## NEW JERSEY BPU/DOE/SNL/PNNL ENERGY STORAGE WEBINAR SERIES:

# Energy Storage and Overburdened Communities, Peak Shaving, and Peaker Replacement

## March 8, 2021 1:00 PM – 4:00 PM (EST)

**Agenda & Speaker Biographies**

**Presented by New Jersey Board of Public Utilities,**
**U.S. DOE Office of Electricity Energy Storage Program, Sandia National Labs, and Pacific Northwest National Lab**

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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. New Jersey Board of Public Utilities Commissioners and Staff are invited to participate in a series of energy storage webinars planned by BPU Staff and 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, NGOs, utilities, and other organizations and institutions will provide content. The goal of the webinar series is to help advance the energy storage market in New Jersey.

**March 8, 2021 - Energy Storage and Overburdened Communities, Peak Shaving, and Peaker Replacement**

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| 1:00 – 1:10 | Introductory Comments<br>Dr. Imre Gyuk, Director, DOE Office of Electricity Energy Storage (OE ES) Program |
| 1:10 – 1:25 | Role of ES in Supporting Overburdened Communities<br>Crystal Pruitt, New Jersey BPU, Dep. Director for Clean Energy Equity |
| 1:25 – 2:20 | Panel Discussion – Overview of ES Programs in CA, NY, MA, with Emphasis on Overburdened Communities<br>Moderator: Rebecca O'Neil, Pacific Northwest National Laboratory (PNNL)<br>Panelists: Mike Gravely, California Energy Commission (CEC)<br>Todd Olinsky-Paul, Clean Energy State Alliance (CESA)<br>Denise Sheehan, New York Battery and Energy Storage Technology Consortium (NY-BEST) |
| 2:20 – 2:30 | Q&A / Discussion |
| 2:30 – 2:40 | Break |
| 2:40 – 3:20 | Self Generation Incentive Program (SGIP), Watt Time, and Getting GHGs out of ES<br>Brian Bishop, Pacific Gas & Electric (PG&E)<br>Gavin McCormick, WattTime |
| 3:20 – 3:50 | MN, AZ, TX, CA Policies Supporting ES for Peaker Plants, and Impacts on Overburdened Communities<br>Will McNamara, Sandia National Laboratories (SNL) |
| 3:50 – 4:00 | Q&A / Discussion |

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

Ms. Pruitt joins NJBPU after serving as Chief of Staff for New Jersey State Assemblyman Andrew Zwicker, where she focused on energy issues. A graduate of North Carolina State University and John Jay College of Criminal Justice, Ms. Pruitt transitioned to government work in 2017 as Director of Constituent Relations and Community Outreach for Assemblyman Zwicker. She moved into the Murphy Administration to work as Legislative Liaison for the New Jersey Department of Human Services before returning to the Legislative Branch as Chief of Staff to Assemblyman Zwicker.

Ms. Pruitt's strong commitment to social justice, behavioral health, and criminal justice inform both her personal and professional pursuits. She works with organizations to help women secure access to reproductive health services, serves on the New Jersey Office of the Attorney General's CLEAR (Community-Law Enforcement Affirmative Relations) Institute workgroup, and the Workgroup on Harassment, Sexual Assault and Misogyny in NJ Politics.

Ms. Rebecca O'Neil is an advisor for Pacific Northwest National Laboratory. In her career at the Laboratory, she has served as the lab relationship manager for the US DOE EERE Renewable Energy portfolio, served a rotation into the U.S. Department of Energy's Water Power Technologies Office to develop a hydropower-grid research program, and led the regulatory area for energy storage. Her research interests relate to energy justice, energy storage, community-scale innovation, sustainable hydropower and marine energy development. She joined PNNL in 2015 from the Oregon Department of Energy, where she represented the agency on water power development, oversaw the state renewable portfolio standard, and ran a multi-million-dollar portfolio of federal grants ranging from renewable energy feasibility studies, agricultural efficiency measures, energy assurance, and woodstove replacement programs. Before her state service, she managed the multifamily energy efficiency program for the Energy Trust of Oregon, administering incentives to drive upgrades in multifamily dwellings. For years, Rebecca represented a coalition of river conservation and recreation organizations in federal hydropower dam licensing, becoming a recognized and published expert in the regulatory process and the relationship

between hydropower operations and environmental effects. She serves on multiple organizational boards and advisory groups related to renewable energy. Unrelated to energy, Rebecca has served as an AmeriCorps-VISTA teaching childhood literacy in rural Kentucky. As a Wagoner Scholar, she conducted Honors work in Cape Town, South Africa, producing a thesis on the role of literacy in manumission. She is a civilian advisory graduate of the National Security Seminar at the U.S. Army War College in Carlisle, Pennsylvania. She earned a B.A. from Rice University in Houston.

Mike Gravely is the Office Manager and Senior Electrical Engineer for the Energy Systems Research Office at the California Energy Commission. His Office is managing over $300 million in microgrid, energy storage and related energy research and demonstration projects. In this role, he oversees the full spectrum of research activities to improve the California Electric Grid including assessing future energy storage needs for California, determining the benefit and value of microgrids and distributed energy resources, addressing the grid related issues associated with integrating higher concentrations of renewables, and addressing natural gas infrastructure safety and reliability. His team oversees over 30 active microgrid research projects that represents a full spectrum of field applications of microgrids including critical facilities, key community emergency response operations, military operations and supporting the needs of the state's underserved communities. In 2020, the Energy Commission awarded over $100 million in state funds and vendor cost-share investments to over 25 new grants to complete research and demonstration projects with new and emerging energy storage technologies. This research focuses on customer-side of the meter applications, green hydrogen storage, long-duration storage, and supporting the energy needs of low-income and disadvantaged communities. One key area of this research is focused on understanding the capability and value of long duration energy storage solutions (from 10 hours to 100+ hours) to assist California in transitioning to the goal of 100 percent zero-carbon resources by December 31, 2045. Mike Gravely has a BSEE from the Virginia Military Institute and an MSEE from California State University at Sacramento. Prior to the Energy Commission, Mike served in executive positions in the Federal Government and private industry including addressing the business challenges of a startup energy storage company. Mike also serves as the Military Advisor to the Chair of the California Energy Commission. As Military Advisor he leverages his over 22 years of military service to coordinate Energy Commission activities with the Department of Defense bases in California.

Todd Olinsky-Paul is senior project director for Clean Energy Group and Clean Energy States Alliance (CESA). Todd directs the Energy Storage Technology Advancement Partnership (ESTAP), a federal-state funding and information sharing project funded by US DOE Office of Electricity and conducted through a contract with Sandia National Laboratories. ESTAP aims to accelerate the deployment of electrical energy storage technologies in the United States. Todd also works with state energy agencies to advance state energy storage policy, programs and regulation.

Denise Sheehan serves as a Senior Advisor to the New York Battery and Energy Storage Technology Consortium (NY-BEST). In her role, Ms. Sheehan provides advice and assistance on NY-BEST's strategic direction, policy issues, and operational management, including member relations, communications, and program development. Ms. Sheehan has more than 30 years of management experience in the government and non-profit sectors. She previously served for 10 years at the New York State Department of Environmental Conservation, including two years as Commissioner, where she oversaw the operations of the State's chief environmental regulatory agency. Ms. Sheehan also served as the Executive Director of The Climate Registry, an international non-profit membership organization focused on assisting companies in reducing their carbon emissions and becoming more sustainable. Her experience also includes 10 years at the NYS Division of the Budget where she was responsible for overseeing the State's environmental and energy budgets.

Brian Bishop has been with PG&E for 8 years managing the California Solar Initiative Thermal Program, as a Principal on the Public Safety Power Shutoff PMO team, and leading the Self-Generation Incentive Program. Under Brian's leadership SGIP has evolved from a focus on generation to a focus on overburdened communities, greenhouse gas emission reduction, wildfire mitigation and resiliency. Before joining PG&E Brian spent many years in the solar industry deploying residential solar projects on the west coast. Brian has a 'green' MBA, a MA in Environmental Science and Geography, and is from Albany-Berkeley CA.

Gavin McCormick is Executive Director of WattTime, a nonprofit devoted to enabling IoT devices to time their electricity use to cleaner moments. While a PhD student in energy econometrics at UC Berkeley, Gavin invented the first algorithms to empirically detect electricity marginal emissions in real time, making Automated Emissions Reduction (AER) technology possible. He also serves as the electricity lead for Climate TRACE, a coalition of environmental groups applying artificial intelligence to satellite imagery to monitor global GHG emissions from space. Gavin has been named a Grist 50 "Fixer", Echoing Green Fellow, Draper Richard Kaplan entrepreneur, Fast Forward Fellow, and Keeling Curve Prize winner. He previously worked at the US Pacific Northwest National Lab and NERA Economic Consulting, and is a graduate of Williams College.

Will McNamara serves as Grid Energy Storage Policy Analyst for Sandia National Laboratories with a focus on energy storage policy development at the federal and state levels. Will has spent his entire 23-year career in the energy and utilities industry with a concentration on regulatory and legislative policy. He has served as a lobbyist in California and has represented major utilities across the U.S. in numerous jurisdictions in proceedings pertaining to integrated resource planning, procurement, cost recovery, rate design, and the development of policymaking best practices. Will's areas of subject matter expertise, in addition to energy storage policy, include distributed energy resources, AMI/smart grid, renewables, and competitive retail markets.