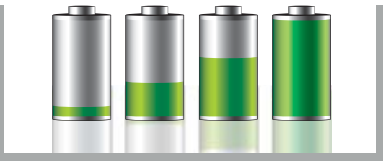
CONFERENCE PROGRAM

CHARGING THE FUTURE



EES NORTH AMERICA CONFERENCE

JULY 10–12, 2017
SAN FRANCISCO, USA

ees® NORTH AMERICA

www.ees-northamerica.com

CONTENTS

CONFERENCE PROGRAM

EXHIBITION PROGRAM & SPECIAL EVENTS

CONFERENCE QUICK FACTS

Dates	July 10–12, 2017	
Hours	Monday	9am–7pm
	Tuesday & Wednesday	9am–6pm
Venue	InterContinental Hotel	
	888 Howard Street, SF, CA 94103	
	Conference Area: Levels 3–5	

Speakers	70+
Attendees	1,500+
Program	→ www.ees-northamerica.com → Program
Registration	→ www.ees-northamerica.com → Registration

ORGANIZERS

SOLAR PROMOTION INTERNATIONAL

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Mobile App

The ees and Intersolar Mobile App is your on-the-go guide for ees and Intersolar North America 2017. Access detailed floor plans, exhibitor descriptions, and information on accompanying exhibition and conference programs straight from your mobile device. Download the ees ans Intersolar at → www.ees-events.com/app

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CALIFORNIA SOLAR ENERGY INDUSTRIES ASSOCIATION

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EES NORTH AMERICA CONFERENCE

Location: InterContinental Hotel

WORKSHOPS AT INTERCONTINENTAL HOTEL

WORKSHOPS AT MOSCONE CENTER

Monday, July 10, 2017

	EES NORTH AMERICA CONFERENCE	WORKSHOPS AT INTERCONTINENTAL HOTEL	WORKSHOPS AT MOSCONE CENTER	
9:00am–10:30am	Energy Storage in the Golden State			
Coffee				
11:00am–12:30pm	Islands, Mini-Grids, Microgrids and Energy Storage			
Lunch				
1:30pm–3:00pm	Financing Energy Storage Projects			
Coffee				
3:30pm–5:00pm	Monetizing the Value of Behind-the-Meter Storage			
5:30pm–7:00pm	Official Opening Ceremony (InterContinental Hotel)			
7:00pm	Welcome Reception (Pacific Terrace)			

Tuesday, July 11, 2017

	EES NORTH AMERICA CONFERENCE	WORKSHOPS AT INTERCONTINENTAL HOTEL	WORKSHOPS AT MOSCONE CENTER	
			Workshop Room I (9030)	Workshop Room II (3012)
9:00am–10:45am	Energy Storage Safety and Reliability			
Coffee				
11:15am–1:00pm	Energy Storage O&M: Who Fixes the Battery When it Breaks?			
Lunch				
2:00pm–3:45pm	Long-Term Storage Solutions	Designing PV Systems with Energy Storage	10:00am–5:00pm	CALSEIA´s Contractor Day
Coffee				
4:15pm–6:00pm	Using Storage to Enable Vehicle Charging			
5:00pm	Summerfest (AT&T Park)			

Wednesday, July 12, 2017

	EES NORTH AMERICA CONFERENCE	WORKSHOPS AT INTERCONTINENTAL HOTEL	WORKSHOPS AT MOSCONE CENTER	
			Track 1: Roof Top	Track 2: Energy Storage, Inverter & Matchmaking Software
9:00am–10:45am			10:15am–12:15pm	Quick Mount PV / eGauge Systems
Coffee				
11:15am–1:00pm	Storage & Standards		12:45pm–2:45pm	Roof Tech Inc. *1 hour training* / Magnum Energy/A Product Brand of Sensata Technologies
			3:00pm–5:00pm	SolarEdge Technologies / Trojan Battery Company

Thursday,z July 13, 2017

	EES NORTH AMERICA CONFERENCE	WORKSHOPS AT INTERCONTINENTAL HOTEL	WORKSHOPS AT MOSCONE CENTER	
			Track 1: Roof Top	Track 2: Energy Storage, Inverter & Matchmaking Software
10:15am–12:15pm			10:15am–12:15pm	SolarRoofHook / APsystems
12:45pm–2:45pm			12:45pm–2:45pm	Sofdesk Inc.

Subject to change

PRICING EES NORTH AMERICA

Conference Packages	On-site July 8–13
Full Conference Package	$1,095
Conference Day Ticket	$575
Exhibition Ticket	$200
Solar Summerfest	$150
Workshop Tickets InterContinental Hotel	
Full Day Workshop	$575
Half Day Workshop	$335
Solar Codes and Safety Forum	$100
Solar Heating & Cooling – Changing your Climate, not the Planet's[1]	$195
Combo Ticket: Solar Heating & Cooling – Changing your Climate, not the Planet's[2]	$295

The Full Conference Pass includes all Intersolar & ees sessions and the Summerfest ticket plus catering (coffee breaks/lunches) on all 3 conference days. Conference Day Tickets are sessions (Intersolar & ees) only of the day(s) selected. Any conference registration grants you full access to the expo halls, Opening Ceremony and Welcome Reception. Your Workshop ticket inludes catering (coffee breaks/lunches) and grants your full access to the expo halls.
1 includes Exhibition Ticket
2 includes Exhibition Ticket and Summerfest

WORKSHOP PRICING

Workshop Tickets Moscone Center	Price
Installation Workshop Package (by NABCEP)[1]	$95
Installer Advantage Package[2]	$375
Single Workshop Tickets	**Price**
CALSEIA's Contractor Day	$200

Any workshop registration grants you full access to the Expo Halls, Opening Ceremony and Welcome Reception at the Intercontinental Hotel.
1 includes access to series of technical trainings and hands-on product workshops (by NABCEP & exhibiting companies).
2 includes Installation Workshop Package, Contractor Day, Solar Summerfest and exhibiton ticket.

WORKSHOPS AT INTERCONTINENTAL HOTEL

Monday, July 10, 2017

9:00am–5:00pm	National Electric Code PV	Field Applications of PV Operations and Maintenance	

Tuesday, July 11, 2017

9:00am–1:00pm		Megawatt-scale PV: Design Considerations and Installation Case Studies	
2:00pm–6:00pm	Designing PV Systems with Energy Storage		

Wednesday, July 12, 2017

9:00am–1:00pm	The Post Net-Metered PV World: New Opportunities	Solar Codes and Safety Forum	Solar Heating & Cooling – Changing your Climate, not the Planet's
2:00pm–6:00pm	PV Technical Sales: The Business and Finance of Residential Solar		

Thursday, July 13, 2017

9:00am–5:00pm	Spanish: Prácticas Recomendadas de Instalaciónes de Sistemas FV Conectados a la Red

Subject to change

WORKSHOP PRICING

Workshop Tickets	Price
Full Day Workshop	$575
Half Day Workshop	$335
Solar Codes and Safety Forum	$100
Solar Heating & Cooling – Changing your Climate, not the Planet's[1]	$195
Combo Ticket: Solar Heating & Cooling – Changing your Climate, not the Planet's[2]	$295

Your Workshop ticket inludes catering (coffee breaks/lunches) and grants your full access to the expo halls.
1 includes Exhibition Ticket
2 includes Exhibition Ticket and Summerfest

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Time 9:00am–10:30am
Room
Grand Ballroom B
InterContinental Hotel

ENERGY STORAGE IN THE GOLDEN STATE

Summary
California has long been the most dynamic storage market in North America and will increasingly be relied upon to provide national leadership on storage and renewable energy issues. This panel will discuss the programs, incentives and mandates that California has used to build its leadership in energy storage. Panelists will present case studies by commercial entities operating in California describing how they have been able to take advantage of the unique opportunities the state provides. The do's and the don'ts of how to work with California public and quasi-public entities in building out an energy storage business will be described.

9:00am Welcome and Introduction
Danny Kennedy, President, CalCharge, U.S.

9:05am Energy Storage – Real World Case Studies
Bob Rudd, Director, Energy Storage & Microgrids, Tesla Motors, U.S.

9:30am ARPAe CHARGES Energy Storage Testing Project
William Torre, PI, UCSD Program Director of Energy Storage, University of California, U.S.

9:55am Residential Energy Storage Sector in the U.S.
Boris von Bormann, Mercedes-Benz Energy Americas LLC, A Daimler Company, U.S.


Danny Kennedy


Bob Rudd


William Torre


Boris von Bormann

Time 11:00am–12:30pm
Room
Grand Ballroom B
InterContinental Hotel

ISLANDS, MINI-GRIDS, MICROGRIDS AND ENERGY STORAGE

Summary
Energy storage technology is a critical resource for ensuring the reliability of islanded power systems. Islanded power systems come in all sizes and varieties, from true islands, to mini-grids and private microgrids. This panel will discuss the growing interest of power designers in islanded power systems and the factors that are driving that interest. The role of storage in islanded power systems will be discussed as well as the unique storage needs of different types of systems. The panel will feature commercial entities that specialize in providing storage resource to islands, mini-grid and microgrids and explore the features of their products that make them well-suited to islanded power applications.

11:00am Welcome and Introduction
Dr. Marco Mangelsdorf, President, ProVision Solar Inc., U.S.

11:05am Energy Storage as the Brigde to Resilient & Sustainable Micogrids
Troy Miller, Director, Grid Solutions, S&C Electric Company, U.S.

11:20am Advanced Multi-Resource Microgrid Project Delivers Real Value on Both Sides of The Utility Meter In Brooklyn
Doug Staker, VP, Global Business & Market Development, Demand Energy Networks, U.S.

11:35am Solar+Storage and the Future of Critical Load Support for Municipalities, Universities, Schools, and Hospitals
John Merritt, Director of Applications Engineering, Ideal Power, Inc., U.S.

11:50am Energy Storage Experiences and Project Management
Kevin Fok, Senior Project Manager, LG Chem, U.S.

12:05pm New Battery Technology Fills the Long-Duration Storage Gap for Renewables
Dr. Ramkumar Krishnan, Chief Technology Officer, Fluidic Energy, U.S.


Dr. Marco Mangelsdorf


Troy Miller


Doug Staker


John Merritt


Kevin Fok


Dr. Ramkumar Krishnan

FINANCING ENERGY STORAGE PROJECTS

Time 1:30pm–3:00pm
Room
Grand Ballroom B
InterContinental Hotel

1:30pm Welcome and Introduction
Dan Borneo, Engineering Program/Project Lead, Sandia National Laboratories, U.S.

1:35pm Managing Risk in Energy Storage Project Finance
Richard Baxter, President, Mustang Prairie Energy, U.S.

1:55pm Due Diligence for Financing Energy Storage Systems
Jon Previtali, Vice President Environmental Finance, Wells Fargo, U.S.

2:15pm How a "Traditional" Equipment Lease can Make Solar + Energy Storage Affordable and Profitable for Commercial & Industrial Companies
Stanley Fishbein, Managing Partner, CleanView Capital, LLC, U.S.

2:35pm Energy Storage Innovative Financing Models
Carl Mansfield, General Manager and Founder, ESSG, Sharp Electronics Corp., U.S.


Dan Borneo


Richard Baxter


Jon Previtali


Stanley Fishbein


Carl Mansfield

Summary
Building out a robust network of energy storage infrastructure will require a robust suite of financial products to support it. Leasing programs, project finance facilities and conventional loans will, among other products, have a place in financing different types of storage projects. This session will discuss the types of information and credit supports that lenders will need to advance funds against energy storage infrastructure. The extent to which storage financing structures may resemble or not resemble solar financing structures will be discussed. During the session opportunities for venture investors in the energy storage and advanced batteries sectors will also discussed.

MONETIZING THE VALUE OF BEHIND-THE-METER STORAGE

Time 3:30pm–5:00pm
Room
Grand Ballroom B
InterContinental Hotel

3:30pm Welcome and Introduction
Dr. Matthias Vetter, Head of Department PV Off-Grid Solutions and Battery System Technology, Fraunhofer Institute for Solar Energy Systems (ISE), Germany

3:35pm Value of Energy Storage under NEM 2.0 and NEM 3.0
Olaf Lohr, Director of Business Development, sonnen, Inc., U.S.

3:55pm Monetization of BTM Storage in a High PV Penetration Paradigm: Realities and Opportunities
Dr. Richard Perez, Research Professor,
Atmospheric Science Research Center (ASRC) of the State University of New York, U.S.

4:15pm Maximizing Benefit of Electrical Energy Storage for – Behind-the-meter Applications
Tu Nguyen, Electrical Engineering, Sandia National Laboratories, U.S.

4:35pm Initial Results from 1MW Energy Storage System Installation at an Industrial Facility in Syracuse, NY, Demonstrating Combined Behind-the-Meter and NYISO Services
Brad Fiebig, Product Manager Energy Storage, Lockheed Martin, U.S.

4:55pm Reducing Operating Costs and Increasing Resiliency for Low-Margin Commercial Applications Using Large Format, Thermal Energy Storage
Amrit Robbins, President and Co-Founder, Axiom Exergy, U.S.


Dr. Matthias Vetter


Olaf Lohr


Dr. Richard Perez


Tu Nguyen


Brad Fiebig


Amrit Robbins

Summary
The storage business is growing behind the meter, with commercial and industrial customers using storage technology to reduce their electricity charges, capture revenue and provide valuable services to employees and customers. This panel will examine ways that commercial and industrial customers can monetize the value of behind-the-meter storage, from demand charge management, to peak shaving, to ancillary services sales. Speakers will advise behind-the-meter storage customers on how to get the maximum value out of storage and how to "stack" the multiple benefits that storage owners can obtain from their systems.

Time 5:30pm–7:00pm
Room
Ballroom A–C, InterContinental Hotel

OFFICIAL OPENING CEREMONY

Summary
The official opening of the Intersolar North America Conference 2017 is comprised of welcome remarks and keynote speeches given by governmental officials and distinguished solar experts.

5:30pm Welcome Remarks
Bernadette Del Chiaro, Executive Director, California Solar Energy Industries Association (CALSEIA), U.S.

5:40pm Welcome Remarks
Prof. Dr. Eicke R. Weber, Director, BEARS Program, Singapore

5:50pm Intersolar Champion of Change AWARD Ceremony – Laudatio
Bernadette Del Chiaro, Executive Director, California Solar Energy Industries Association (CALSEIA), U.S.

6:10pm Intersolar Champion of Change
Richard Kauffmann, Chairman of Energy and Finance for New York, Office of New York Gov. Andrew Cuomo, U.S.

6:20pm Keynote Speaker
Jon Wellinghoff, Principal, Policy/DER Consulting, U.S.

6:30pm Keynote Speaker
Dr. Martin Keller, Director, National Renewable Energy Laboratory (NREL), U.S.

6:40pm Keynote Speaker
Elena Lucas, Chief Executive Officer & Co-founder, UtilityAPI, U.S.


Bernadette Del Chiaro


Prof. Dr. Eicke R. Weber


Richard Kauffmann


Jon Wellinghoff


Dr. Martin Keller


Elena Lucas

Time 7:00pm–9:30pm
Room
Level 4, Pacific Terrace InterContinental Hotel

WELCOME RECEPTION

Join us directly after the Opening Ceremony to celebrate the 10th Intersolar event at San Francisco! With drinks and appetizers at the Pacific Terrace (Intercontinental Hotel, Level 4) all conference attendees, visitors and exhibitors are invited to kick off the first conference day in a perfect venue for networking.


Greg Maguire
Andrew Tanner
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Time 9:00am–10:45am
Room
Grand Ballroom B
InterContinental Hotel

ENERGY STORAGE SAFETY AND RELIABILITY

Summary
The storage business is growing behind the meter, with commercial and industrial customers using storage technology to reduce their electricity charges, capture revenue and provide valuable services to employees and customers. This panel will examine ways that commercial and industrial customers can monetize the value of behind-the-meter storage, from demand charge management, to peak shaving, to ancillary services sales. Speakers will advise behind-the-meter storage customers on how to get the maximum value out of storage and how to "stack" the multiple benefits that storage owners can obtain from their systems.

9:00am Welcome and Introduction
Paula Mints, Founder, Chief Market Research Analyst, Solar PV Market Research, U.S.

9:05am Changing Scope for Regulators for Market Access for Distributed Generation
Timothy Zgonena, Principal Engineer for Distributed Energy Resources Equipment and Systems, UL LLC, U.S.

9:30am Lithium Ion Battery Innovation: Moving to Cobalt-Free Chemistry to Increase Safety, Reliability and Lifecycle of Energy Storage
Jordan Little, Application Engineers, SimpliPhi Power, Inc., U.S.

9:55am Lithium Iron Phosphate: The Safe, Reliable Chemistry to Usher in the Renewable Age
Brandon Williams, Founder and Chief Executive Officer, Iron Edison Battery Co., U.S.

10:20am Q&A Round


Paula Mints


Timothy Zgonena


Jordan Little


Brandon Williams

Time 11:15am–1:00pm
Room
Grand Ballroom B
InterContinental Hotel

ENERGY STORAGE O&M: WHO FIXES THE BATTERY WHEN IT BREAKS?

Summary
This panel would examine the growing market for energy storage system operations and maintenance. It will discuss the types of warranties currently given by battery manufacturers and highlight companies providing a range of O&M services to batteries both in front and behind the meter. End-of-life issues will also be discussed. Who is responsible for the safe disposal of high voltage ESS batteries? How are utilities reserving for that liability, if at all?

11:15am Welcome and Introduction
James J. Greenberger, Executive Director, NAATBatt International, U.S.

11:20am Planning For EES Maintenance, Repair and Decommissioning
Donald Karner, President, Electric Applications Incorporated, U.S.

11:45am Energy Storage: Lifecycle Management
Dave Mauer, Vice President Sales & Services, Renewance, U.S.

12:10pm Warranty Insurance for Energy Storage Systems: Underwriting A Project and the Key to Widespread Adoption of Stationary Storage
Virgil Beaston, Chief Technology Officer, Powin Energy, U.S.

12:35am Q&A Round


James J. Greenberger


Donald Karner


Virgil Beaston

LONG-TERM STORAGE SOLUTIONS

Time 2:00pm–3:45pm
Room
Grand Ballroom B
InterContinental Hotel

2:00pm Welcome and Introduction
2:05pm Energy Storage Evaluation in Cordova, Alaska
Benjamin Schenkman, Senior Member of Technical Staff, Sandia National Laboratories, U.S.
2:30pm Beyond 4 Hours: A Business Case for Long-Duration Energy Storage
Craig E. Evans, President, Chief Executive Officer and Founder, Ess Inc., U.S.
2:55pm Stacked Services with Energy Storage
Dr. Randell Johnson, Chief Analytics Officer, ALEVO Analytics, U.S.
3:20pm The Advantages of Zinc-Based Battery Chemistry in Long-Term Storage
Philippe Bouchard, Vice President of Business Development, Eos Energy Storage, U.S.


Craig E. Evans


Dr. Randell Johnson


Philippe Bouchard

Summary
Last year almost 85% of storage projects commissioned in the United States used lithium-ion battery technology. However, lithium-ion batteries have their limitations, particularly when it comes to providing cost effective long-term energy storage. For long-term storage, other technologies may one day surpass lithium-ion batteries as the medium of choice. This panel will look at two technologies that show promise for long-term storage applications: flow batteries and hydrogen storage. Speakers will explain flow battery technology and provide case studies in its use. Hydrogen technology, which has garnered substantial interest in Germany, will be discussed as a possible alternative to battery storage.

USING STORAGE TO ENABLE VEHICLE CHARGING

Time 4:15pm–6:00pm
Room
Grand Ballroom B
InterContinental Hotel

4:15pm Welcome and Introduction
James J. Greenberger, Executive Director, NAATBatt International, U.S.
4:20pm Mobile Energy Storage Enables New and Compelling Business Models
Torben Spitzer, VP of Product & Marketing, FreeWire Technologies, Inc., U.S.
4:45pm Creating Virtual Power Plants with Electric Vehicles
Preston Roper, Chief Operating Officer and CMO, eMotorWerks, U.S.
5:10pm The Role of Secondary Life Batteries in Stationary Energy Storage
Dirk Spiers, President, Energy Storage – Battery 4R – Logistics, U.S.
5:35am Q&A Round


James J. Greenberger


Torben Spitzer


Preston Roper


Dirk Spiers

Summary
This panel will discuss the role of stationary storage in enabling electric vehicles and the possible future role of electric vehicles in helping to stabilize the grid. Fast and extreme fast vehicle charging may soon become widespread. This panel will discuss the necessary role of stationary energy storage systems in both enabling fast charging and buffering the electricity grid from its otherwise potentially destabilizing effects. What the grid can do for cars, of course, cars can do for the grid. Panelists will discuss the prospects for V2G (vehicle to grid) systems, whereby idle electric vehicles can provide grid supporting, energy storage services. The panel will explore the prospects of and barriers to V2G technology.

Time 2:00pm–6:00pm
Room
InterCon Ballroom B, InterContinental Hotel

Workshop
Single Ticket: $335 (separate Registration required)

NABCEP CE – 3 hrs (Task Analysis: 3)

WORKSHOP: DESIGNING PV SYSTEMS WITH ENERGY STORAGE

Summary

The market demand for energy storage technologies presents new opportunities and varied applications, but battery-based system design and installation is a complex task. This course is an in-depth look at sizing systems and selecting components for residential battery-based applications. NEC 2014 requirements, best-practice design, and system maintenance strategies will be presented by instructors who have extensive experience designing, installing, and servicing battery-based PV systems.

Topics include:

- Determining the best system architecture to meet the objectives of a customer
- Considerations for implementing battery storage in PV system design
- Specific design parameters for different battery technologies

2:00pm Workshop: Designing PV Systems with Energy Storage
Carol Weis, PV Instructor, Solar Energy International (SEI), U.S.

Carol Weis

Partner

SOLAR ENERGY INTERNATIONAL

Time 11:15am–1:00pm
Room
Grand Ballroom B InterContinental Hotel

Summary
Data communication and the ability to integrate easily with Energy Management System software solutions are critical issues for energy storage manufacturers and integrators. This session will describe the ways in which energy storage is being integrated today, the challenges and barriers that integrators must overcome, and low-cost, standards-based approaches for addressing market needs.

STORAGE & STANDARDS

11:15am Advanced Grid Standards Around The World and Update on Control and Communications (IEEE 2030.5/SEP2) Protocols for DER Assets
Tom Tansy, Chairman, SunSpec Alliance, U.S.

11:30am Rule 21 interconnect, UL and IEE 1547 Updates
Timothy Zgonena, Principal Engineer for Distributed Energy Resources Equipment and Systems, UL LLC, U.S.

11:50am Introducing IEEE 2030.5: The Default Communication Protocol for CA Rule 21
Bob Fox, Principal Engineer, SunSpec Alliance, U.S.

12:10pm Advanced Grid Standards Around the World
Matthias Heinze, Director Business Development, TÜV Rheinland, U.S.

12:20pm Compliance Requirements for Stationary Energy Storage Systems
Ryan Franks, Business Manager, Global Energy Storage, CSA Group, U.S.

12:30pm LG Storage and Solar Implementation Case Study
Tilak Gopalnarathnam, Director, Technology Partnerships, LG Electronics, U.S.

12:45pm Panel Discussion

- Ryan Franks, Business Manager, Global Energy Storage, CSA Group, U.S.
- Tilak Gopalnarathnam, Director, Technology Partnerships, LG Electronics, U.S.
- Matthias Heinze, Director Business Development, TÜV Rheinland, U.S.
- Tom Tansy, Chairman, SunSpec Alliance, U.S.
- Timothy Zgonena, Principal Engineer for Distributed Energy Resources Equipment and Systems, UL LLC, U.S.

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WORKSHOPS AT MOSCONE CENTER, INSTALLATION & PRODUCT WORKSHOPS

Presenter: Trojan Battery Company — 2 NABCEP CEUs

Deep-Cycle Battery Technologies, Proper Maintenance and System Selection for Renewable Energy Applications

Learn the basics of battery selection, battery technology types, system sizing and proper maintenance to achieve maximum performance from your deep-cycle battery investment. In addition, learn how Trojan Battery addresses the impact of Partial State of Charge (PSOC) on deep-cycle batteries in renewable energy applications. Trojan Battery manufactures a complete line of true deep-cycle products for the renewable energy industry. This session qualifies for NABCEP continuing education credit.

Presenter: Magnum Energy/A product brand of Sensata Technologies — 2 NABCEP CEU

PV + Storage, Design Options

This session will provide a detailed understanding of Magnum Energy products used in DC coupled solar based applications and our new grid tied AC coupled storage ready product solution. The presentation will include specifics on the PT-100 MPPT medium voltage 100 Amp charge controller, as well as a brief overview of our interconnection system equipment and remote controls. The discussion will also focus on technical details and installation of our recently released MicroGT-500 dual MPPT grid-tied storage ready micro-inverter. It will also encompass adding storage to existing grid tied applications at anytime.

ELECTRICAL ENERGY STORAGE (EES) STAGE

TUESDAY, JULY 11, 2017 — **LEVEL 2, BOOTH 8433**

10:30am–1:30pm **MARKET OVERVIEW, REGULATORY FRAMEWORK & SUCCESSFUL BUSINESS MODELS**

Key players of the US storage market will provide a highly topical three-hour industry information session based on a detailed overview of the market status in the US storage sector. Today's most innovative approaches and business strategies will be discussed, including insights of leading manufacturers, distributors and installers in a panel discussion. Refine your business case by listening to experts of the sector and learn how to develop a consistent plan at a national level for the effective installation and distribution of storage products.

10:30am The Evolution of Energy Storage: A Holistic View into the Past, Present and Future
10:50am Status-Quo and Future Scenarios for Energy Storage in the U.S.: Deployment Trends in the Residential, Commercial and Utility Scale Segments
11:10am What's Next for Energy in the U.S.? Evaluation of Competitive Market Designs & Business Models
11:30am The Utility of the Future
11:50am Executive Roundtable Discussion: Building the Storage Bridge between West & East
12:50pm Grid Architecture Today & Tomorrow: Roll and Function of Energy Storage for the Energy Supply System
1:10pm Assessing Innovative Business Models for Battery Storage in the U.S.
1:30pm Session Closing

2:00pm–4:30pm **FINANCE & BANKABILITY4:30pm**

This session will take a closer look on successful methodologies for finance structures following the requirements of the current storage market situation. Financing issues still play an important role in the storage deployment plan. Banks, investors and developers will share their long-sighted market evaluations in this afternoon session and give an outlook on the role of storage in the US in the short- and long-term perspective. Benefit from valuable findings of finance experts of the energy sector and learn how to best tackle challenges and capitalise on current market trends.

2:00pm Successful Energy Storage Investments: Financing Solutions vs. Different Business Models?
2:20pm Emerging Financing Mechanisms for Systems and Projects – How will they Change the Market?
2:40pm Clean Energy Ownership Program: Energy Cost Reduction Plus Value Creation
3:00pm Investing in Energy Storage: Steps to Increase Bankability and Attract Investment
3:50pm Project Financing: Contractual Concerns, Long Term Assurance and Third Party Financing Scenarios
4:10pm Investment Appraisal for Energy Storage – Highlighting the Investors' Perspective
4:30pm Session Closing

WEDNESDAY, JULY 12, 2017 — **LEVEL 2, BOOTH 8433**

10:30am–1:30pm **TECHNOLOGICAL ADVANCEMENTS DRIVING ENERGY STORAGE DEPLOYMENT AND MAXIMIZING ROI**

Industry leaders will present successfully proven storage innovations as well as identify improvement opportunities for the existing storage technologies while complying with the environmental and security requirements. Delegates will gain a deep understanding of latest design improvements, best practices and technological advancements in the sphere of energy storage and maximizing the profit with today's most efficient technologies of the sector.

10:30am Finding the Right System Solution: Key Characteristics for Residential and Commercial Applications
10:50am Managing Risk: Energy Storage System Design and Safety
11:10am Electric Utilities and Battery Storage: Utility Value Drivers
11:30am Executive Panel Discussion: Evaluation of Main Technologies and Application Segments for Energy Storage Systems
12:30pm Technological Advancements for Behind the Meter Energy Storage Projects
12:50pm Interplay of Storage and Intelligent Software Controls: Improving the Consumption Profile
1:10pm Assessment of the Pros and Cons of Microgrids and Grid Extensions for Obtaining Reliable Access to Power
1:30pm Session Closing

2:00pm–4:30pm **REAL-WORLD FIELD EXPERIENCES AND INSIGHTS RESIDENTIAL, COMMERCIAL & UTILITY STORAGE**

This session will give attendees the opportunity to learn about the real world of energy storage directly from market shapers. Our experts will introduce applications and technologies that currently are operating in the residential, commercial and utility scale facilities. Listen to actively involved companies of the storage market explaining their different roadmaps to a successful implementation and sustainable growth.

2:00pm Case Study: Advanced Multi-Resource Microgrid Projects
2:20pm From Conception to Implementation: Essentials for Securing Project Success (Utility Scale)
2:40pm From Conception to Implementation: Essentials for Securing Project Success (Commercial Segment)
3:00pm From Conception to Implementation: Essentials for Securing Project Success (Residential Segment)
3:20pm The Dos & Don'ts in Energy Storage Project Development: Lessons Learned and Exclusive Insights by Key Stakeholders
4:10pm Real-world Field Experience: PV and Storage for Grid Stabilization and Emergency Power
4:30pm Session Closing

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EES: ELECTRICAL ENERGY STORAGE EXHIBITIONS & CONFERENCES WORLDWIDE

The global ees exhibition series is the industry meeting point, bringing together manufacturers, distributors, users and suppliers of stationary and mobile electricity storage systems. The ees exhibitions are co-located with Intersolar, the leading exhibition series for the solar industry.

The ees exhibitions and accompanying ees Conferences are dedicated to renewable energy storage solutions, from residential and commercial applications to large-scale storage systems for stabilizing the grid. Other focal points are products and solutions for smart renewable energy, energy management, e-mobility and uninterruptible power supply (UPS).

With ees Europe in Munich, ees North America in San Francisco, and the ees Special Exhibit at Intersolar India in Mumbai and Intersolar South America in São Paulo, ees is represented on four continents.

SAMPLE OF EES NORTH AMERICA EXHIBITORS 2017

Alevo USA, Inc | Battery Systems Inc. | BizLink Technology Inc. | BYD Company Limited | C&D Technologies Inc. | Clean Energy Storage Inc. | Customized Energy Solutions | Demand Energy | Dynapower Company LLC | Eaton | EEMB Energy Power Co., Ltd | Electriq Power | Elite Power Solutions | EnerSys | EnSync Energy Systems | ESS Inc. | Geli (Growing Energy Labs Inc.) | GILDEMEISTER energy storage GmbH | Green Charge Networks | GS Battery (USA) Inc. | IBEW-NECA LMCC | Ideal Power Inc. | Interphase Technologies | JLM Energy | Korea Battery Industry Association | Lockheed Martin Energy | Master Battery | Mercedes Benz Energy Americas LLC | Mersen | MK Battery | New York Battery and Energy Storage Technology Consortium | NH Research, Inc. | NPPower International Inc. | Parker Hannifin – Energy Grid Tie Division | Pika Energy, Inc. | Primus Power | Princeton Power Systems, Inc. | Rolls Battery Engineering | Shenzhen Click Technology Co. Ltd. | SimpliPhi Power, Inc. | Socomec Inc. | SolarMax Renewable Energy Provider, Inc. | sonnen, Inc. | Sunxtender Batteries | Tabuchi Electric Company of America Limited | Trina Energy Storage Solutions (Jiangsu) Co., Ltd. | Trojan Battery Co., LLC | UL, LLC | ViZn Energy Systems Inc. | Zhangzhou Huawei Power Supply Technology Co., Ltd.

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