

Grid Energy Storage – Technology and Deployment in the Electric Grid  
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SYNOPSIS OF YOUR PRESENTATION (two paragraphs)

Energy storage is vital to the stability and resiliency of the electric grid. For over twenty five years, Sandia National Laboratories has played a leadership role in the development, testing and validation, and on helping to enable large scale deployment of energy storage in the electric grid. The research program at the laboratories includes the development low cost battery technologies, power electronics and power conversion systems, and algorithms and controls for optimum utilization of energy storage assets. The laboratory is a center of excellence in the safety and reliability of grid scale energy storage systems. The laboratory also provides trusted, independent, third-party testing and validation of electrical energy storage systems and advanced storage technologies from cell to MW systems in both grid and simulated environments. The laboratory has played a unique role in the deployment and demonstration of a number of pilot scale energy storage projects across the country. This presentation will give an overview of the grid energy storage research program and discuss our plans for the future.

**BRIEF BIO (two paragraphs highlighting your experience and the impact of your work)**

**Dr. Babu Chalamala**  
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Dr. Babu Chalamala is Manager of the Energy Storage Technology and Systems Department at Sandia National Laboratories. Prior to joining Sandia in August 2015, he was a Corporate Fellow at MEMC/SunEdison for five years, where he led R&D and product development in grid scale energy storage. Before that, he founded two startup companies commercializing large format lithium batteries and digital x-ray sources. Earlier, as a research staff member at Motorola, Research Triangle Institute, and Texas Instruments, he made contribution to the development of electronic materials and device technologies.

He is a Fellow of the IEEE and Academy of Sciences St Louis, a Life Member of the Electrochemical Society, and a Member of the Materials Research Society. As chair of the IEEE Photonics Society Technical Committee on Displays, he was instrumental in launching the IEEE/OSA Journal of Display Technology. He has been an active member of the Materials Research Society for twenty years and served as General Chair of the 2006 MRS Fall Meeting. He served on the editorial boards of the Proceedings of the IEEE, IEEE Access and the Journal of Display Technology. He was also a guest editor for special issues of the MRS Bulletin, Proceedings of the IEEE, and the IEEE Journal on Selected Topics in Quantum Electronics. He is currently a member of the IEEE Fellow Committee, IEEE PES Energy Storage and Stationary Battery Committee, and the MRS New Meetings and Government Affairs Subcommittees. He received his B.Tech degree in Electronics and Communications Engineering from Sri Venkateswara University and his PhD degree in Physics from the University of North Texas. He received the 2015 James Eads Award of the Academy of Sciences St Louis. He received the 2015 James Eads Award of the Academy of Sciences St Louis. He authored over 90 publications and 8 US patents related to energy storage, display technologies and electronic materials.

**PROFESSIONAL PHOTO**



**ARE YOU WILLING TO SPEAK WITH THE MEDIA?**

Yes