



Advanced Electricity Infrastructure Workshop

Frances C. Arrillaga Alumni Center, Fisher Conference Center

STANFORD UNIVERSITY

Stanford, California



November 1-2, 2007

Day 1

8:00 – 8:30 **CONTINENTAL BREAKFAST**

8:30 – 11:15 **Welcome and Introduction**

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|---------------|---|---|
| 8:30 | Overview of the Global Climate and Energy Project | Franklin M. Orr, <i>Global Climate and Energy Project</i> |
| 9:00 | Power System Introduction and Overview: System and Control | Thomas Overbye, <i>University of Illinois, Urbana-Champaign</i> |
| 9:40 | California Grid Operations: Current Conditions and Future Needs | Jim Detmers, <i>California ISO</i> |
| 10:20 – 10:35 | BREAK | |
| 10:35 | An Industry Perspective On Emerging Electricity Delivery Technologies | Juan de Bedout, <i>General Electric Company</i> |

11:15 – 2:15 **Advanced Transmission**

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| 11:15 | High-Temperature Super-Conducting Transmission: Losses and Considerations | Michael Gouge, <i>Oak Ridge National Lab</i> |
| 11:55 – 12:55 | LUNCH | |
| 12:55 | Power Quality Requirements for Reliability | Surya Santoso, <i>University of Texas- Austin</i> |
| 1:35 | Quantum Wires for Grid Applications | Matteo Pasquali, <i>Rice University</i> |

2:15 – 5:10 **Power Systems, Control and Analysis**

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| 2:15 | Distributed Solutions for Grid Control | Deepak Divan, <i>Georgia Institute of Technology</i> |
| 2:55 – 3:10 | BREAK | |
| 3:10 | Integration Technologies for Power Flow Controllers | Khai Ngo, <i>Virginia Institute of Technology</i> |
| 3:50 | Enhanced State Estimation | Ali Abur, <i>Northeastern University</i> |
| 4:30 | Computational Issues for Intelligent Grids | Bruce Wollenberg, <i>University of Minnesota</i> |
| 5:10 – 6:00 | RECEPTION | |

All food served at the workshop is provided by Catering By The Other Woman—seasonal, sustainable cuisine with an emphasis on organic and natural foods.



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Day 2

8:00 – 8:30 **CONTINENTAL BREAKFAST**

8:30 - 9:10 Opening

8:30 Visions for the Utility of the Future David Mohler, *Duke Energy*

9:10 – 12:05 Distributed Generation

9:10 Perspectives on Vehicles to Grid Michael Kintner-Meyer, *Pacific Northwest National Laboratory*

9:50 Impacts and Needs for Renewables in Distributed Generation Integration Giri Venkataramanan, *University of Wisconsin-Madison*

10:30 – 10:45 **BREAK**

10:45 Distributed Generation Expansion: Analysis, Directions, Modeling, and Formulation Kevin Tomsovic, *Washington State University*

11:25 Voltage Control with Distributed Generators to Enhance Voltage Stability Fangxing (Fran) Li, *University of Tennessee- Knoxville*

12:05 – 1:05 **LUNCH**

1:05 – 3:05 Storage for Distributed Resources

1:05 Energy Storage: A Distributed Resource Imre Gyuk, *Department of Energy*

1:45 Battery Materials for Grid Applications Glenn Amatucci, *Rutgers University*

2:25 Kinetic Energy Storage and Power Generation Robert Hebner, *University of Texas-Austin*

3:05 *Closing Remarks*

3:10-4:30 Speaker Roundtable Discussion

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