

2020 UTSR Project Review Meeting - Virtual

EST	Day 1 - Tuesday, November 17, 2020			
11:00 AM	Welcome, Introductions, and Meeting Approach: Richard Dennis, Turbine Technology Manager, NETL, DOE			
11:15 AM	Advanced Turbines Program Overview: Richard Dennis, Turbine Technology Manager, NETL, DOE			
11:45 AM	Question & Answer			
12:00 PM	Break			
	Moderator: Patcharin Burke			
	Organization	Project Number	Title	Presenter
12:15 PM	Pennsylvania State University	FE0025011	Improving Turbine Efficiencies through Heat Transfer and Aerodynamic Research in the Steady Thermal Aero Research Turbine (START)	Karen Thole
1:00 PM	University of Pittsburgh	FE0031277	Integrated Transpiration and Lattice Cooling Systems Developed by Additive Manufacturing with Oxide-Dispersion Strengthened Alloys	Minking Chyu and Bruce Kang
1:45 PM	University of Texas at Austin	FE0031760	Integrated Turbine Component Cooling Designs Facilitated by Additive Manufacturing and Optimization	David Bogard and Karen Thole
2:30 PM	Lunch Break			
	Moderator: Richard Dalton			
3:45 PM	Pennsylvania State University	FE0031280	Discrete Element Roughness Modeling for Design Optimization of Additively and Conventionally Manufactured Internal Turbine Cooling Passages	Robert Kunz
4:30 PM	Ohio State University	FE0031278	Development of High Performance Ni-Base Alloys for Gas Turbine Wheels Using A Co-Precipitation Approach	Michael Mills
5:15 PM	University of Pittsburgh	FE0031774	An Effective Quality Assurance Method for Additively Manufactured Gas Turbine Metallic Components Via Machine Learning from In-Situ Monitoring, Part-Scale Modeling, and Ex-Situ Characterization Data	Xiayun Zhao
6:00 PM	Summary and Closing Remarks			
6:15 PM	Adjourn			

Day 2 - Wednesday, November 18, 2020				
11:00 AM	Welcome, Introductions, and Meeting Approach			
11:15 AM	Gas Turbine OEM Panel Discussion: Session Chairs: Richard Dennis and Robert Schrecengost, DOE; Panelists: John Mason, Solar Turbines; Scott F. Johnson, GE Gas Power; Carlos Koeneke, MHI; John Marra, Siemens Energy; and Dustin Davis, Pratt & Whitney			
1:15 PM	Lunch Break			
	Moderator: Mark Freeman			
	Organization	Project Number	Title	Presenter
2:30 PM	Embry-Riddle Aeronautical University	FE0031227	Improving NOx Entitlement with Axial Staging	Scott Martin
3:15 PM	University of Michigan	FE0031773 and FE31228	Pressure Gain, Stability, and Operability of Methane/Syngas Based RDEs Under Steady and Transient Conditions	Mirko Gamba
4:00 PM	Georgia Tech	FE0031285	High-Frequency Transverse Combustion Instabilities in Low-NOx Gas Turbines	Timothy Lieuwen
	Moderator: Seth Lawson			
4:45 PM	Pennsylvania State University	FE0031806	Development and Evaluation of a Novel Fuel Injector Design Method Using Hybrid-Additive Manufacturing	Jacqueline O'Connor
5:30 PM	West Virginia University	FE0031771	Techno-Economic Optimization of Advanced Energy Plants with Integrated Thermal, Mechanical, and Electro-Chemical Storage	Debangsu Bhattacharyya
6:15 PM	Summary and Closing Remarks			
6:30 PM	Adjourn			

EST	Day 3 - Thursday, November 19, 2020			
11:00 AM	Welcome, Introductions, and Meeting Approach			
11:15 AM	University Panel Discussion: Program Success Stories and Suggestions for Continued Advancement Chair: Patcharin Burke, DOE and Karen Thole, Penn State University; Panelist: Carson Slabaugh, Purdue University; Carl Frick, University of Wyoming; Lesley Wright, Texas A&M University; Margaret Wooldridge, University of Michigan; Jackie O'Connor, Penn State University; Eric Deshong, Penn State University			Session
1:15 PM	Lunch Break			
	Moderator: Matt Adams			
	Organization	Project Number	Title	Presenter
2:00 PM	Clemson University	FE0031281	Integrated TBC / EBC For SiC Fiber Reinforced SiC Matrix Composites for Next Generation Gas Turbines	Rajendra Bordia
2:45 PM	Pennsylvania State University	FE0031758	Development of Additive Manufacturing for Ceramic Matrix Composite Vanes	Stephen Lynch
3:30 PM	Arizona State University	FE0031759	A Multiphysics Multiscale Simulation Platform for Damage, Environmental Degradation, and Life Prediction of Ceramic Matrix Composites in Extreme Environments	Aditi Chattopadhyay
	Moderator: Richard Dalton			
4:15 PM	University of Central Florida	FE0025260	Combustion Kinetics Model Development and Fluid Property Experimental Investigation for Improved Design of Supercritical CO2 Power Cycle Components	Subith Vasu
5:00 PM	Georgia Tech	FE0031772	Advanced Model Development for Large Eddy Simulation of Oxy-Combustion and Supercritical Carbon Dioxide Power Cycles	Joseph Oefelein
5:45 PM	University of Central Florida	FE0031282	In-Situ Optical Monitoring of Operating Gas Turbine Blade Coatings Under Extreme Environments	Quentin Fouliard
6:30 PM	Summary and Closing Remarks			
6:45 PM	Adjourn - End of Meeting			