
UK/US Collaboration in Energy R&D: Clean Coal Technology

Workshop on New Research Areas

**OMNI William Penn Hotel
Pittsburgh
PA, US
24th May 2010**

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- **Type of Collaboration**
 - Sharing of samples, procedures, etc.
 - Joint workshops
 - Access to facilities
 - Integrated research
 - **Intellectual Property**
 - **Culture of Collaboration**
 - **Funding requirement**

Key Benefits

- **Cost and Time Savings**
- **Access to Facilities, Skills and Capabilities**
- **Common Approach to Standards**



Process for Developing Collaborations



- **Identify topics of common interest between UK and US**
- **Prepare 2-page task proposal highlighting the areas of interest and 'quid pro quo' for JCC review**
- **When agreed, JCC will appoint UK and US task leaders**
- **Start collaboration and report back annually to the JCC**



2-page proposal



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- **Project Title**
 - **US and UK Task Leaders**
 - **Introduction**
 - **Objectives**
 - **Deliverables**
 - **Start Date and Completion Date**
 - **Detailed Description of Work**
 - **Quid Pro Quo – person years and \$/£**
 - **Key Milestones and Dates**

Materials		
Mike Santella	ORNL	Creep strength-enhanced ferritic steels
Peter Tortorelli	ORNL	Creep strength-enhanced ferritic steels
Patricia Rawls	NETL	Creep strength-enhanced ferritic steels Steam Oxidation Phase 2 Boiler Corrosion – Phase 2 Gas Turbine Materials Life Assessment and NDE – Phase 2 ODS Alloys – Phase 2
Nigel Simms for Ilias Nikolaidis	Cranfield (RR – not attending)	Corrosion Lfing Methods And Testing (CLIMATE)
Craig Degnan	EON	Innovative Materials, Design and Monitoring of Power Plant to Accommodate Carbon Capture
Geert Verhaeghe	TWI	Verified Approaches to Life Management & Improved Design of High Temperature Steels for Advanced Steam Plants (VALID)
Nigel Simms	Cranfield	Carbon Abatement Using Surface Engineering Technologies (CASET) Steam Oxidation – Phase 2 Boiler Corrosion – Phase 2 Gas Turbine Materials Life Assessment and NDE – Phase 2 ODS Alloys – Phase 2

Sensors and Monitoring		
Susan Maley	NETL	Sensors for High Temp GTs in Harsh Environments
Evan Lally Anbo Wang (dial-in)	Virginia Tech University	Sensors for High Temp GTs in Harsh Environments
Hia Xiao	Missouri Science & Technology Center	Sensors for High Temp GTs in Harsh Environments
Steve Goodstine	Alstom Power	Sensors for High Temp GTs in Harsh Environments
Nancy Ulreich	Siemens Power - telecon	Sensors for High Temp GTs in Harsh Environments GT, Life Assessment and NDE – Phase 2
Brian Strazisar	NETL	CO2 Sensors
Junhang Dong	Uni Cincinatti	Sensors for High Temp GTs in Harsh Environments
Stephen Fasham	Oxsensis - telecon	Fast REsponse Temperature Sensors for GAs Turbine Efficiency
Scott Hoover	RR - telecon	
Kevin Dodds	BP Alt Energy	Nanoscale Gravity Sensors for Monitoring CO2 Storage

CO2 Capture		
Frank Morton	Southern Companies	PSDF – Gasification
Tim Fout for Jared Ciferno	NETL	National Carbon Capture Centre FE Post-combustion solvent capture program
Michael Knaggs	NETL	Overview of FE Algae R&D Program
Malc Hillel	RR – not attending	CO2 separation by compression
Peter Tune	CPI	Industrial CO2 as a precursor to sustainable biomass: reducing energy consumption and CO2 footprint.
Kevin Dodds	BP Alt Energy	Efficient Water Gas Shift Technology for Low-Carbon Electric Power Generation from Fossil Fuels
Bryony Livesey Sean Black	Doosan	CCPilot100+