

Peer Review 2020 AGENDA

Below is the agenda for this year's Peer Review event. Each day includes two roundtables and two keynote talks featuring national experts from energy storage and related topics. Presentations will be available to view and/or download from this page on September 22.

Tuesday, September 29, 10am – 5pm ET

<i>Time</i>	<i>Presentation</i>	<i>Presenter</i>	<i>Organization</i>
10:00 – 10:05 AM	Welcome, and Webinar Details	Howard Passell	SNL, Peer Review Coordinator
10:05 – 10:15 AM	Welcome	Carol Adkins	Director, Secure Energy and Earth Systems Center, SNNL
10:15 – 10:25 AM	Welcome	Imre Gyuk	Director, DOE Office of Electricity Energy Storage Program
10:25 – 10:40 AM	Welcome	Bruce Walker	Assistant Secretary, DOE Office of Electricity
10:40 – 10:50 AM	SNL Introduction	Babu Chalamala	SNL Energy Storage Program
10:50 – 11:00 AM	PNNL Introduction	Vince Sprenkle	PNNL Energy Storage Program
11:00 – 11:10 AM	ORNL Introduction	Michael Starke	ORNL Energy Storage Program
11:10 – 11:40 AM	Keynote Speaker	Mike Gravely	Team Leader, Energy Research and Development Division, California Energy Commission
11:40 AM – 12:00 PM	Session Summary — Power Electronics	Stan Atcitty	SNL
12:00 – 12:15 PM	Efficient Power Electronics Enabled by 3.3kV Silicon Carbide Switches	Ranbir Singh	GeneSiC Semiconductor

12:15 – 12:30 PM	GaN Enabled Efficient Plug-And-Play Battery Energy Storage System	Alex Huang	UT Austin
12:30 – 12:45 PM	GaN-Based Inverters for Grid-Tied Energy Storage Systems	Medhi Ferdowsi	Innocit
12:45 – 01:00 PM	Break		
01:00 – 01:40 PM	Roundtable — Grid Modernization	Charlie Hanley	Senior Manager, Grid Modernization, SNL
01:40 – 01:55 PM	Reliability Studies of Wide-Bandgap Power Semiconductor Devices Under Realistic Stress Conditions	Robert Kaplar	SNL
01:55 – 02:10 PM	Predicting Reliability, Improving Safety and Resiliency in Grid Connected Battery Energy Storage Systems	Raja Kaushik	University of Houston
02:10 – 02:25 PM	Development of a 100kW Secondary Use Energy Storage System	Michael Starke	ORNL
02:25 – 02:40 PM	Break		
02:40 – 03:20 PM	Roundtable — Innovative Projects	Ben Schenkman	R&D Electrical Engineer, SNL
03:20 – 03:40 PM	Session Summary — Reliability, Codes, & Standards	Charlie Vartanian	Senior Technical Advisor, PNNL
03:40 – 03:55 PM	Li-Ion Battery State of Health Electrothermal Model	Alasdair Crawford	PNNL
03:55 – 04:10 PM	Reliability Assessment of Li-Ion Battery Single Cells Under Grid Services	Daiwon Choi	PNNL
04:10 – 04:25 PM	Reliability Performance Testing of kW Scale Modules at PNNL	Ed Thomsen	PNNL
04:25 – 04:40 PM	EPRI/PNNL Reliability Data Project Update	Steve Willard	EPRI/PNNL

04:40 – 05:10 PM	Keynote Speaker	Lola Infante	Senior Advisor, External Relations and Strategic Initiatives Electric Power Research Institute (EPRI)
05:10 – 05:15 PM	Wrap-Up	Imre Gyuk	Director, DOE OE ES Programs
05:15 PM	Adjourn		

Wednesday, September 30, 10am – 5:45pm ET

<i>Time</i>	<i>Presentation</i>	<i>Presenter</i>	<i>Organization</i>
10:00 – 10:05 AM	Welcome and Day 1 Recap	Imre Gyuk	Director, DOE Office of Electricity Energy Storage Program
10:05 – 10:35 AM	Keynote Speaker	Kelly Speakes-Backman	Chief Executive Officer Energy Storage Association (ESA)
10:35 – 10:55 AM	Session Summary — Safety	Joshua Lamb	Principal Member of the Technical Staff, SNL
10:55 – 11:10 AM	Development of Thermal Runaway Risk Database	Hsin Wang	ORNL
11:10 – 11:25 AM	Material Science-Based Predictions of Single-Cell Thermal Failures	Randy Shurtz	SNL
11:25 – 11:40 AM	Long Term Safety and Reliability of Li-Ion Cells	Yuliya Preger	SNL
11:40 – 11:55 AM	Energy Storage Safety Collaborative – Update 2020	Matt Paiss	PNNL
11:55 AM – 12:10 PM	Break		
12:10 – 12:50 PM	Roundtable — Beyond Li-Ion, and Long Duration Storage	Imre Gyuk	Director, DOE Office of Electricity Energy Storage Program

12:50 – 01:05 PM	Thermal Analysis to Mitigate Cascading Propagation of Lithium-Ion Cell Stacks	John Hewson	SNL
01:05 – 01:20 PM	Mitigation of Failure Propagation Through Active Cooling: A Model Based Experimental Design	Loraine Torres-Castro	SNL
01:20 – 01:35 PM	System Level Safety Design and Planning	David Rosewater	SNL
01:35 – 01:55 PM	Session Summary — Equitable Regulatory Environment	Jeremy Twitchell	Energy Research Analyst, PNNL
01:55 – 02:10 PM	Regulatory Commission Engagement	Howard Passell	SNL
02:10 – 02:25 PM	Policy Analysis	Will McNamara	SNL
02:25 – 02:40 PM	Break		
02:40 – 03:20 PM	Roundtable — The Technology-Policy Nexus	Will McNamara/ Jeremy Twitchell	Grid Energy Storage Analyst, SNL/Energy Research Analyst, PNNL
03:20 – 03:40 PM	Session Summary — Zinc Batteries	Timothy Lambert	SNL
03:40 – 03:55 PM	From Concept Through Product to Market: Rechargeable Zinc Manganese Dioxide Batteries	Sanjoy Banerjee	CCNY
03:55 – 04:10 PM	Engineering an Aqueous Energy Dense Manganese Dioxide Zinc Battery to Challenge Lithium- Ion's Dominance	Yadav Gautam	UEP
04:10 – 04:25 PM	Operando Studies to Enumerate the Electrochemical Phase Transformations of MnO₂	Joshua Gallaway	Northeastern University
04:25 – 04:40 PM	Advanced Aqueous Zn Batteries	Xiaolin Li	PNNL
04:40 – 04:55 PM	Mechanistic Probes of Zinc Anode Aqueous Electrolyte Batteries	Esther Takeuchi	Stony Brook University

04:55 – 05:25 PM	Keynote Speaker	Bill Acker	Executive Director, NY Battery and Energy Storage Technology Consortium (NY-BEST)
05:25 – 05:30 PM	Wrap-Up	Imre Gyuk	Director, DOE Office of Electricity Energy Storage Program
05:30 PM	Adjourn		

Thursday, October 1, 10am – 6:30pm ET

<i>Time</i>	<i>Presentation</i>	<i>Presenter</i>	<i>Organization</i>
10:00 – 10:05 AM	Welcome and Day 2 Recap	Imre Gyuk	Director, DOE Office of Electricity Energy Storage Program
10:05 – 10:35 AM	Keynote Speaker	Terry Boston	Director, Grid Protection Alliance
10:35 – 10:55 AM	Session Summary — Flow Batteries	Wei Wang	Chief Scientist, PNNL
10:55 – 11:10 AM	Higher Voltage Iron Bipyridines for Non-Aqueous Redox Flow Battery	Travis Anderson	SNL
11:10 – 11:25 AM	Phenazine-Based Anolyte Materials in Aqueous Redox Flow Batteries	Aaron Hollas	PNNL
11:25 – 11:40 AM	Ambient Temperature Non-Aqueous Sulfide Based Redox Flow Batteries and Membrane Development	Jagjit Nanda	Jagjit Nanda
11:40 – 11:55 AM	Advanced Membranes for Flow Batteries	Cy Fujimoto	SNL
11:55 AM – 12:10 PM	Towards Building Optimal Electrolytes for Pb-Acid Battery Through Tunable Solvation Chemistry	Vijayakumar Murugesan	PNNL
12:10 – 12:25 PM	Break		

12:25 – 01:05 PM	<u>Roundtable — Electrification</u>	Richard Fioravanti	Director, Transportation Electrification, Quanta Technology
01:05 – 01:20 PM	<u>Flow Battery Capacity Fade and Power Density With Redox-Active Aqueous-Soluble Organics</u>	Michael Aziz	Harvard/PNNL
01:20 – 01:35 PM	<u>Probing Components and Durability in Redox Flow Batteries</u>	Tom Zawodzinski	ORNL
01:35 – 01:55 PM	<u>Session Summary — Sodium Batteries</u>	Erik Spoeerke	Energy Storage Materials Thrust Lead, SNL
01:55 – 02:10 PM	<u>Low Temperature Molten Sodium Batteries</u>	Leo Small	SNL
02:10 – 02:25 PM	<u>Multi-Scale Characterization of the Structure and Mechanical Properties of Sodium Ion Conductors</u>	Ryan Hill	University of Kentucky
02:25 – 02:40 PM	Break		
02:40 – 02:55 PM	<u>Advanced Intermediate Temperature Sodium-Metal Halide (Na-Mh) Batteries for Grid Storage Application</u>	Guosheng Li	PNNL
02:55 – 03:10 PM	<u>Advanced Na-Ion Battery: Progress Towards Co-Free Cathodes</u>	Biwei Xiao	PNNL
03:10 – 03:25 PM	<u>Engineering Routes Towards Synthesis and Performance of Layered Oxide Cathode Materials for Sodium-Ion Batteries</u>	David Wood	ORNL
03:25 – 03:40 PM	<u>Perspectives and Strategies of Developing Long Duration and Seasonal Energy Storage Technologies for Improving Grid Resiliency and Reliability</u>	Guosheng Li	PNNL
03:40 – 04:20 PM	<u>Roundtable — Recycling & Re-Use</u>	Jeffrey Spangenberg	Materials Recycling Group Leader, Argonne National Lab

04:20 – 04:40 PM	Session Summary — Analytics	Ray Byrne	SNL
04:40 – 04:55 PM	Evaluation of Energy Storage as Transmission Assets Storage	Tu Nguyen	SNL
04:55 – 05:10 PM	Energy Storage Finance Summits and Pricing Survey	Richard Baxter	Mustang Prairie Energy
05:10 – 05:25 PM	Sizing Behind-The-Meter Energy Storage and Solar for Electric Vehicle Fast-Charging Stations	Rodrigo Trevizan	SNL
05:25 – 05:40 PM	MASCORE: A Web-Based Tool for Microgrid Asset Sizing Considering Cost and Resilience	Di Wu	PNNL
05:40 – 05:55 PM	Realization of Energy Storage Economic Benefits: Managing Changes in Real Time	Jan Alam	PNNL
05:55 – 06:25 PM	Keynote Speaker	Ralph Masiello	Industry Advisor, Quanta Technology
06:25 – 06:30 PM	Wrap-Up	Imre Gyuk	Director, DOE Office of Electricity Energy Storage Program
06:30 PM	Adjourn		