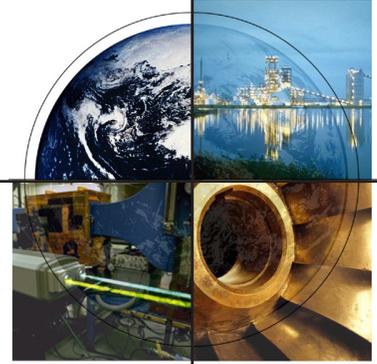


Advanced Power Systems Peer Review Hyatt Regency Pittsburgh International Airport

July 16 - 19, 2007



AGENDA



MONDAY PROGRAM, JULY 16, 2007

8:00 - 9:00 a.m. Continental Breakfast - Open to all

- CLOSED SESSION -

OPEN TO DEPARTMENT OF ENERGY AND AMERICAN SOCIETY OF MECHANICAL ENGINEERS PERSONNEL ONLY

- 9:00 - 10:30 a.m. **APS Peer Review Panel Kick Off Meeting**
- Review of ASME Peer Review Process - Michael Tinkleman/Kim Hart, ASME
 - Meeting Logistics/Completion of Forms - Steven Ostheim/Charles Schmidt, TMS
 - Role of NETL - José Figueroa, NETL

Overview of IGCC and Advanced Research Portion of Advanced Power Systems

- Gary Stiegel, Gasification Technology Manager, NETL
- Robert Romanosky, Advanced Research/Combustion Technology Manager, NETL

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- 10:30 - 10:45 a.m. **Break**
- 10:45 - 11:30 a.m. **Project # 40343** - ITM Oxygen Technology for Integration in IGCC and Other Advanced Power Generation Systems, *Phillip Armstrong, Air Products & Chemicals, Inc.*
- 11:30 - 11:50 a.m. Q&A
- 11:50 - 12:15 p.m. Discussion, evaluation, and written comments
- 12:15 - 1:15 p.m. **Lunch (on your own)**
- 1:15 - 1:45 p.m. **Project # 40675** - Novel Technologies for Gaseous Contaminants Control, *Raghubir Gupta, Research Triangle Institute*
- 1:45 - 2:05 p.m. Q&A
- 2:05 - 2:25 p.m. Discussion, evaluation, and written comments
- 2:25 - 2:30 p.m. Set-up/Transition allowance between presentations
- 2:30 - 3:00 a.m. **Project # 41866** - Hybrid Combustion-Gasification Chemical Looping Coal Power Technology Development, *Herbert Andrus, Alstom Power, Inc.*
- 3:00 - 3:20 p.m. Q&A
- 3:20 - 3:40 p.m. Discussion, evaluation, and written comments
- 3:40 - 3:55 p.m. **Break**
- 3:55 - 4:55 p.m. **Project # 25140** - Power Systems Development Facility, *Kerry Bowers, Southern Company Services, Inc.*
- 4:55 - 5:15 p.m. Q&A
- 5:15 - 5:45 p.m. Discussion, evaluation, and written comments



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TUESDAY PROGRAM, JULY 17, 2007

- 7:00 - 8:00 a.m. Continental Breakfast - Open to all
- 8:00 - 8:30 a.m. **Project # 42469** - Scale-Up of Hydrogen Transport Membranes for IGCC and FutureGen Plants, *Doug Jack*, **Eltron Research, Inc.**
- 8:30 - 8:50 a.m. Q&A
- 8:50 - 9:10 a.m. Discussion, evaluation, and written comments
- 9:10 - 9:25 a.m. **Break**
- 9:25 - 9:55 a.m. **Project # ORD-07-22068-1** - Refractory Materials for Slagging Gasifiers, *Cynthia Powell*, **National Energy Technology Laboratory**
- 9:55 - 10:15 a.m. Q&A
- 10:15 - 10:35 a.m. Discussion, evaluation, and written comments
- 10:35 - 10:40 a.m. Set-up/Transition allowance between presentations
- 10:40 - 11:10 a.m. **Project # T401.01.04** - 2006 Cost and Performance Baseline for Fossil Energy Plants, *Julianne Klara*, **National Energy Technology Laboratory**
- 11:10 - 11:30 a.m. Q&A
- 11:30 - 11:50 a.m. Discussion, evaluation, and written comments
- 11:50 - 12:50 p.m. **Lunch (on your own)**
- 12:50 - 1:20 p.m. **Project # 41922** - New Optical Sensor Suite for Ultra High Temperature Fossil Fuel Applications, *Russell May*, **Prime Research, LLC**
- 1:20 - 1:40 p.m. Q&A
- 1:40 - 2:00 p.m. Discussion, evaluation, and written comments
- 2:00 - 2:05 p.m. Set-up/Transition allowance between presentations
- 2:05 - 2:35 p.m. **Project # 41175** - Development of Advanced Materials for Ultrasupercritical Boiler Systems, *Vis Viswanathan and Robert Purgert*, **Energy Industries of Ohio**
- 2:35 - 2:55 p.m. Q&A
- 2:55 - 3:15 p.m. Discussion, evaluation, and written comments
- 3:15 - 3:30 p.m. **Break**
- 3:30 - 4:15 p.m. **Project # FEAA028** - Fossil Energy Advanced Research Materials Program, *Roddie Judkins*, **Oak Ridge National Laboratory**
- 4:15 - 4:35 p.m. Q&A
- 4:35 - 5:05 p.m. Discussion, evaluation, and written comments
- 7:00 - 8:00 p.m. Final Comments on IGCC/Advanced Research Projects by Reviewers

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WEDNESDAY PROGRAM, JULY 18, 2007

7:00 - 8:00 a.m. Continental Breakfast - Open to all

- CLOSED SESSION -

**OPEN TO DEPARTMENT OF ENERGY AND
AMERICAN SOCIETY OF MECHANICAL ENGINEERS PERSONNEL ONLY**

8:00 - 8:30 a.m. **Overview of Advanced Turbines Portion of Advanced Power Systems**
- Richard Dennis, Turbines Technology Manager, NETL

8:30 - 9:15 a.m.	Project # 41431 - University Turbine Systems Research (UTSR) Program, <i>Robert Leitner, South Carolina Institute for Energy Studies</i>
9:15 - 9:35 a.m.	Q&A
9:35 - 10:00 a.m.	Discussion, evaluation, and written comments
10:00 - 10:05 a.m.	Set-up/Transition allowance between presentations
10:05 - 10:35 a.m.	Project # 42643 - Advanced IGCC/Hydrogen Gas Turbine Development, <i>Kevin Collins, GE Energy, Inc.</i>
10:35 - 10:55 a.m.	Q&A
10:55 - 11:15 a.m.	Discussion, evaluation, and written comments
11:15 - 11:30 a.m.	Break
11:30 - 12:00 p.m.	Project # 42644 - Advanced Hydrogen Turbine for FutureGen, <i>Joseph Fadok, Siemens Power Generation</i>
12:00 - 12:20 p.m.	Q&A
12:20 - 12:40 p.m.	Discussion, evaluation, and written comments
12:40 - 1:40 p.m.	Lunch (on your own)
1:40 - 2:10 p.m.	Project # 42650 - Novel Concepts for the Compression of Carbon Dioxide, <i>Klaus Brun, Southwest Research Institute</i>
2:10 - 2:30 p.m.	Q&A
2:30 - 2:50 p.m.	Discussion, evaluation, and written comments
2:50 - 2:55 p.m.	Set-up/Transition allowance between presentations
2:55 - 3:25 p.m.	Project # 42651 - CO ₂ Compression Using Super Sonic Shock Wave Technology, <i>Pete Baldwin, Ramgen Power Systems</i>
2:25 - 3:45 p.m.	Q&A
3:45 - 4:05 p.m.	Discussion, evaluation, and written comments
4:05 - 4:15 p.m.	Break

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WEDNESDAY PROGRAM, JULY 18, 2007 - CONTINUED

- 4:15 - 4:45 p.m. **Project # ORD-07-220623-2** - Combustion Systems for Hydrogen-Based Turbines, *Kent Casleton and Pete Strakey, National Energy Technology Laboratory*
- 4:45 - 5:05 p.m. Q&A
- 5:05 - 5:25 p.m. Discussion, evaluation, and written comments

THURSDAY, JULY 19, 2007

- 7:00 - 8:00 a.m. Continental Breakfast
- 8:00 - 8:30 a.m. **Project # 42646** - Zero Emissions Coal Syngas-Oxygen Turbo Machinery, *Mohan Hebbar and Jim Downs, Siemens Power Generation*
- 8:30 - 8:50 a.m. Q&A
- 8:50 - 9:10 a.m. Discussion, evaluation, and written comments
- 9:10 - 9:15 a.m. Set-up/Transition allowance between presentations
- 9:15 - 9:45 a.m. **Project # 42645** - Coal-Based Oxy-Fuel System Evaluation and Combustor Development, *Scott MacAdam, Clean Energy Systems*
- 9:45 - 10:05 a.m. Q&A
- 10:05 - 10:25 a.m. Discussion, evaluation, and written comments
- 10:25 - 10:40 a.m. **Break**
- 10:40 - 11:10 a.m. **Project # 42652** - Systems Analysis of Advanced Brayton Cycles, *Scott Samuelsen, University of California at Irvine*
- 11:10 - 11:30 a.m. Q&A
- 11:30 - 11:50 a.m. Discussion, evaluation, and written comments
- 11:50 - 12:45 p.m. **Lunch (on your own)**
- 12:45 - 1:15 p.m. **Project # FWP-FEAA070** - Materials Issues in Coal-Derived Synthesis Gas/Hydrogen Fired Turbines, *Ian Gordon Wright, Oak Ridge National Laboratory*
- 1:15 - 1:35 p.m. Q&A
- 1:35 - 1:55 p.m. Discussion, evaluation, and written comments
- 1:55 - 2:00 p.m. Set-up/Transition allowance between presentations
- 2:00 - 2:30 p.m. **Project # T401.01.06** - Development of Baseline Performance Values for Turbines in Existing IGCC Applications, *Walter Shelton, National Energy Technology Laboratory*
- 2:30 - 2:50 p.m. Q&A
- 2:50 - 3:10 p.m. Discussion, evaluation, and written comments
- 3:10 - 3:40 p.m. **Review Break**
- 3:40 - 5:00 p.m. Final Comments on Turbine Projects by Reviewers and Overall Meeting Wrap-up