

# NECPUC/DOE ENERGY STORAGE WEBINAR SERIES:

## Interconnection, Codes and Standards

May 21, 2021 12:00 PM – 2:00 PM (ET)

Agenda & Speaker Biographies

Presented by New England Conference of Public Utilities Commissioners,  
U.S. DOE Office of Electricity Energy Storage Program,  
Sandia National Labs, Pacific Northwest National Lab, and Clean Energy States Alliance

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

Energy storage is a key ingredient in helping the region meet our energy goals. Storage can play an important role in unleashing the power of renewables, relieving generation, transmission, and distribution demands, and hastening our energy transition to a cleaner future. To further our knowledge and share information, NECPUC 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, Sandia National Laboratories, and Pacific Northwest National Laboratory. Experts from the national labs, regional agencies and other organizations and institutions will provide content, with time for discussion and questions.

### May 21, 2021 – Interconnection, Codes and Standards

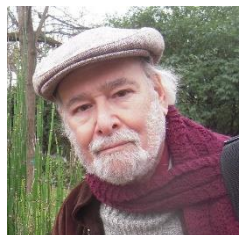
12:00 - 12:10	Introduction Dr. Imre Gyuk, Director, DOE Office of Electricity Energy Storage (ES) Program
12:10 - 1:00	Panel: Streamlining Interconnection Dr. Ryan Quint, North American Electric Reliability Council (NERC) Charlie Vartanian, Pacific Northwest National Laboratory (PNNL) Dr. Mike Ropp, Sandia National Laboratories (SNL)
1:00 - 1:15	Q&A / Discussion
1:15 - 1:45	Fire and Product Safety Codes (NFPA 855 & UL 9450) Matt Paiss, Pacific Northwest National Laboratory (PNNL)
1:45 - 2:00	Q&A / Discussion



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## 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.



Ryan Quint is a Senior Manager at the North American Electric Reliability Corporation where he supports the electric utility industry tackle emerging reliability risks and grid transformation topics for the bulk power system. Ryan leads a number of industry efforts focused on integrating inverter-based resources to the bulk power system, ensuring reliability with increasing amounts of distributed energy resources, and incorporating cybersecurity into traditional system planning, operations, and design practices. Ryan received his PhD from Virginia Tech and worked at the Bonneville Power Administration and Dominion Virginia Power prior to joining NERC in 2015.



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.



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.



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Matthew Paiss serves as a Technical Advisor in the Battery Materials & Systems group. Prior to joining PNNL, he was the President of Energy Response Solutions, Inc (a Training & Consultation). He brings 28 yrs of emergency response experience retiring as a Fire Captain with the San Jose CA Fire Department. His background in renewable energy started in 1982 at ARCO Solar in Camarillo, CA before studying Solar Technology and Fire Science in Santa Cruz, CA. Matt has 10 years' experience on RE Codes & Standards committees and currently serves on NFPA 855 Energy Storage Systems, UL Standards Technical Panels 9540, 1974, and IEC TC120. He served as a subject matter expert for the National Fire Protection Association on energy storage and has contributed to the model Fire Code sections on PV & ESS. He has delivered electrical safety training to over 8000 firefighters nationwide and has spoken across North America and in Europe on fire and PV/ESS safety.



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