

# Improving the Energy Productivity and Competitiveness of U.S. Manufacturers

*Hosted by the House Manufacturing Caucus*

January 24, 2017

10:00 AM to 11:30 AM

Rayburn House Office Building

Room B-318

You are invited to a briefing on the current state of U.S. manufacturing and the activities of the U.S. Department of Energy (DOE) Advanced Manufacturing Office (AMO).

Moderated by AMO Director, *Dr. Mark Johnson*

Representatives *Tim Ryan (Ohio)* and *Tom Reed (NY)*, invited

## Panelists:

*Larry Kavanagh, Steel Market Development Institute*

"High Performance Computing Applications in Steel"

*Bryan P. Rasmussen, Ph.D., P.E., Texas A&M*

"The US Dept. of Energy Industrial Assessment Center program"

*Richard Neff, Cincinnati, Inc.*

"AMO Helps 118 Year Old Machinery Company, Cincinnati Incorporated, Develop the Biggest and Best 3D Printer in the World, BAAM"

*Chris Kaffer, Ph.D., Mallinda*

"How the DOE and Cyclotron Road Advance US Hard Technology Development"

*Steven Betza, Lockheed Martin*

"The Business Value of Manufacturing USA"

The AMO supports the DOE vision of a strong and prosperous America powered by clean, affordable, and secure energy. AMO is the only technology development office within the U.S. Government that is dedicated to improving the energy and material efficiency, productivity, and competitiveness of U.S. manufacturers.

The AMO seeks to drive energy productivity improvements by bringing together manufacturers, research institutions, and institutes of higher education to; identify challenges, catalyze innovations, as well as develop cutting-edge materials, process focus, and information technologies needed for an efficient and competitive domestic manufacturing sector.

Briefing panelists include academic and industry leaders who are working with AMO to achieve its goal of improving the competitiveness of our nation's manufacturers and manufacturing workforce. Panelists also include entrepreneurs and technologists who are poised to transform the future in energy, with innovations supported by AMO and other DOE resources, such as the National Laboratory system.

Join us for this fascinating discussion on the AMO's activities in support of U.S. manufacturing and the impact these initiatives are having on the U.S. economy, particularly manufacturing and technology job growth.

This is a widely attended event and space is limited. Please [RSVP](#)

**Mark Johnson**, Ph.D., serves as the Director of the Advanced Manufacturing Office (AMO) in the Office of Energy Efficiency and Renewable Energy (EERE). Previously, Mark served as a Program Director in the Advanced Research Projects Agency–Energy (ARPA-E), where he had the longest tenure in that post—from ARPA-E’s formation in 2010 to mid-2013. He also served as the Industry and Innovation Program Director for the Future Renewable Electric Energy Delivery and Management (FREEDM) Systems Center. Mark joins EERE on assignment from North Carolina State University, where he is an Associate Professor of Materials Science and Engineering. In addition to his academic career, Mark is an entrepreneur and early stage leader in Quantum Epitaxial Designs (now International Quantum Epitaxy), EPI Systems (now Veeco) and Nitronex (now GaAs Labs). Mark has a bachelor’s degree from MIT and a Ph.D., from NC State, both in Materials Science and Engineering.

**Lawrence Kavanagh** is the president of the Steel Market Development Institute (SMDI), a business unit of the American Iron and Steel Institute (AISI). He is responsible for developing and executing strategies to advance the competitive position of steel in multiple markets in accordance with the SMDI Mission and Goals established by its Board. Prior to his appointment in 2009, he served as AISI’s Vice President of Environment & Technology. Mr. Kavanagh came from Davy International’s Automation Services Division (now doing business as Kvaerner and Voest-Alpine) where he was responsible for all phases of steel and aluminum industry capital project execution. He is a graduate of the University of Notre Dame (BSEE) and the ‘mini-MBA’ program at George Mason University. He is also the Treasurer of the American Iron and Steel Institute.

**Bryan Rasmussen**, Ph.D., is an Associate Professor of Mechanical Engineering, and the Director of the Industrial Assessment Center (IAC) at Texas A&M University. He holds degrees in mechanical engineering from Utah State University and the University of Illinois at Urbana-Champaign. Over the past 30 years the IAC program at Texas A&M University has conducted over 700 audits, employed and trained over 300 students, and resulted in savings of more than \$250 million for regional manufacturers. He is the recipient of the National Science Foundation CAREER award, the ASHRAE Young Investigator award, and numerous awards for teaching excellence. He is a member of ASME, IEEE, ASHRAE, ASEE, and is a registered Professional Engineer in the state of Texas.

**Rick Neff** is BAAM (Big Area Additive Manufacturing) Sales Manager at Cincinnati Incorporated, a machinery manufacturer. Rick has worked at CI for 24 years of its 118 year history. He is responsible for, marketing, selling and development collaboration of BAAM 3D printers. Rick worked with DOE, AMO and Oak Ridge National Laboratory MDF to develop BAAM. He has a BSME from Lehigh University and has worked for three fortune 500 companies in sales and marketing of aerospace components and capital equipment. He is interested in additive manufacturing, composites, laser technology and manufacturing innovation. Rick is also an active member of the SME, FMA, IACMI, SPE, AMUG and LIA in order to promote technology and its application to manufacturing challenges.

**Chris Kaffer** is the CEO and Co-founder of Mallinda, an early-stage material supplier of advanced composite materials. He is responsible for business development and for developing and executing commercialization and financing strategies. He earned his Ph.D. from the University of California, Berkeley, and his MBA at The University of Colorado, Boulder. He has a breadth of operational experience from intellectual property to corporate development.

**Steve Betza** is the Corporate Director of Future Enterprise Initiatives at Lockheed Martin, where he leads the identification and deployment of emerging capabilities for a corporation with 50,000 scientists and engineers and \$46B in annual sales. During a 33-year career at IBM and Lockheed Martin, he has held progressively responsible positions in engineering management, program management, and as CIO for \$2.5B segment of LM companies. Prior to his current assignment, from 2013-2015, Steve led Lockheed Martin's partnership formation with seven Manufacturing USA Institutes.