ADVANCED MANUFACTURING OFFICE
PEER REVIEW
JUNE 13-14, 2017

Sheraton Hotel, Pentagon City
900 South Orme Street
Arlington, Virginia 22204
Phone: (703) 521-1900

FINAL AGENDA

Day 1 (June 13)		
8:00 – 8:45 am	Peer Reviewer Briefing Breakfast **Mark Johnson, Rob Ivester, Isaac Chan, Valri Lightner, and Jay Wrobel, DOE-AMO**	
8:45 – 9:00 am	BREAK	
8:00 – 9:00 am	REGISTRATION FOR ATTENDEES	
9:00 – 9:30 am	Welcome and AMO Overview	**Mark Johnson** AMO Director
9:30 – 10:00 am	Overview of the AMO Multiyear Program Plan	**Valri Lightner** Program Manager, R&D Consortia
10:00 – 10:20 am	AMO Strategic Analysis Activities	**Joe Cresko** AMO Analysis Lead
10:20 – 10:40 am	NETWORKING BREAK	
	National Laboratory Manufacturing Consortia Programs	
10:40 – 11:00 am	High Performance Computing for Manufacturing	Lead Lab: LLNL Other Labs: ORNL, LBNL
11:00 – 11:20 am	Lab Embedded Entrepreneurship Programs	Peter Winter, AMO Fellow LBNL, ANL, ORNL
11:20 – 11:40 am	Catalysis Development and Testing Program	Lead Lab: INL Other Labs: ORNL, ANL
11:40 am – 12:00 pm	Roll-to-roll Advanced Materials	Lead Lab: ORNL Other Labs: ANL, NREL, LBNL
12:00 – 1:00 pm	LUNCH (Private Lunch for Reviewers)	

Day 1 (June 13) Continued				
TRACK A			**TRACK B**	
R&D Projects Review			**Technical Assistance Review**	
1:00 – 1:20 pm	***Additive Manufacturing***		1:00 – 1:05 pm	Introductions
	Powder Synthesis and Alloy Design for Additive Manufacturing	Ames Laboratory	1:05 – 1:30 pm	Tools and Training Jay Wrobel
1:20 – 1:40 pm	In-Situ Data Acquisition and Tool Development for Additive Manufacturing Metal Powder Systems	SLAC		
1:40 – 2:00 pm	***Advanced Materials Manufacturing***		1:30 – 2:00 pm	Better Plants Eli Levine
	Energy Efficient Thermoplastic Composite Manufacturing	The Boeing Company		
2:00 – 2:20 pm	A Novel Flash Ironmaking Process	American Iron and Steel Institute	2:00 – 2:25 pm	Industrial Assessment Centers John Smegal
2:20 – 2:40 pm	Carbon Fiber Test Facility	ORNL	2:25 – 2:45 pm	Superior Energy Performance Paul Scheihing
2:40 – 3:00 pm	Processes for 2G HTS Wire Manufacturing	Superconductor Technologies Incorporated	2:45 – 3:00 pm	50001 Ready Pete Langlois
3:00 – 3:20 pm	BREAK		3:00 – 3:20 pm	BREAK
3:20 – 3:40 pm	Enhanced 2G HTS Wire for Electric Motor Applications	American Superconductor Corporation	3:20 – 3:50 pm	CHP Deployment Jay Wrobel
3:40 – 4:00 pm	Metal (Cu, Al) CNT Composite Wires for Energy Efficient Motors	University of Central Florida		
			3:50 – 4:00 pm ***Transition to R&D Projects Review***	

Day 1 (June 13) Continued				
TRACK A			**TRACK B**	
R&D Projects Review				
4:00 – 4:20 pm	Carbon Conductors for Lightweight Motors and Generators	Rice University	***Process Heating***	
			Coatings and Process Development Reduced Energy Automotive OEM Manufacturing	PPG Industries, Inc.
4:20 – 4:40 pm	Amorphous and Nanocomposite Magnets for High Efficiency, High Speed Motor Designs	Carnegie Mellon University	***Materials for Harsh Service Conditions***	
			Wear-Resistant Surface Technologies for Low-Leakage NG Compressors	Argonne National Laboratory
4:00 – 5:00 pm	Si-Al-Cr-Mn Alloy for High Specific Resistivity	AK Steel Corporation	***Smart Manufacturing***	
			Industrial Scale Demonstration of Smart Manufacturing Achieving Transformational Energy Productivity Gains	University of Texas at Austin
5:00 – 5:10 pm	Introduction to Poster Session	AMO Staff	Introduction to Poster Session	AMO Staff
5:15 – 6:15 pm	Private Dinner and Discussion for Reviewers			

5:10 – 7:30 pm	POSTER SESSION AND NO-HOST RECEPTION (27 Posters)

#	Project Title	Performer
1	HPC4Mfg: Massively Parallel Multi-Physics Multi-Scale Large Eddy Simulations of a Fully Integrated Aircraft Engine Combustor and High Pressure Stage One Nozzle	ORNL, LLNL, General Electric
2	HPC4Mfg: Numerical Simulation of Fiber Glass Drawing Process via a Multiple-Tip Bushing	LLNL, PPG Industries, Inc.
3	HPC4Mfg: Increased Efficiency Low Temperature Drying Process	LLNL, ZoomEssence, Inc.
4	HPC4Mfg: Highly-Scalable Multi-Scale FEA Simulation for Efficient Paper Fiber Structure	LLNL, The Procter & Gamble Company
5	HPC4Mfg: Multi-physics Modeling of Continuous Liquid Interface Production (CLIP) for Additive Manufacturing	LBNL, Carbon, Inc.
6	HPC4Mfg: Integrated Predictive Tools for Customizing Microstructure and Material Properties of Additively Manufactured Aerospace Components	ORNL, LLNL, United Technologies Research Center
7	HPC4Mfg: Process Map for Tailoring Microstructure in Direct Metal Laser Melting (DMLM) additive Manufacturing Process	ORNL, General Electric
8	Phase III SBIR: Flash Processed Steel for Automotive Applications	SFP Works
9	Phase II SBIR: Low-Cost Modular Plasma System for Reforming of Natural Gas	Rivis, Inc.
10	Phase II SBIR: Capability of Rolling Efficiency for 100M High-Speed Rails	OG Technologies
11	Phase II SBIR: High Ion-Accessible Surface Area CNT-Ultracapacitors for Groundwater Desalination	Mainstream Engineering Corp.
12	Phase II SBIR: Gliding Arc Plasma Reformer with Efficient Heat Recuperation	Advanced Cooling Technologies

13	Phase II SBIR: Magnetocaloric Generator for Waste Heat Recovery	Aqwest LLC
14	Cyclotron Road	Lawrence Berkeley National Laboratory
15	Chain Reaction Innovations	Argonne National Laboratory
16	Innovation Crossroads	Oak Ridge National Laboratory
17	CaloriCool	Ames National Laboratory
18	"SMASH" Project	Stanford Linear Accelerator
19	Covetics: Melt Processing of Covetic Materials	National Energy Technology Laboratory (Albany, Oregon)
20	Covetics: High Performance Electrical and Thermal Conductors	Argonne National Laboratory
21	Covetics: Synthesis and Characterization of Covetic Nanomaterial	Oak Ridge National Laboratory
22	Crosscutting Manufacturing R&D	Argonne National Laboratory
23	Combined Heat and Power R&D	Oak Ridge National Laboratory
24	Analysis 1: Manufacturing in a Connected Economy	• Lawrence Berkeley National Laboratory • Oak Ridge National Laboratory • Argonne National Laboratory • National Renewable National Laboratory • Energetics, Inc.
25	Analysis 2: Clean Water	
26	Analysis 3: Analysis Methodology, Tools & Integrating Analysis	
27	Analysis 4: Sustainable Manufacturing	

Day 2 (June 14)				
	TRACK A		TRACK B	
8:00 – 9:00 am	REGISTRATION FOR ATTENDEES			
	R&D Projects Review		**R&D Consortia Review**	
9:00 – 9:05 am	Welcome, AMO R&D Staff		Welcome, Valri Lightner, Program Manager, R&D Consortia	
9:05 – 9:25 am	***Advanced Materials Manufacturing***		9:05 – 9:45 am	Power America North Carolina State University
	High-Silicone Steel Sheet By Single Stage Shear-Based Processing	Purdue University		
9:25 – 9:45 am	Cost-effective Conductor, Cable, and Coils for High Field Rotating Electric Machines	Florida State University		
9:45 – 10:05 am	Resistively Graded Insulation System for Next-Generation Converter-Fed Motors	General Electric	9:45 – 10:25 am	Critical Materials Institute Ames Laboratory
10:05 – 10:25 am	Polydopamine/PTFE Composite Coating for Large-Scale Journal Bearings in Next Generation Electric Machines	SurfTech, LLC		
10:25 – 10:40 am	BREAK		10:25 – 10:40 am	BREAK
10:40 – 11:00 am	Highly Efficient Conical Air Gap Axial Motor Using Soft Magnetic Composites and Grain-Oriented Electrical Steel	Regal-Beloit	10:40 – 11:20 am	Institute for Advanced Composite Materials Innovation
11:00 – 11:20 am	Advanced Manufacturing of High Performance Superconductor Wires	University of Houston		
11:20 – 11:40 am	Nanometal-Interconnected Carbon Conductors for Advanced Electric Machines	Rochester Institute of Technology	11:20 – 12:00 pm	Manufacturing Demonstration Facility Oak Ridge National Laboratory
11:40 – 12:00 pm	***Wide Bandgap Semiconductors***			
	Medium Voltage Integrated Drive and Motor	CalNetix Technologies		

Day 2 (June 14) Continued				
12:00 – 1:00 pm	LUNCH (Private Lunch for Reviewers)			
Research and Development Projects **TRACK A**			**R&D Consortia** **TRACK B**	
1:00 – 1:20 pm	***Wide Bandgap Semiconductors***		1:00 – 1:25 pm	Clean Energy Smart Manufacturing Innovation Institute Smart Manufacturing Leadership Coalition
	SiC enabled High-Frequency Medium Voltage Drive for High-Speed Motors	General Electric		
1:20 – 1:40 pm	Integrated 10kV SiC VSD and High-Speed MW Motor for Gas Compression Systems	Eaton Corporation	1:25 – 1:50 pm	Rapid Advancement in Process Intensification Deployment (RAPID) Institute AIChE
1:40 – 2:00 pm	Fully Integrated High Speed Megawatt Class Motor and High-Speed MW Motor for Gas Compression Systems	Clemson University	1:50 – 2:15 pm	Reducing Embodied-energy and Decreasing Emissions (REMADE) Institute Sustainable Manufacturing Innovation Alliance
2:00 – 2:20 pm	Integrated Electric Drive with HV2 Modular Electric Machine and SiC Based Power Converters	The Ohio State University		
2:20 – 2:35 pm	BREAK		2:15 – 2:35 pm	BREAK
2:35 – 2:55 pm	Graduate Study and Research Program Focused on the Experimentation, Design, Development, and Manufacturing of WBG-Based Power Electronics, Grid Equipment, and High-Efficiency Electrical Systems	Virginia Polytechnic Institute and State University	**Research and Development Projects** ***Sustainable Manufacturing***	
			Development of an Automatic Continuous Online Monitoring and Control Platform for Polymerization Reactions	Tulane University
2:55 – 3:15 pm	Design-Oriented Education and Hands-On Training with Wide Bandgap Power Electronics for the Next-Generation Power Engineering Workforce	University of Tennessee-Knoxville	Rapid Freeform Sheet Metal Forming: Technology Development and System Verification	Ford Motor Company

Day 2 (June 14) Continued				
3:15 – 3:35 pm	***Process Intensification***		Development of Energy Efficient Integrated Die Casting Process For Large Thin-Walled Magnesium Applications	General Motors LLC
	Low-Energy, Low Cost Production of Ethylene by Low Temperature Oxidative Coupling of Methane	Siluria		
3:35 – 3:55 pm	New Design Methods and Algorithms for Energy Efficient Distillation Trains	Purdue University	A Novel Unit Operation to Remove Hydrophobic Contaminants	Doshi & Associates
3:55 – 4:15 pm	One Step Hydrogen Generation through Sorption Enhanced Reforming	Gas Technology Institute	Advanced, Energy-Efficient Hybrid Membrane System for Industrial Water Reuse	Research Triangle Institute
4:15 – 4:35 pm	Sacrificial Protective Coating Materials that can be Regenerated In-Situ to Enable High Performance Membranes	Teledyne Scientific and Imaging	Bio-Oxo Technology	Easel Biotechnologies
4:35 pm	PEER REVIEW MEETING ADJOURNS			
4:45 – 6:00 pm	PRIVATE MEETING OF REVIEW PANEL *(including time with AMO management to address outstanding questions)*			