

## **Industry Collaborative Envisions U.S. As Global Center For Power Electronics Research, Design, And Manufacturing**

*by Keith Evans, President, U.S. Power Electronics Industry Collaborative (PEIC)*

The field of power electronics is growing in importance as it represents the means of controlling and converting electric power in an increasingly high technology world that places more and more value on energy efficiency and green solutions. Accordingly, there is an international race to establish the required infrastructure and to map out and develop critical elements of the manufacturing supply chain.

The Power Electronics Industry Collaborative (PEIC) is focused on advancing the U.S. power electronics industry by bringing industry, government, national laboratories, academia and trade organizations together to define and pursue common objectives. The PEIC is a 501(c)(6) nonprofit organization established in late 2012 to serve as a U.S. industry-driven membership-based consortium comprised of OEMs, suppliers, researchers and other stakeholders working to advance the U.S. power electronics industry. PEIC members are engaged in U.S. and global manufacturing of power electronics materials, components and systems.

PEIC's vision is to position the U.S. as the global center of power electronics research, design and manufacturing. The organization has identified three key objectives to achieve its vision: 1) to complete a thorough industry analysis to identify gaps and opportunities; 2) to advocate for public and private investment to accelerate the speed, scale and development of the manufacturing supply chain, and 3) to develop a highly skilled, competitive workforce to support design and manufacturing needs of the industry.

### **Recent Activities**

In May 2014, the PEIC's proposal entitled "Strengthening the Domestic Power Electronics Ecosystem" was awarded a \$500,000, two-year grant from the National Institute of Standards and Technology (NIST) under their Advanced Manufacturing Technology Consortia (AMTech) Program. The AMTech Program provides support to industry-driven consortia to develop plans that address challenges impeding advanced manufacturing in the U.S. Funds provided through the AMTech Program will help the PEIC develop an in-depth understanding of the manufacturing and innovation capabilities of the nation's power electronics industry, and produce consensus-based technology roadmaps to guide cooperative, pre-competitive research and workforce development efforts.

The PEIC's approach to fulfilling its goals under the AMTech Program include:

- Convening the U.S. power electronics industry to assess and document the industry's current status and competitive position,
- Analyzing how technology and policy drivers could provide opportunity for U.S. leadership in power electronics innovation and manufacturing, and
- Seeking consensus on detailed technology, product and policy roadmaps that will enable industry stakeholders to cooperate on pre-competitive research and on achieving common market, policy and workforce development goals.

Since PEIC members are volunteers and have full-time "day jobs," the PEIC has outsourced much of the AMTech Project's technical work to NextEnergy, a 501(c)3 nonprofit organization with great experience in high-technology business roadmapping, and the organizational support work to Kuntzsch Business Services, a consulting service with great experience in helping nonprofit organizations to get established and grow.

Through the AMTech Program, the PEIC will work toward achieving all three of its organizational objectives, by strategically engaging industry stakeholders to identify gaps and opportunities. This work will help the PEIC most effectively leverage public and private investment and identify workforce development needs. Additionally, stakeholder engagement conducted through the AMTech Program will support further development of the PEIC's diverse membership.

### **Get Involved With The PEIC**

Power electronics cuts across multiple sectors, and stakeholder involvement is crucial to strengthen the PEIC's voice and advance its objectives. The involvement of suppliers, OEMs, researchers and other industry

stakeholders is critical to the PEIC's success. For more information about becoming a PEIC member, visit [peic-us.org/about/become-a-member](http://peic-us.org/about/become-a-member).

### About The Author



*Keith Evans is the president & CEO of Kyma Technologies and recently took on the additional role of president of the U.S. Power Electronics Collaborative (PEIC). He previously held executive positions at QED/IQE, Veeco Instruments, and Crystal-IS, which followed his early career at the U.S. Air Force Research Laboratory (AFRL) where he built a team that advanced the science and technology of III-V epitaxial crystal growth for national defense applications. Keith is a member of the American Association for the Advancement of Science (AAAS), a repeat Mentor for the National Science Foundation I-Corps Program, and serves as an Entrepreneur Affiliate with the Center for Entrepreneurship and Innovation at the Duke University Fuqua School of Management. He received a PhD in Physical Chemistry from Purdue University.*