

## SusTech 2014 Keynotes, Invited Papers and Speakers 22-Jul-14

### Keynotes

#### *Thursday Opening Keynote*

##### **Nuclear Options for Our Energy Future**

Prof. Digby D. Macdonald, University of California at Berkeley

#### *Friday Lunch Keynote*

##### **Sustainability Writ Large - A Perspective on Sustainability, Its Impact and Implications**

Joe Fjelstad, Verdant Electronics

#### *Friday Dinner Keynote*

##### **Ethic Responsibility**

Gerald Engel, University of Connecticut

#### *Saturday Lunch Keynote*

##### **Sustainability Policy in the U.S. : Creating and Preserving a Future for Our Next Generation**

Tom Tierney, IEEE-USA VP Government Relations

#### *Saturday Closing Keynote*

##### **Reinventing Fire: Bold Business Solutions for the New Energy Era**

Eric Wanless, Rocky Mountain Institute

### Gold Patron Presentation

**Mark Rossolo** (UL Environment)

Title: "Sustainability Certification"

### Alternate Energy

**Will Lumpkins** (O & S Services, USA)

Title: "RFID Energy Harvesting: Extending Battery Life From Eighteen Hours to Thirty Days"

**Digby Macdonald** (University of California at Berkeley, USA); Jiangbo Shi (Tianjin University, USA)

Title: "The Mechanism of Stress Corrosion Cracking in Sensitized Austenitic Stainless Steels in Nuclear Power Reactor Heat Transport Circuits"

Sarah Marten (Macquarie University, Australia);

**Philip Hall** (The University of Western Australia, USA)

Title: "Marine Tidal Energy: a Case Study in Legislative Challenges and Environmental Impacts"

Jonas Mueller (ETH Zürich, Germany); **Marcus Hildmann** (ETH Zurich, Switzerland); Andreas Ulbig (ETH Zürich, Germany); Göran Andersson (ETH Zürich, Switzerland)

Title: "Grid Integration Costs of Fluctuating Renewable Energy Sources"

**Tony Nguyen** (Pacific Northwest National Laboratory, USA); Nader Samaan (Pacific Northwest National Laboratory, USA); Chunlian Jin (ERCOT, USA)

Title: "Evaluation of Production Cost Savings From Consolidation of Balancing Authorities in the U.S. Western Interconnection Under High Wind and Solar Penetration"

**John Steigers** (Energy Northwest, USA)

Title: "Modular and Dispatchable Battery Energy storage System Field Demonstration and Use cases"

## Energy Efficiency

**Fred Chiou** (Weber State University, USA)  
Title: "Energy Efficiency Projects - A Case Study at Weber State University"

Jerry McNeish (Sandia National Labs, USA)  
Title: "Institutional Transformation for Energy Conservation/Sustainability"

## Smart Grid

**Guy ALee** (EMerge Alliance, USA)  
Title: "Edison was Right! By the Numbers, DC Microgrids for Sustainable Buildings Sooner"

**Conrad Eustis** (Portland General Electric, USA)  
Title: "The Role of Flexible Load in Achieving Sustainability"

**Emilie Hogan** (Pacific Northwest National Laboratory, USA)  
Title: "Advances in Power Grid Research in the Pacific Northwest"

**Rhonda Walton** (Evo2Go, USA)  
Title: "Charging Into a Greener Future with Smart Grid"

**Kevin Whitener** (Portland General Electric, USA)  
Title: "Demonstration of Energy Storage Applications at the Salem Smart Power Center"

**Bryce Yonker** (Smart Grid Oregon, USA)  
Title: "Smart Grid in the Northwest"

## Societal Implications / Quality of Life

**Dan Berne** (Next Chapter Marketing, USA)  
Title: "Integrated Technology Solutions for Agricultural Irrigation"

**Malcolm Bowman** (Stony Brook University, USA)

Title: "Will New York City Ever Be Safe From Future Flooding?"

**Karen Faerber-Hall** (Project One Earth, Inc, USA); Philip Hall (The University of Western Australia, USA)

Title: "Residential Energy Independence: Moving Beyond Net-zero"

**Roger Hadgraft** (CQ University, Australia)

Title: "Educating Sustainability Engineers - Redesigning Curricula"

**T.L.Prasanna Venkatesan** (Expert in Humanitarian Technologies, USA)

Title: "Recent Advancements and Opportunities in Humanitarian Technologies"

Slobodan Petrovic (Oregon Institute of Technology, USA); **John Grieser** (Elemental Energy, USA); Hope Corsair (Oregon Institute of Technology, USA)

Title: "Renewable Energy for International Development "

**Kyle Wiens** (IFIXIT.COM, USA)

Title: "DIY Repair: How a Global Movement of Tinkerers, Hackers, and Self-Taught Engineers is Building a Repairable Electronics Industry"

## Sustainable Electronics

**Otto Andersen** (Vestlandsforskning, Norway)

Title: "Life Cycle Assessment of Electronics"

**Annabelle Bennett** (Trucost PLC, USA)

Title: "Valuing Natural Capital: How to Enhance Business Value in the Technology Sector"

**Thomas Coughlin** (Coughlin Associates, USA)

Title: "Safe Advanced Mobile Power Initiative"

**Douglas A. Keszler** (Center Director, Executive Council, Distinguished Professor, Department of Chemistry, Oregon State University)

Title: "Research to Innovation for Sustainable Electronics"

**Wayne Rifer** (Green Electronics Council)

Title: "Environmental Markets Enhance Business Value"

## **Transportation Electrification**

**Franklin Jones** (Owner/CEO B-Line, USA)

Title: "B-Line, Sustainable Urban Delivery"

Stephanie Morse (Vermont Energy Investment Corporation, USA); **Karen Glitman** (Vermont Energy Investment Corporation, USA)

Title: "Electric Vehicles as Grid Resources in ISO-NE and Vermont"

**Lee Stogner** (Chair, IEEE Transportation Electrification Initiative; Vincula Group, USA)

Title: "IEEE Transportation Electrification Initiative"

**Jennifer Vining** (Daimler, USA)

Title: "Applications and Advanced Controls for Heavy Duty Hybrids"

**Julia Zhang** (Oregon State University, USA)

Title: "HEV/BEV Noise, Vibration, Harshness Issues Caused by Electric Machine Drive Components and Mitigation Using Advanced Electric Machine Design and Motor Control Algorithms"

**Zdenek Zumr** (Portland State University, USA)

Title: "Last Mile Asset Monitoring"