

# WI PSC/DOE ENERGY STORAGE WEBINAR SERIES:

## Engineering Details

June 9, 2021 10:00 AM - 12:30 PM (CT)

Agenda & Speaker Biographies

Presented by Public Service Commission of Wisconsin,  
U.S. DOE Office of Electricity Energy Storage Program,  
and Sandia National Labs

[JOIN WEBINAR HERE](#)

Meeting will be open ½ hour early so you can test your connections

Energy storage is the key to unleashing the power of renewables, relieving generation, transmission, and distribution demands, and hastening the energy transition to a decarbonized future. Public Service Commission of Wisconsin Commissioners and Staff are invited to participate in a series of energy storage webinars presented in collaboration with US DOE Office of Electricity Energy Storage Program and Sandia National Laboratories. Experts from the national labs, regional agencies and other organizations and institutions will provide content, with time for discussion and questions.

### June 9, 2021 - Engineering Details

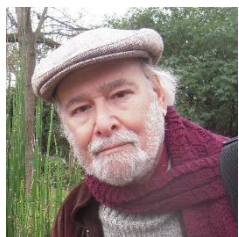
10:00 - 10:10	Introductory Comments Dr. Imre Gyuk, Director, DOE Office of Electricity Energy Storage (ES) Program
10:10 - 10:40	Project Development/Commissioning Dan Borneo, Sandia National Laboratories (SNL)
10:40 - 11:10	Interconnection, Technical Dr. Mike Ropp, Sandia National Laboratories (SNL)
11:10 - 11:20	Q&A
11:20 - 11:50	Technical Issues Associated with Multiple Use Applications Charlie Vartanian, Pacific Northwest National Laboratory (PNNL)
11:50 - 12:20	Energy Storage System Safety Dr. David Rosewater, Sandia National Laboratories (SNL)
12:20 - 12:30	Q&A



U.S. DEPARTMENT OF  
**ENERGY**



## Speaker Biographies



After taking a B.S. from Fordham University, Dr. Imre Gyuk did graduate work at Brown University on Superconductivity. Having received a Ph.D. in Theoretical Particle Physics from Purdue University he became a Research Associate at Syracuse. As an Assistant Professor he taught Physics, Civil Engineering, and Environmental Architecture at the University of Wisconsin. Dr. Gyuk became an Associate Professor in the Department of Physics at Kuwait University where he became interested in issues of sustainability. Dr. Gyuk joined the Department of Energy to manage the Thermal and Physical Storage program. For the past two decades he has directed the Electrical Energy Storage research program in the Office of Electricity, developing a wide portfolio of storage technologies for a broad spectrum of applications. He supervised the \$185M ARRA stimulus funding for Grid Scale Energy Storage Demonstrations and is now partnering with the States on numerous storage projects for grid resilience. His work has led to 12 R&D 100 awards, two EPA Green Chemistry Challenge Awards, and Lifetime Achievement Awards from ESA and NAATBatt. He is internationally recognized as a leader in the energy storage field.



Daniel Borneo is an Engineering Program/Project Lead at Sandia National Laboratory (SNL) where he leads a projects team that is part of Sandia's Grid-Tied Electrical Energy Storage Program. The main emphasis of Dan's work is to collaborate with utilities, industry partners, academia, and State Energy offices to develop Energy Storage (ES) projects and bring innovative electrical energy storage technologies to commercialization. He also specializes in the commissioning of ES systems, and does work both Nationally and Internationally. Dan earned his Bachelor's and Master's degrees in Electrical Engineering from the University of New Mexico, focusing on power and controls. He holds a professional engineering license in the state of New Mexico.



Michael Ropp received the Bachelor's degree in Music from the University of Nebraska-Lincoln in 1991, and the Masters and Ph.D. in Electrical Engineering in 1996 and 1998, respectively, from the Georgia Institute of Technology, Atlanta, GA. He is presently a Principal Member of Technical Staff at Sandia National Laboratories, Albuquerque, NM.

Dr. Ropp has over twenty years of experience in research and education in power engineering, power electronics, and photovoltaics. He has authored over eighty technical publications and holds six patents. He is a Senior Member of the IEEE and is active in standards creation, and is a registered Professional Engineer in South Dakota and Hawaii. His primary technical interests are in power electronics, especially solid-state transformers; the planning, design, modeling and simulation, control, dynamics, protection, reliability, diagnosis and event analysis of low-inertia, distributed and inverter-dominated power systems; and electrified transportation. Dr. Ropp is passionate about the education of future electrical engineers and engages in education, mentorship and outreach whenever possible. He does occasionally still get to use his musical skills.



U.S. DEPARTMENT OF  
**ENERGY**





Charlie Vartanian is a Technical Advisor at the Pacific Northwest National Laboratory where he focuses on integration of energy storage with power systems. Charlie has 25 years of industry experience deploying advanced grid technologies, performing system studies, and contributing to standards development. Prior employers include Mitsubishi Electric, the California Energy Commission, and Southern California Edison. During his 15 years at SCE, his activities ranged from T&D planning through grid R&D.



David Rosewater is a Senior Member of the Technical Staff at the Sandia National Laboratories. He received a B.S. and an M.S. in electrical engineering from Montana Tech of the University of Montana, as well as a PhD in electrical and computer engineering from the University of Texas at Austin. His research interests include modeling and simulation, performance testing, safety, and standardization of battery energy storage systems. From 2009 to 2011, he worked at the Idaho National Laboratory developing advanced spectral impedance measurement techniques for hybrid vehicle battery cells. He is a Senior Member in the IEEE and currently chairs the IEEE P2686 working group developing a recommended practice for design and configuration of battery management systems in energy storage applications. David holds a professional engineering license in the state of New Mexico.



U.S. DEPARTMENT OF  
**ENERGY**

