

# 2020-21 NM ENERGY STORAGE WORKSHOP SERIES:

## ENERGY STORAGE FOR MEETING PEAK LOAD

### DEC. 8, 2020 AGENDA / SPEAKER BIOS / WEBINAR LINK

Presented by DOE Office of Electricity Energy Storage Program,  
in collaboration with the New Mexico Public Regulation Commission and Sandia National Laboratories

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MEETING WILL BE OPEN ½ HOUR EARLY SO YOU CAN TEST YOUR CONNECTIONS. IF YOU REGISTERED YOU WILL ALSO RECEIVE THIS MEETING LINK IN AN OUTLOOK INVITATION.

The Energy Transition Act of NM (NM ETA) requires the state's retail electricity sales to be carbon free by 2050. The New Mexico Public Regulation Commission (NM PRC) began meeting that objective recently when it unanimously approved a plan to replace the coal-fired San Juan Generating Station near Farmington, N.M., with 650 MW of photovoltaics (PV) and 300 MW of energy storage by 2022. These brief webinars will explore the energy storage and other technologies, and policies associated with them, necessary to achieve the NM ETA objectives, and to help inform regulators and policy makers, utilities, industry, and the public on the pathways to meeting them.

## December 8, 2020 - Battery Storage for Generation and Transmission Deferral

10:00 – 10:10	<b>Opening Comments</b> Dr. Imre Gyuk, Director, DOE Office of Electricity Energy Storage Program
10:10 – 10:30	<b>ES for Transmission and Distribution (T&amp;D) Deferral (the “Non Wires Alternative”.)</b> Hisham Othman, Quanta Technology
10:30 – 11:30	<b>ES for T&amp;D Deferral Panel: Regulatory Best Practices and Lessons Learned</b> Moderated by Dr. Hisham Othman  <b>Deploying Energy Storage as Transmission Assets</b> Robert McKee, Strategic Projects Director, American Transmission Company  <b>Energy Storage, A Tool In The Toolbox</b> Babak Enayati, Manager, Engineering and Technology Department, Asset Development, National Grid  <b>Storage as a T&amp;D Investment Deferral Option</b> Chris Root, Chief Operating Officer, Vermont Electric Power Company  <b>Non-Wire Alternatives: Challenges and Opportunities</b> Samrat Datta, Director, Advanced Network Planning, Entergy
11:30 – 11:50	<b>ES for T&amp;D Deferral – the NM Policy Perspective</b> Jeremy Twitchell, Pacific Northwest National Laboratory
11:50 – Noon	<b>Q&amp;A/Discussion</b>



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 Award, and Lifetime Achievement Awards from ESA and NAATBatt. He is internationally recognized as a leader in the energy storage field.



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## DECEMBER 8, 2020 - SPEAKERS, CONTINUED



Hisham Othman leads the transmission and regulatory compliance consulting practice at Quanta Technology providing technical and economic advisory services supporting regulated utilities, energy developers, and RTOs to address their evolving and challenging business needs. Prior to joining Quanta Technology, Hisham spent 5 years in the Renewable Energy industry with SunEdison, and as CTO to Petra Solar, working on innovative approaches to grid integration, hybrid solutions, energy storage, and smart grids. Additionally, Hisham held leadership roles with global technology providers, ABB and GE, in the US and Internationally, delivering pioneering Network Management and Infrastructure solutions. Throughout his career, Hisham was fortunate to work with leading teams that introduced the Thyristor-Controlled Series Capacitor, Implemented the first ISO/RTO operational and business IT system in the US, Implemented the largest distributed 40MW solar system on utility poles in the World, designed and implemented a high penetration fuel abatement solar-diesel system, and extensively modeled, analyzed, and invested in energy storage applications. Hisham continues his journey advising clients on prudent investment options in energy storage. Hisham holds a PhD in Electrical Engineering from the University of Illinois at Urbana-Champaign.



Bob McKee is Strategic Projects Director for American Transmission Company (ATC), a stand-alone transmission company based in Wisconsin. In this role, Bob leads the development, evaluation and execution of strategic and innovative initiatives, such as adopting new types of technologies and assets and offering new services. Prior roles include leading ATC's Federal Regulatory Relations & Policy function and the team in Transmission Planning focused on regional planning. Bob has held several leadership positions in the Midcontinent Independent System Operator (MISO) stakeholder process, including serving as Chair of the Planning Advisory Committee, and is a past president of the WIRES trade organization. Bob holds an MBA from the University of Wisconsin - Madison, a Ph.D. in political science from the University of Illinois at Chicago, and a BA in journalism and political science from Eastern Illinois University.



Babak Enayati received his PhD in Electrical Engineering from Clarkson University, USA in 2009. He joined National Grid, USA in 2009 and is currently the Manager of the Technology Deployment team, which is responsible for the implementation of the new technologies to meet National Grid's Intelligent Transmission Network objectives. Since Babak joined National Grid, he has held engineering positions in the Protection Engineering, Retail Connections Engineering, and New Energy Solutions departments. Babak is a registered Professional Engineer (PE) in the state of Massachusetts.



Mr. Chris Root has over 30 years of utility operations and engineering leadership experience. He is currently the Chief Operating Officer for Vermont Electric Power Company in Rutland, Vermont, USA. He is responsible for the engineering, construction and operation of the transmission system in the state of Vermont, USA. Previously, he was the Senior Vice President at National Grid USA. He held many leadership roles in Transmission and Distribution Operations, Engineering and Construction for operations in four Northeastern US states. Mr. Root has a BS in Electrical Engineering from Northeastern University and a MEng in Electric Power Engineering from Rensselaer Polytechnic Institute. He attended the Program for Management Development at the Harvard Business School. Mr. Root is a registered Professional Engineer in the states of MA and RI. He is a member of the CIGRE US National Committee and a Senior Member of IEEE.



Samrat Datta is the Director, Advanced Network Planning at Entergy. He is responsible for identifying non-traditional solutions to Transmission and Distribution system constraints and for the administration of interconnections to the Distribution system. His areas of interest include integrated grid planning, smart grid technologies, demand-side and distributed energy resource management, non-wire alternative solutions, and economic transmission planning. Prior to his current role, he worked in various positions in Transmission Planning. He has a B.S.E.E. degree from Nagpur University, India, and a M.S.E.E. degree from the University of Texas at Austin. He is a Senior member of the IEEE and a registered Professional Engineer in the state of Mississippi.



Jeremy Twitchell is an energy research analyst at the Pacific Northwest National Laboratory, where he leads the equitable regulatory environment area of the PNNL Energy Storage Program and assists in distribution system planning research. In those roles, he is responsible for reaching out to states to provide technical assistance in analyzing energy storage and other developing energy resources and incorporating them into utility planning and procurement activities. Prior to joining PNNL, Jeremy spent five years at the Washington Utilities and Transportation Commission, where he was the staff lead for the development of policies associated with the treatment of energy storage in utility resource planning and rulemaking. His work has supported integrated resource planning, which included development of a distribution planning rule. He participated in multiple utility advisory groups on energy efficiency and resource planning, provided expert testimony in the areas of rate design and resource acquisition, and oversaw renewable resource portfolio standard compliance. He also testified before the Washington State Legislature and prepared a report to the Legislature on best practices in distribution system planning. He has presented on the topics of energy storage, renewable resource portfolio standards, and renewable resource integration at regional, national, and international conferences.