melanie Jensen



H5.4 DETERMINATION AND RECOVERY OF RARE EARTHS FROM COAL

Co-Chair - Evan Granite, Research Chemical Engineer, Task Leader, USDOE; Ken Ladwig, Elliot Roth



H5.5 USING AGRICULTURAL WASTES TO RECOVER REE FROM URBAN WASTES

David Reed, Senior Scientist, Idaho National Laboratory; Vicki Thompson, Yoshiko Fujita, INL; Yongqin Jiao, Lawrence Livermore National Laboratory; Jacob Fisher, BYU; Michael Crain-Zamora, University of Iowa, Katherine Scalzone, Montana State University



H5.6 CASE HISTORY-CCR LANDFILL COVER SYSTEM WATER DESIGN AND MANAGEMENT Ken Daly, Principal Engineer, Wood

## Tuesday | 3:30PM - 5:30PM



H6. FGD, ELG, CCR & CCS

H6.1 NEW MEMBRANE CONFIGURATION SAVES COSTS IN FGD TREATMENT FOR ELG/

Co-Chair - Jon Liberzon, Vice President, BKT; Jonathan Chen



H6.2 REGULATIONS AND WATER USE: NAVIGATING THE BALANCING ACT Dan Elliott, Staff Chemical Engineer, Burns and McDonnell; Katie Bland



H6.3 CONSIDERATIONS FOR CCR MANAGEMENT USING GEOTEXTILE CONTAINERS Randy Wilcox, Technical Sales and Engineering Manager, WaterSolve, LLC; Grega Lebster, WaterSolve; Bryan Hamilton, Tom Stephens, TenCate Geosynthetics **Americas** 



H6.4 HOW TO MINIMIZE CCR LANDFILL LEACHATE AND CONTACT WATER MANAGEMENT Co-Chair - Phil Gearing, Project Manager, SCS Engineers



Katie McIntyre, Chemical Engin 25r, EES

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## TRACK | I | WATER & 316(b) COOLING TOWER

Monday | 1PM - 3PM

# 11. WASTEWATER, GROUND WATER, REMEDIATION,

ELG. FGD

Services; Karin Stewart Harmon

DUKE

11.1 ULTRAFILTRATION OF FGD WASTEWATER FOR ELG COMPLIANCE Co-Chair - Keith Ambrose, Chemical Engineer, Duke Energy



11.2 COMPLIANCE UNDER THE NEW(ER) ELG RULE Patricia Scroggin, Regional Practice Manager - Energy, Burns & McDonnell

**I1.3 GROUNDWATER MANAGEMENT AND REMEDIATION USING SLURRY WALL SYSTEMS** Dale Evans, Senior Director of Technology & Strategy, Remedial Construction



11.4 MONITORING, PREDICTING, PREVENTING AND CONTROLLING ALGAL BLOOMS Session Sponsor - Co-Chair - Lisa Brand, CTO, LG Sonic



11.5 PROGRESSES AND PERFORMANCES IN DISTILLERY STILLAGE TREATMENT Getachew Gebreeyessus, Lecturer, Kotebe Metropolitan University

#### Monday | 3:30PM - 5:30PM



12. 316(b), ELG, FGD, WASTEWATER 12.1 THE WATER-ENERGY NEXUS: PARTNERING WITH DOE/NETL

Thomas Feeley, Strategic Partnership Manager, National Energy Technology Laboratory



12.2 316(B) COMPLIANCE: PLANNING AND IMPLEMENTING ENGINEERING SOLUTIONS Dallen Kroger, Engineer, Burns & McDonnell; Christopher Wiggins





12.3 FGD WASTE WATER TREATMENT - PRETREATMENT + BRINE CONCENTRATION Lanny Weimer, Product Management, Suez Water Technologies and Solutions



12.4 LESSONS LEARNED IN EXECUTIION OF POWER PLANT WASTEWATER TREATMENT PROJECTS Co-Chair - Dennis Fink, Water for Power Lead, Jacobs (formerly CH2M); Thomas Higgins, Laura Reid



12.5 HG, AS AND SE DETERMINATION BY PHOTOCHEMICAL VAPOUR GENERATION - AFS Dr. Warren Corns, Research and Technical Suppoprt Manager, PS Analytical, Shaun Lancaster, Eva Krupp, Joera Feldmann

#### Tuesday | 7:30AM - 9:30AM





13.1 COOLING TOWER RETROFIT FOR 316(B): CHALLENGES THAT AFFECT COST Andrew Cerra, Mechanical Engineer, Burns & McDonnell; Christopher Wiggins



I3.2 A STUDY OF 316(B) IMPLEMENTATION AT ALABAMA POWER PLANT BARRY Mark Hussey, National Account Manager, Intralox



13.3 EPA 316(B) IMPACT ON CIRCULATING WATER PUMPS AND MOTORS Kurt Schumann, President, ProPump Services, LLC.



13.4 IMPINGEMENT TECHNOLOGY PERFORMANCE OPTIMIZATION STUDY UNDER BTA Kurtis Schlicht, Technical Director, ERM; Bill Stephens



13.5 THERMAL VARIANCE DEMONSTRATION STUDY ON THE MISSISSIPPI RIVER Co-Chair - Brian O'Neill, Senior Aquatic Ecologist, Burns & McDonnell

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# TRACK | I | WATER & 316(b) COOLING TOWER

Tuesday | 10AM - 12PM

#### 14. WATER SUPPLY & SECURITY



**14.1 HOW TO ENSURE WATER SUPPLY SECURITY** 

Co-Chair - Aaron Morrison, President and CEO, Chaoticwaters, Inc.



**14.2 A SUSTAINABLE APPROACH TO IMPLEMENTING DESALINATION FACILITIES** 

Ted Schilling, West Region Design & Engineering Manager, Arcadis



I4.3 SUSTAINABLE ALTERNATIVES TO POWER PLANT MAKE-UP WATER: USING TREATED MUNICIPAL WATER

Bridget Finnegan, Process Specialist, Veolia



14.4 WATER RISK MANAGEMENT - FROM RISK TO OPPORTUNITY

Co-Chair - Krystal Perez, Global Technology Lead - Water for Power, Jacobs: Joe Rozza, Jameson Morrell, Dennis Fink



14.5 ABQAIQ PLANTS WATER CONSERVATION JOURNEY

Mohammed Almugahwi, Process Engineer, Saudi Aramco

#### Tuesday | 1PM - 3PM

## 15. WASTEWATER & WATER TREATMENT



15.1 PLANT BOWEN LONG-TERM MEMBRANE PERFORMANCE USING UV FOR DECHLORINATION

Co-Chair - Dennis Bitter, Sales Director, Atlantium Technologies



15.2 ESTIMATED BIOLOGICAL EFFICACY OF SCREENING TECHNOLOGIES AND SURVIVAL

Co-Chair - Christopher Wiggins, Certified Ecologist, Burns & McDonnell



**15.3 NEW PINCH VALVE TECHNOLOGY** 

John Chapman, Nuclear Engineering Director, Continuous Engineering Solutions



15.4 REDUCING CORRECTIVE ACTIONS THROUGH MODELING Ernie Stine, Scientist V, APTIM; Vikas Tandon, James Teo



**15.5 WATER FILTRATION WITH FLOWROX** 

Mark Galimberti, Sales Engineer Representative, Flowrox

#### Tuesday | 3:30PM - 5:30PM

## 16. 316(b), ELG & WASTEWATER



16.1 UPDATE OF WATER-RELATED ANALYSIS WORK AT NETL

Co-Chair - Eric Grol, Energy Analyst, USDOE/NETL; Marc Turner, Leidos; Eric Lewis, Deloitte



16.2 316(B) DO'S AND DON'T'S

Greg Seegert, Chief Ichthyologist, EA Engineering, Science & Technology



16.3 PARTNERING WITH BIG INDUSTRY TO REDUCE NUTRIENT POLLUTION Sarah Gilstrap, Senior Environmental Scientist, Burns and McDonnell

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16.4 DETERMINATION OF SELENIUM IN FGD WASTEWATER BY TRIPLE QUAD ICP-MS

Chaoyang Huang, Senior Chemist, Southern Research Institute; Young Chul Choi

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## TRACK | J | UTILITY FLEET & TRANSPORTATION ELECTRIFICATION

Monday | 1PM - 3PM



## J1. TE, ELECTRIC UTILITIES & EV CHARGING

J1.1 CLEAN ENERGY PATHWAY EFFORTS IN THE PORT OF LONG BEACH Damon Hannaman, Sr. Advisor, Key Accounts, Southern California Edison



Edizon Clastric J1.2 ELECTRIC COMPANIES ACCELERATING TRANSPORTATION ELECTRIFICATION Co-Chair - Kellen Schefter, Sr. Manager, Sustainable Technology, Edison Electric

Guam Public Utilities Commission

J1.4 REGULATORY CHALLENGES IN GUAM'S POWER GENERATION Co-Chair - Dr. Filomena Cantoria, Commissioner, Guam Public Utilities Commission



J1.5 DESIGNING SUCCESSFUL TRANSPORT ELECTRIFICATION PROGRAMS FOR UTILITIES Andrew Dillon, Senior Principal, EV & DER Solutions, West Monroe Partners



J1.6 FLEET CHARGING INFRASTRUCTURE TO OPTIMIZE TOTAL COST OF OPERATIONS Terry O'Day, Chief Strategy Officer, Executive Vice President, innogy eMobility US

#### Monday | 3:30PM - 6:00PM



#### J2. ADVANCE CLEAN TRUCKS - AFV & ZEV & FLEETS

J2.1 THE ELECTRIFICATION OF COMMERCIAL TRANSPORTATION Co-Chair - Jim Castelaz, Founder and CEO, Motiv Power Systems



J2.2 VIABILITY OF ELECTRIC VEHICLES IN THE LOGISTIC/TRANSPORTATION INDUSTRY Heidi Rous, Director, ESA: Jeff Caton



J2.3 IN-WHEEL ELECTRIFIED HUBS FOR TRAILERS AND TRUCKS



#### Caleb Lander, Product Manager - Electrification, ConMet

J2.4 MANAGING WITH ELECTRICITY



Co-Chair - Kenneth Williams, Fleet Asset Superintendent, City of Kansas City / Aviation Department

Proensis LLC

J2.5 BRIDGING THE GAP: A RADICAL NEW VISION FOR ELECTRIC TRUCKING Tom Bartley, Founder / VP Sales and Marketing, Proensis LLC.



72.6 FLEET ELECTRIFICATION-LIGHT, MEDIUM, AND HEAVY DUTY EVS IN FLEETS Raghuel Soat, Research Analyst, Navigant Consulting inc



J2.7 TROPOS ABLE - HOW DOWNSIZING TO AN ECUV CAN SAVE THOUSANDS

Jeff Esfeld, Director National Fleet Sales & Business Devlpmnt, Tropos Technologies, Inc.

Tuesday | 7:30AM - 9:30AM



## J3. EV, PHEV, HYBRID, FLEET SUSTAINABILITY

J3.1 PRELIMINARY ROUTING FOR A NATIONAL LABORATORY COMMUTING PROGRAM Amy Moore, Transportation Planning Engineer, Oak Ridge National Laboratory





J3.3 THE ELECTRIC VEHICLE DISCOVERY CENTRE - EV MARKET TRANSFORMATION Cara Clairman, President and CEO, Plug 'n Drive; Davorka Cvilkovic



J3.4 BIGGER MARKET THAN ELEC GRID: WIND + SOLAR HYDROGEN TRANSPORT + CHP FUEL Co-Chair - Bill Leighty, Director, The Leighty Foundation



J3.5 FUTURE OF ELECTRIC & HYBRID-DRIVE SYSTEMS IN COMMERCIAL & OFF ROAD EQUIP. Marilyn Tarbet, Driector, New Business Development, Power Systems Research



J3.6 TOOLS AND TECHNIQUES TO SWITCH TO ELECTRIC VEHICLES RISK FREE Alex Baker, CEO, CleanCar

## TRACK | J | UTILITY FLEET & TRANSPORTATION ELECTRIFICATION

Tuesday | 10AM - 12PM

## J4. ULTRA CLEAN LD/MD/HD



J4.1 A MACROECONOMIC ASSESSMENT OF TRANSPORTATION ELECTRIFICATION Edward Carr, Senior Research Analyst, Energy and Environmental Research Associates; James Winebrake, Erin Green



J4.2 DATA INSIGHTS: STAYING COMPETITIVE IN A CONNECTED VEHICLE WORLD Gary Schmidt, Vice President of Business Solutions, Zonar



J4.3 HIGH EFFICIENCY, LOW EMISSIONS DRIVE MARKET ADOPTION OF THE OP ENGINE Jerome Payne, Chief Operating Officer, Achates Power



J4.4 RETROFITING CLASS 2 HYBRID VEHICLES WITH ELECTROCHEMICAL CAPACITOR Toshihiko Furukawa, Senior Manager / Global Engineering, United Chemi-Con, Inc.



J4.5 UPCOMING CALIFORNIA ZEV REGULATIONS FOR HEAVY-DUTY VEHICLES Craia Duehrina, Air Resources Supervisor, California Air Resources Board (CARB); Paul Arneja



J4.6 CNG HYBRID ELECTRIC SUPER TRUCK DESIGN

Co-Chair - James Burns, CSO, Transportation Power, Inc.; Dr. Paul Scott

#### Tuesday | 1PM - 3PM

#### J5. UTILITY FLEET GEOTAB.

J5.1 FIVE LESSONS FROM A DECADE OF EV FLEET MANAGEMENT

Co-Chair - Matt Stevens, VP, Electric Vehicles, Geotab

J5.5 LARGE FLEET ADOPTION OF ELECTRIC PROPULSION



J5.2 CHARGE THE NORTH: CHARACTERIZING ELECTRIC VEHICLE CHARGING PROFILES Eric Mallia, General Manager, FleetCarma



J5.3 ELECTRIC FLEETS: MOVING BEYOND PILOTS FOR THE REAL BENEFITS Co-Chair - Paul Stith, Director of Strategy & Innovation, Black & Veatch



J5.4 THE ELECTRIFICATION CHECKLIST: MAKING THE RIGHT XEV DECISIONS Jeremy Twomey, Regional Sales Manager, XL - The Fleet Electrification



Michael McDonald, Sr. Director of Sustainability & Gov't Affairs, United Parcel Service (UPS)



J5.6 THE COMMERCIALIZATION OF HEAVY DUTY CLASS 6-8 TRUCKS AND BUSES Joshua Goldman, VP Sales and Marketing, TransPower



J5.7 EV OPPORTUNITIES IN ROBUST, HIGH CAPACITY, PEOPLE MOVER APPLICATIONS Newton Montano, VP and GM, Trams International

#### Tuesday | 3:30PM - 5:30PM

#### J6. CARB REGS. EV CHARGING PROJECTS J6.1 VW FUNDING OPPORTUNITIES



Eric Brown, Air Pollution Specialist, California Air Resources Board (CARB); Patrick Chen



J6.2 DIVIDEND - ACCOUNT PARKING: FEASIBLE & ENFORCEABLE MITIGATION Co-Chair - Michael Bullock, Transportation Committee Chair, Sierra Club, Evolved Wireless,



J6.3 HYBRID AND ZERO-EMISSION TRUCK AND BUS VOUCHER INCENTIVE PROJECT - HVIP Patrick Chen, Air Pollution Specialist, California Air Resources Board



J6.4 A CASE STUDY IN COLLABORATIVE VEHICLE ELECTRIFICATION James DeGrood, Deputy Director, Pima Association of Governments



J6.5 A CASE STUDY IN COLLABORATIVE VEHICLE ELECTRIFICATION James DeGrood, Deputy Director, Pima Association of Governments, Regional

Transportation Authority RPC

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## TRACK | K | BATTERY, STORAGE & CHARGING

#### Monday | 1PM - 3PM



## **K1. BATTERY, ENERGY STORAGE SYSTEMS**

K1.1 BATTERY SELECTION BASED UPON CURRENT CAPACITY RATINGS IS OUTDATED Co-Chair - Jeremy Cordray, Director, Original Equipment, NorthStar Battery



K1.2 METHODS TO MEASURE AND IMPROVE BATTERY STORAGE SYSTEMS PERFORMANCE Khalid Rahman, Electrical Engineer, Commonwealth Associates, Inc.



K1.3 PRACTICAL BENEFITS AND LIMITATIONS OF ENERGY STORAGE Carl Salas, Foundina Principal, Salas O'Brien



K1.4 THE BATTERY PUZZLE - THE PATH TO ELECTRIFICATION FOR HEAVY-DUTY Mike Terzo, CEO & CTO, Terzo Power Systems, LLC



K1.5 ENCAPSULATOR TECHNOLOGY FOR BATTERY AND STORAGE SYSTEM PROTECTION Jeffrey Bonkoski, Area Manager, Encapsulator Technology Specialist, Hazard Control Technologies; Ron Lowrey



K1.6 GETTING AHEAD OF THE EV BOOM WITH INCENTIVIZED SMART-CHARGING Marc Monbouquette, Sr. Manager, Regulatory and Government Affairs, eMotorWerks

#### Monday | 3:30PM - 5:30PM



#### **K2. EV FAST CHARGING & INFRASTUCTURE**



K2.1 HOW CUSTOMER EXPERIENCE IMPACTS UTILITY EV CHARGING PROGRAM SUCCESS Co-Chair - April Bolduc, President, S Curve Strategies



**K2.2 HOW TO STREAMLINE YOUR UTILITY EV CHARGING INSTALLATION PROCESS** Nicole Alarcon, VP of Program Development, C2 Group; Luis Alarcon



**K2.3 FAST DC CHARGING WITH MINIMUM GRID UPGRADE** Heesoo Lee, General Manager, Energy Systems, AVM

**K2.4 THE NEED FOR SPEED** Steve Bloch, Western Regional Vice President, ABB



K2.5 CCS AS THE GLOBAL STANDARD FOR CHARGING BATTERY POWERED EVS Oleg Logvinov, Spokesperson, CharlN e.V. NA





**K2.7 EV TRANSPORTATION CORRIDORS - ASSESSING EV FLEET INFRASTRUCTURE** Andrew Dillon, Senior Principal, EV & DER Solutions, West Monroe Partners

#### Tuesday | 7:30AM - 9:30AM





K3.1 ELECTRIFYING TRANSPORTATION: HOW ELECTRIC UTILITIES ARE LEADING CLEAN MOBILITY Co-Chair - Dean Siegrist, Associate Vice President, Black & Veatch; Maryline Daviaud Lewett, Black & Veatch



**K3.2 ELECTRIC FLEETS: UNDERSTANDING INFRASTRUCTURE OPTIONS** Co-Chair - Kim Okafor, Trillium EV Business Line Leader, Trillium



K3.3 A SCALABLE APPROACH TO DEPLOYMENT OF THE EV CHARGING INFRASTRUCTURE Olea Loavinov, President and CEO, loTecha



CYBER SWITCHING K3.4 REDUCING YOUR CHALLENGES FOR EV INFRASTRUCTURE INVESTMENT Patty DiNapoli, Marketing Director, Cyber Switching



K3.5 DESIGNING INCENTIVES TO ALIGN EV CHARGING WITH GRID RELIABILITY OBJECT Matt Owens, Business Development Executive, West Monroe Partners



K3.6 USING NATURAL GAS AND PROPANE FOR CHARGING EVS Arthur Sams, CEO, Polar Power

## TRACK | K | BATTERY, STORAGE & CHARGING

## Tuesday | 10AM - 12PM

## **K4. BATTERY, STORAGE & CHARGING SYSTEMS**



K4.1 THE SLOW FAST CHARGE: WHAT YOU GET IS ALL YOU NEED Scott McCalmont, Principal Engineer, Paired Power, Inc.



K4.2 EV CHARGING AND THE VEHICLE PURCHASE PROCESS: LESSONS LEARNED Co-Chair - Dr. Ryan Bodanyi, Senior Specialist for EV Program Transparency & Evaluation, Center for Sustainable Energy (CSE); Brett Williams



**K4.3 INTEGRATING ELECTRIC VEHICLE CHARGING INTO MICROGRID OPERATION** Azhar Ul Haq, Assistant Professor, National University of Sciences & Technology; Saifullah Awan, Aaib Perwaiz



K4.4 EV CHARGING INCENTIVES USING LOW CARBON FUEL CREDITS AND BLOCKCHAIN Andrew Dillon, Senior Principal, West Monroe Partners; Kayvon Hosseini



K4.5 BATTERY INNOVATIONS, E-MOBILITY & SMART CITIES Cameron Peebles, Scientist, Wildcat Discovery Technologies; Dee Strand

#### Tuesday | 1PM - 3:00 PM



## K5. FUEL CELLS, LI-ION, H2, BATTERIES



**K5.1 THE CALIFORNIA FUEL CELL REVOLUTION** 

Keith Malone, Public Affairs, California Fuel Cell Partnership; Bill Elrick



K5.2 FUEL CELL & HYDROGEN - A COMPELLING VALUE PROPOSITION FOR ZERO EMISSION Alan Mace, Product Development/Market Specialist, Ballard Power Systems, Inc.



K5.3 CARBON NEUTRAL LIQUID FUELS FOR TRANSPORTATION / ENERGY STORAGE Madhav Acharya, T2M Advisor, ARPA-E



K5.4 HYDROGEN FREIGHT IN CALIFORNIA: FUEL CELL TRUCKS IN SAN PEDRO PORTS Co-Chair - Cory Shumaker, Development Specialist, California Hydrogen Business



**K5.5 A FAIL-SAFE SOLUTION FOR THE SAFETY OF BATTERIES** 

XiaoXiona Luo, Research Lead, Pyrophobic Systems, Ltd.



K5.6 FUEL CELL ELECTRIC TRUCKS/VEHICLES POWERED BY RENEWABLE HYDROGEN FUEL Rob Del Core, Managing Director, Hydrogenics USA, Inc.

## Tuesday | 3:30 PM - 5:30 PM



## K6. EV. BATTERY. MANUFACTURER & SUPPLY CHAIN



K6.1 A CHALLENGE OF RELIABLE CIRCUIT PROTECTION IN AUTOMOTIVE APPLICATIONS Co-Chair - Liwu Wang, Director of Business Development, AEM Components (USA),



K6.2 IMPLEMENTING MOTOR CIRCUIT ANALYSIS DE-ENERGIZED TESTING William Kruger, Technical & Training Manager, ALL-TEST Pro, LLC



**K6.3 SAFE CABLE MANAGEMENT** 



Phil Ramos, Jr., Founder and CEO, Philatron Wire and Cable K6.4 LEVERAGING LOCAL SUPPORT WITHIN A GLOBAL SUPPLY CHAIN

K6.5 ROLLING ENERGY STORAGE- ELECTRIC VEHICLES \* CHARGING



Co-Chair - Wesley Brandon, President, CTEMS, Engineering and Manufacturing Services



💠 🎞 Kevin Wood, Clean Transportation Specialist, Center for Sustainable Energy (CSE)



K6.6 ALIGNING INTELLECTUAL PROPERTY STRATEGIES WITH R&D AND COMMERCIAL GOAL Daniel Abraham, Vice President, MPEG LA

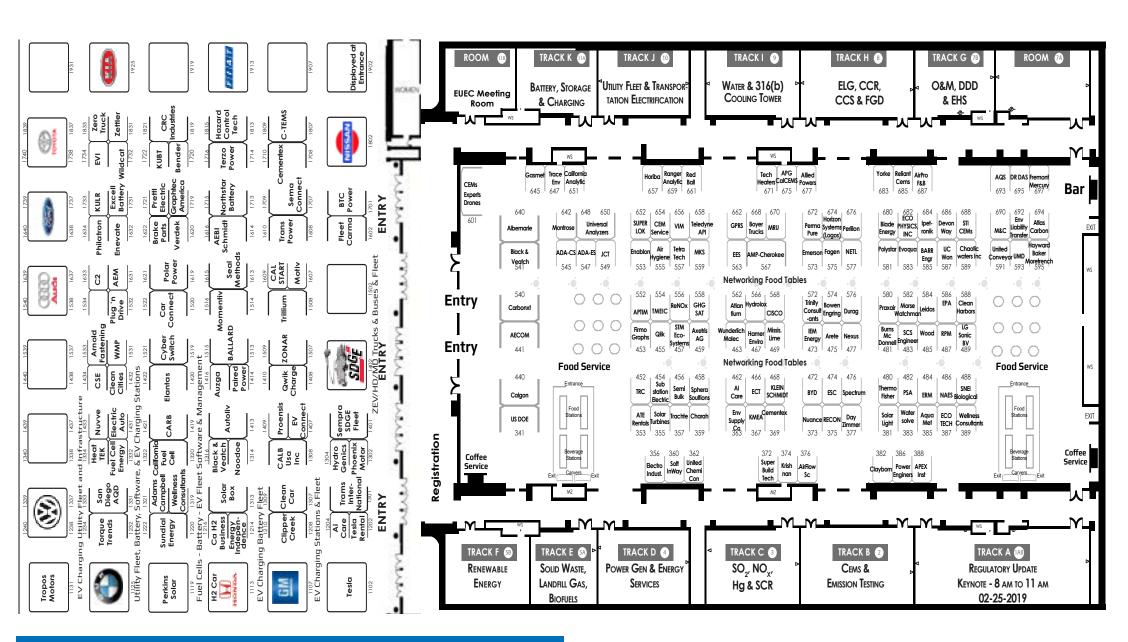
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# **TE-EXPO IN SAILS PAVILION**

# **EUEC2019 IN BALLROOM**



# 2-DAY EXHIBIT SCHEDULE

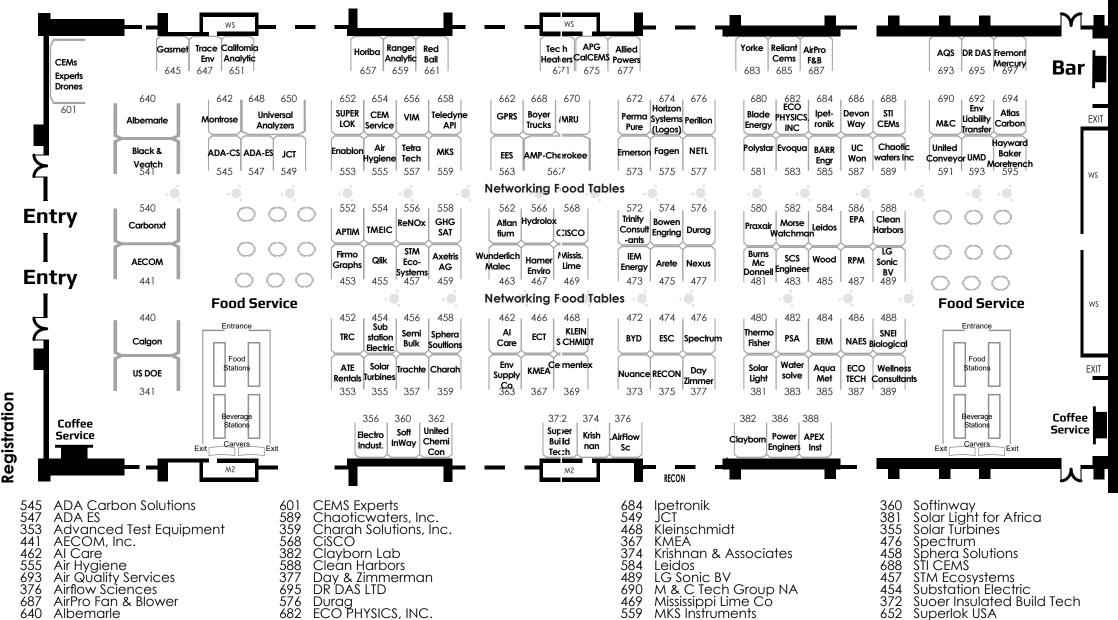
## 2-DAY EXHIBIT SHOW HOURS

Sun. Setup 12 pm to 6 pm Mon. Feb 25 12 pm to 7 pm Tues. Feb 26 9 am to 7 pm Wed. Feb 27 8 am Tear Down

## NETWORK RECEPTIONS

AM Breaks 9:30 am to 10 am Lunches 12 pm to 1 pm PM Breaks 3 pm to 3:30 pm Receptions 5 pm to 7 pm WARNING FAKE AGENCIES

Do NOT accept any phone or email solicitations
for Hotels or Mailing lists



Allied Powers American Ecotech 567 AMP-Cherokee Apex Instruments APG Analyzer Systems **APTIM** Agua Metrology 475 Arete 562 Atlantium Atlas Carbon 459 585 Axetris AG **Barr Engineering** 541 Black & Veatch 680 Blade Energy Bowen 668 Bover Trucks 481 Burns & McDonnell 472 Calgon Carbon California Analytical Inst. 440 651 540 Carbonxt, Inc. CEM Service Group, Inc.

Cementex

Durag ECO PHYSICS, INC. 466 Electro Industries/GaugeTech Emerson Enablon Environ Energy Svcs. (EES) Environ Liability Transfer Environ Supply Co. Environ Systems Corp (ESC) 586 EPA 484 ERM **Evoqua Water Tech** Fagen FirmoGraphs Fremont Mercury Services 645 558 Gasmet **GHGSat** 662 **GPRS** Hamer Environmental Hayward Baker & Moretrench 657 Horizon Systems/LLC LOGOSGRUP Hydrolox<sup>1</sup> IEM Energy Consultants LLC

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ADA Carbon Solutions 547 ADA ES 353 Advanced Test Equipment 441 AECOM, Inc. 462 Al Care 555 Air Hygiene 693 Air Quality Services Airflow Sciences 687 AirPro Fan & Blower 640 Albemarle 677 **Allied Powers** 387 American Ecotech 567 AMP-Cherokee 388 Apex Instruments 675 **APG Analyzer Systems** 552 **APTIM** 385 Aqua Metrology 475 Arete 562 Atlantium 694 Atlas Carbon 459 Axetris AG 585 **Barr Engineering** 541 Black & Veatch 680 Blade Energy 574 Bowen **Boyer Trucks** 668 481 Burns & McDonnell 472 BYD 440 Calgon Carbon 651 California Analytical Inst. 540 Carbonxt, Inc. 654 CEM Service Group, Inc. 369 Cementex 601 **CEMS Experts** 589 Chaoticwaters, Inc. 359 Charah Solutions, Inc. CiSCO 568 382 Clayborn Lab 588 Clean Harbors 377 Day & Zimmerman DR DAS LTD 695 576 Durag ECO PHYSICS, INC. 682 466 ECT 356 Electro Industries/GaugeTech 573 **Emerson** 553 Enablon Environ Energy Svcs. (EES) 692 Environ Liability Transfer 363 Environ Supply Co. 474 Environ Systems Corp (ESC) 586 EPA 484 ERM Evoqua Water Tech 583 575 Fagen FirmoGraphs 453 697 Fremont Mercury Services 645 Gasmet 558 **GHGSat** 662 **GPRS** Hamer Environmental 467 Hayward Baker & Moretrench 595 657 Horiba

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549 JCT Kleinschmidt 468 367 **KMEA** 374 Krishnan & Associates 584 Leidos 489 LG Sonic BV 690 M & C Tech Group NA 469 Mississippi Lime Co 559 MKS Instruments 642 Montrose Environmental 582 Morse Watchman 670 MRU Instruments 486 NAES 577 NETL 477 Nexus 373 Nuance 676 Perillon 672 Perma Pure 581 Polystar Containment 386 **Power Engineers** 580 Praxair 482 PS Analytical 455 Qlik 659 Ranger Analytic 375 Recon 661 Red Ball Technical Gas 685 Reliant CEM Svcs 556 ReNOx 487 **RPM Solutions** 483 **SCS** Engineers Semi-Bulk Systems Inc 456 488 SNEI Biological 360 Softinway Solar Light for Africa 381 355 Solar Turbines 476 Spectrum 458 Sphera Solutions 688 STI CEMS 457 STM Ecosystems 454 Substation Electric 372 Suoer Insulated Build Tech 652 Superlok USA 671 Technical Heaters, Inc. 658 Teledyne API 557 Tetra Tech, Inc. 480 ThermoFisher 554 **TMEIC** Trace Environmental 357 Trachte LLC 452 TRC Companies, Inc. 572 Trinity Consultants 587 RenewGeo (UC-Won) 341 U.S. DOE, O. of Fossil Ener 362 United Chemi-Con

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## **TE-EXPO EXHIBITORS**

## **EV CHARGING, BATTERY & ELECTRIC FLEET**



FEBRUARY 25-26, 2019 SAN DIEGO, CA

TE-EXPO: Provides Speaking and Exhibit opportunities for suppliers to utility fleets, electric & alternate fuel vehicle manufacturers, battery & charging companies to showcase advanced technologies and strategies for compliance and implementation of SB350.

TE-EXPO is held in the 100,000 sq.ft. Sails Pavilion of the San Diego Convention Center, San Diego, California on February 25 and 26, 2019.

# What Is SB350: Transportation Electrification

- SB350: DIRECTS CALIFORNIA REGULATORS (CPUC, ARB, CEC, AQMD)
- TO ELECTRIFY BUSES, TRUCKS, FLEET AND OFF-ROAD EQUIPMENT
- \$1B FUNDED BY INVESTOR OWNED UTILITIES SDG&E, SCE AND PG&E

# WHO SPEAK & EXHIBITS AT TE EXPO?

- UTILITY FLEET SUPPLIERS
- LD/MD/HD FLEET
- FLEET DELIVERY SERVICES
- **EV & AFV MANUFACTURERS**
- AFV, CNG, H2 FUEL CELL
- **ELECTRIC TRUCK & BUSES**
- FAST CHARGING & INFRASTRUCTURE
- BATTERY, STORAGE & CHARGING
- **SOLAR & RESIDENTIAL CHARGING**
- TRANSPORTATION SOFTWARE
- **METERING & DATALOGGERS**
- OFF-ROAD EQUIPMENT, FORK-LIFT

#### ELECTRIC TRUCK, BUS, TRAM & Charging Stations at Expo

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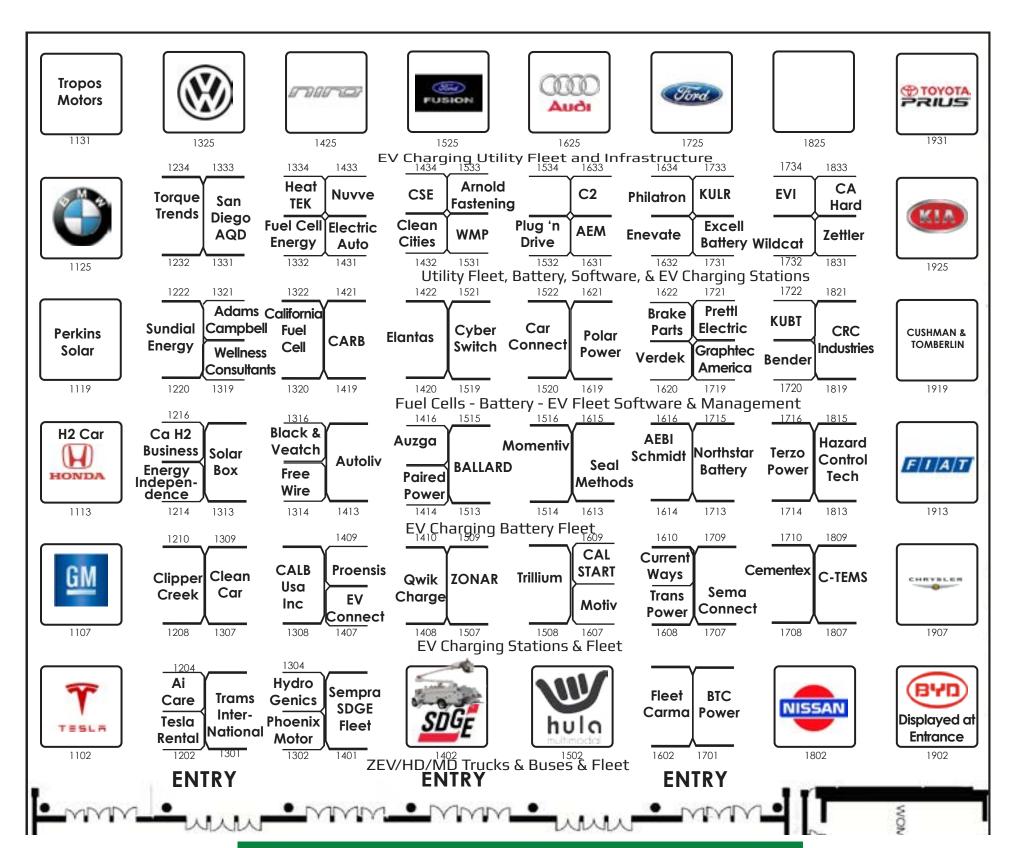
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IA one page PdF color advertisement in the EUEC Program Guide. Email a 6" x 9.5" (1/4" bleed) CMYK color pdf file to info@euec.com

The Show Guide is the official, up-to-date information on the EUEC event. One page color Advertisement distributed to 2,000 delegates, is continuously referenced multiple times a day by all attendees. An excellent location for introducing new product or company announcements.

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As a Session Sponsor you receive the full contact information of all attendees to your session. The cost is \$500. You may also Co-chair the session you are speaking, with your company logo prominently advertised among the leading experts in the industry.

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## 4. Advertisement in ENERGYNews - \$500 per issue

Leverage the EUEC network to reach 50,000 professionals in the energy utility and environment sector in North America. Place your logo and advertisement on ENERGYNews (linked to your website) announcing your new product, service or just your exhibit and speaking topics!

## 5. Attendee Lanyard, with Company Logo and information – \$3,000

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## Back Packs with Company Brochure & Information Stuffed – \$3,000

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## 7. Hotel Key Cards - \$5,000

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