

DOE's Better Plants program helps a diverse group of manufacturers leverage opportunities for innovation, training, and new technology. This includes AMO R&D Consortia, which are collaborative efforts that leverage common assets to the benefit of all stakeholders in targeted technical areas of manufacturing, overcoming the significant manufacturing challenges that are impractical for any single entity to bear alone. DOE has funded five institutes as a part of Manufacturing USA, a government-wide initiative focused on coordinating public and private investment in emerging advanced manufacturing technologies. Manufacturing USA brings together industry, academia, and government partners to leverage existing resources, collaborate, and co-invest to advance manufacturing innovation and accelerate commercialization. Better Plants partners can directly benefit from these institutes by joining them as official members.



The [PowerAmerica Institute](#) is focused on accelerating the adoption of advanced semiconductor components made with silicon carbide and gallium nitride into a wide range of products and systems.

PowerAmerica

Using silicon carbide and gallium nitride to make new wide bandgap semiconductor devices can unlock new energy savings for American manufacturers. These next generation technologies can operate at higher temperatures and voltages, and switch faster than silicon. Applications include power electronic motor controls leading to huge energy savings, power flow control and conditioning leading to a more resilient grid, and enabling chargers and propulsion inverters for electric transportation. PowerAmerica is working to make wide bandgap semiconductor technologies more cost-competitive with silicon-based power electronics, and to facilitate more rapid supply chain integration and workforce development for this new technology. In partnership with the U.S. Department of Energy, PowerAmerica focuses on the three following technology areas:

- Open foundry and power semiconductor device development
- Module advancements: packaging of power semiconductor devices
- Power electronic applications

Better Plants Partner in Action: Lockheed Martin

Lockheed Martin, a Better Plants partner, is a full sustaining member of Power America Institute serving on both the advisory and executive committees and helping to advise the institute on new projects and technologies to investigate. Through this partnership to not only to reduce the cost, but also improve the performance and reliability of wide bandgap devices and the systems that incorporate SiC and GaN technologies.

Lockheed Martin also has the technical capability to design, fabricate, and test prototype wide bandgap semiconductor devices for specific applications utilizing technology developed at other PowerAmerica partners. Lockheed Martin participates in the reviews of these technologies in order to provide guidance and coordination for their commercialization.

To learn more about how to access numerous manufacturing institutes in the Manufacturing USA network:

Email:

Betterplants@ee.doe.gov or

Contact your Technical Account Manager

Visit:

[PowerAmerica's Website](#)

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