

## Summary:

For the September 30<sup>th</sup> issue of NAATBatt's Advanced Battery Weekly, we highlight the ongoing sector activities.

Executive Director James Greenberger explains why American Electric Power's deployment of the first community energy storage system in the United States is a watershed event for the advanced battery industry and suggests that CES may be the "killer app" that makes grid-connected energy storage a commercial reality. Read "**Community Energy Storage Leads the Way**" in the Executive Director's Notes section of this newsletter below.

The NAATBatt Index increased 6.3% while the U.S. and Asia Battery Indices declined 11.8% and 10.3%, respectively. The S&P500 and Russell 2000 decreased 3.4% and 5.2%, respectively.

## Key Highlights:

- **EnerSys** has entered into a definitive agreement with **GAIA Akkumulatorenwerke GmbH (GAIA)**, a subsidiary of **Lithium Technology Corporation (LTC)** to launch a joint venture (JV) in **Germany** to produce large format lithium-ion (li-ion) battery cells. The JV will include LTC's contribution of certain intellectual property and li-ion manufacturing located in **Nordhausen, Germany**.
- **Panasonic** is cancelling its planned expansion of a domestic factory that makes lithium-ion (li-ion) batteries due to the strong yen and price competition from **South Korean** rivals which is making it difficult to keep producing the batteries in **Japan**. The plant began operating last year after the first stage was completed, but the company has now decided to cancel the second stage and won't make any additional investments.
- **EnerSys** has entered into a definitive agreement to launch a JV in **South Africa** to produce and market batteries for industrial applications. The company will have majority ownership in the JV in cooperation with **Powertech Batteries** (part of **Allied Electronics Corporation Limited (Altron)**).
- **3M** and **Umicore** have entered into a second technology license agreement that further expands the use of **nickel, manganese and cobalt (NMC)** cathode materials in li-ion batteries. Under the agreement, 3M is granting Umicore license to a family of low cobalt NMC cathode material compositions for manufacture and sales to battery manufacturers for automotive and consumer electronics applications.
- **Ford Motor** could produce electric vehicles (EVs) with partner **Changan Automobile Group** in **China**. **Daimler AG** and **General Motors** have already announced plans to add EVs in the country.
- Two charging stations have been installed at the **Chicago Premium Outlets** mall. The mall's owner, **Simon Property Group**, is among the first retail properties in the nation to offer charging stations.
- Researchers at the **University of Leeds, UK**, have developed a material and a process that could simplify the manufacture of li-ion cells. The process has already been licensed to US cell maker **Polystor**, and now the university is looking to build a collaborative venture between Leeds, Polystor and one other.

- A team from the **National University of Singapore's Nanoscience and Nanotechnology Initiative (NUSNNI)** has developed the world's first energy-storage membrane. This could translate to an energy cost of 10-20 watt-hour per dollar for the membrane compared to 2.5 watt-hour per dollar for li-ion batteries.
- **AAA** has launched the second phase of their electric vehicle (EV) initiative with the installation of a charging station at the AAA National office. The Level II station will enable owners to 'top off' their vehicle charge and can accommodate two cars simultaneously.
- **S&C Electric Company** announced the deployment of a 750-kW **PureWave® Storage Management System (SMS)** to **PNM Resources**. The system, installed in **Albuquerque, New Mexico** is the nation's first solar storage facility that is fully integrated into a utility's power grid.
- The **New York State Energy Research and Development Authority (NYSERDA)** awarded \$1 million to **Paper Battery Company** of **Troy** to develop an energy-storage device that is as thin as a sheet of paper. The three-year-old company is part of the **Russell Sage College INVEST Incubator**.

## A Few More Details:

EnerSys has entered into a definitive agreement with GAIA Akkumulatorenwerke GmbH (GAIA), a subsidiary of Lithium Technology Corporation (LTC) to launch a joint venture (JV) in Germany to produce large format lithium-ion (li-ion) battery cells. The company will have a majority interest in the JV. The JV will include LTC's contribution of certain intellectual property and li-ion manufacturing located in Nordhausen, Germany. The JV is expected to commence operations next month.

Source: EnerSys

Panasonic is cancelling its planned expansion of a domestic factory that makes lithium-ion (li-ion) batteries due to the strong yen and price competition from South Korean rivals which is making it difficult to keep producing the batteries in Japan. The plant began operating last year after the first stage was completed, but the company has now decided to cancel the second stage and won't make any additional investments. However, the company is boosting its output in China, as it is building a new battery plant in the eastern Chinese city of Suzhou, and is also planning to boost capacity at its subsidiary Sanyo Electronic's existing Chinese plant.

Source: WSJ

EnerSys has entered into a definitive agreement to launch a JV in South Africa to produce and market batteries for industrial applications. The company will have majority ownership in the JV in cooperation with Powertech Batteries (part of Allied Electronics Corporation Limited (Altron)). The JV will include Powertech Batteries contribution of its existing industrial lead-acid business including its industrial battery manufacturing facility located in Port Elizabeth, South Africa, plus its existing distribution and service capability. The joint venture will serve both reserve power and motive power customers across sub-Saharan Africa, including South Africa. The transaction will be effective on October 3, 2011.

Source: EnerSys

3M and Umicore have entered into a second technology license agreement that further expands the use of nickel, manganese and cobalt (NMC) cathode materials in li-ion batteries. Under the agreement, 3M is granting Umicore license to a family of low cobalt NMC cathode material compositions for manufacture

and sales to battery manufacturers for automotive and consumer electronics applications. The battery cathode compositions composed of nickel, manganese, and cobalt, covered by this agreement, offer a balance of power, energy, thermal stability and low cost.

Source: 3M

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Ford Motor could produce EVs with partner Changan Automobile Group in China. Daimler AG and General Motors have already announced plans to add EVs in the country. The Chinese government's objective is to have one million electric-powered vehicles on the road by 2015, according to the Ministry of Science. However, the rollout will depend on the availability of a charging infrastructure.

Source: Bloomberg

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Two charging stations have been installed at the Chicago Premium Outlets mall. The mall's owner, Simon Property Group, is among the first retail properties in the nation to offer charging stations. In addition to the Aurora mall, Simon is also installing charging stations at eight other locations in the Chicago suburbs. The stations are two of 12 completed at Simon properties with another 47 to be installed. 350Green operates the stations and has more than 1,100 stations under contract.

Source: The Beacon-News

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Researchers at the University of Leeds, UK, have developed a material and a process that could simplify the manufacture of li-ion cells. The process has already been licensed to US cell maker Polystor, and now the university is looking to build a collaborative venture between Leeds, Polystor and one other. The material replaces the separator and liquid electrolyte of a traditional cells and c could cut production cost with no loss of cell performance.

Source: ElectronicsWeekly.com

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A team from the National University of Singapore's Nanoscience and Nanotechnology Initiative (NUSNNI) has developed the world's first energy-storage membrane (as shown in **Exhibit 1**). The researchers used a polystyrene-based polymer to deposit a soft, foldable membrane that, when sandwiched between and charged by two metal plates, could store charge at 0.2 farads per square centimeter -- above the typical upper limit of 1 microfarad per square centimeter for a standard capacitor. The cost involved in energy storage could be drastically reduced as technologies based on liquid electrolytes cost about \$7 per farad to store compared to \$0.62 per farad with the advanced energy storage membrane. This translates to an energy cost of 10-20 watt-hour per dollar for the membrane versus 2.5 watt-hour per dollar for lithium ion batteries.

### Exhibit 1: High Energy Storage Membrane



Source: National University of Singapore and Nanowerk

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AAA has launched the second phase of their electric vehicle (EV) initiative with the installation of a charging station at the AAA National office. The Level II station will enable owners to 'top off' their vehicle charge and can accommodate two cars simultaneously. Access to the charging station is free and available 24 hours a day to AAA members and the general public.

Source: AAA

S&C Electric Company announced the deployment of a 750-kW PureWave® Storage Management System (SMS) to PNM Resources. The system, installed in Albuquerque, New Mexico is the nation's first solar storage facility that is fully integrated into a utility's power grid. The PNM Prosperity Energy Storage Project can produce 500 kilowatts of power and uses high-tech batteries to create firm and dispatchable energy derived from a renewable energy source.

Source: *The Sacramento Bee*

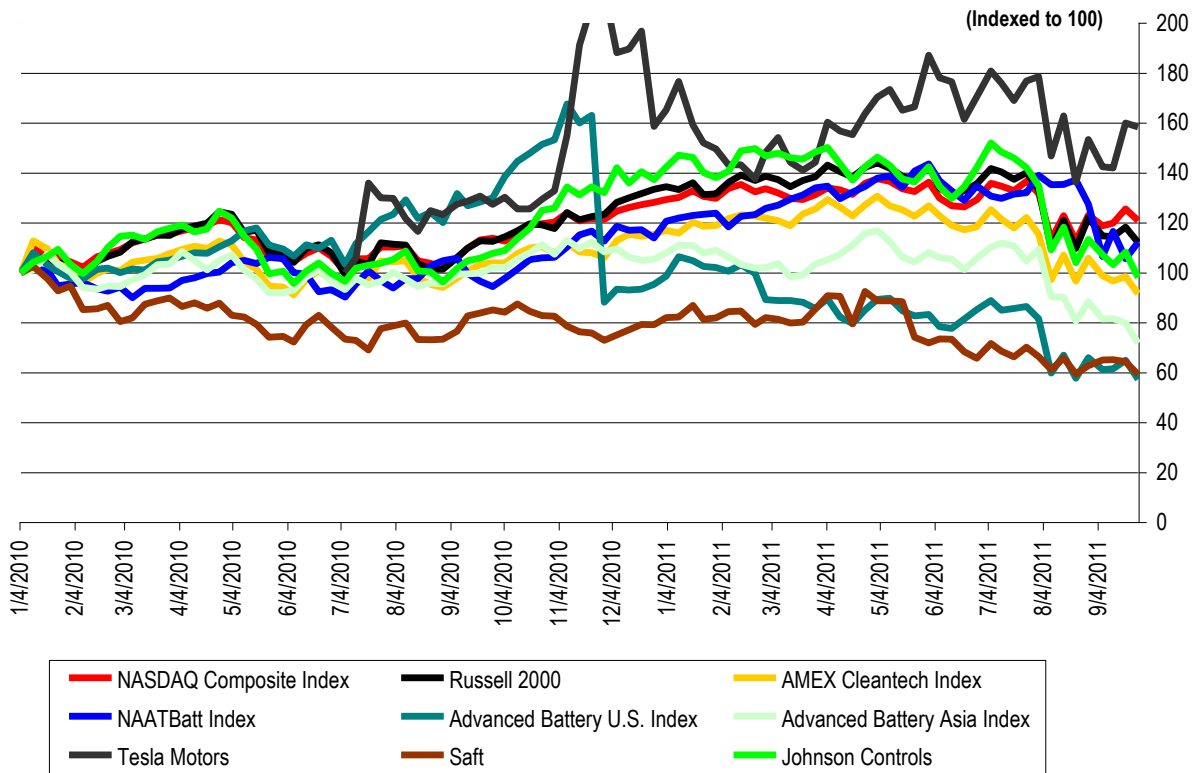
The New York State Energy Research and Development Authority (NYSERDA) awarded \$1 million to Paper Battery Company of Troy to develop an energy-storage device that is as thin as a sheet of paper. The company is also trying to enter the ultracapacitor market. Paper Battery is a three-year-old company located at the Russell Sage College INVEST Incubator.

Source: *WRGB*

## **Member News:**

- EnerSys announced it has entered into a definitive agreement to launch a joint venture in Germany to produce large format lithium-ion battery cells. The company will have a majority interest in the joint venture in cooperation with GAIA Akkumulatorenwerke GmbH ("GAIA"), a wholly owned subsidiary of Lithium Technology Corporation ("LTC"). The joint venture will include LTC's contribution of certain intellectual property, and its lithium-ion manufacturing capability located in Nordhausen, Germany. It is anticipated the joint venture will commence operations in October 2011. For complete details, please visit: <http://phx.corporate-ir.net/phoenix.zhtml?c=180086&p=irol-news>
- EnerSys announced that it has entered into a definitive agreement to launch a joint venture in South Africa to produce and market batteries for industrial applications. EnerSys will have majority ownership in the joint venture in cooperation with Powertech Batteries, which is a part of Allied Electronics Corporation Limited (Altron). The joint venture will include Powertech Batteries contribution of its existing industrial lead-acid business including its industrial battery manufacturing facility located in Port Elizabeth, South Africa, plus its existing distribution and service capability. The joint venture will serve both reserve power and motive power customers across sub-Saharan Africa, including South Africa. The transaction will be effective on October 3, 2011. For complete details, please visit: <http://phx.corporate-ir.net/phoenix.zhtml?c=180086&p=irol-news>
- Mega Graphite Australia (MGA) and Strategic Energy Resources (SER) will call for staff in the next few months for the Uley Graphite Project, with a view to be shipping product for international sales at the end of this year or start of 2012. For complete details, please visit: <http://www.megagraphite.com/investor/pressrelease>

**Exhibit 2: Indices Performance  
(From January 4, 2010)**

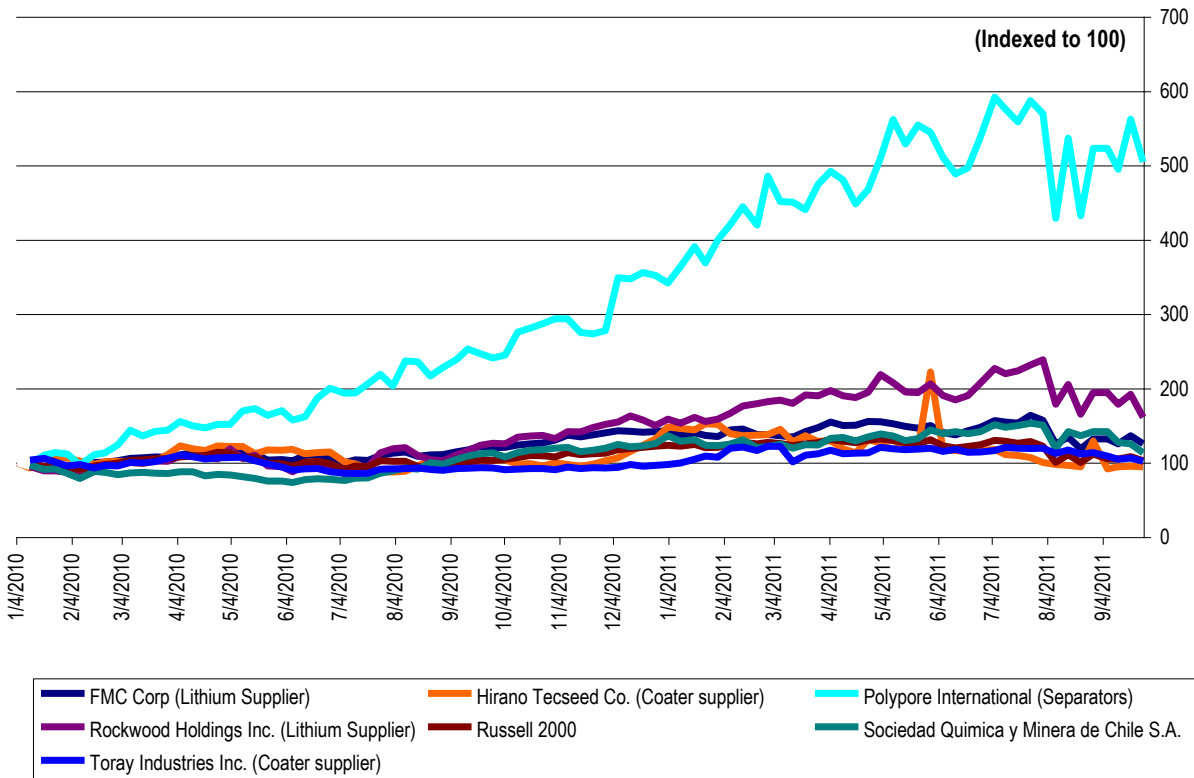


Index	Close on 9/26/2011	52-Wk High	% of 52-Wk High	Performance		
				LTM	YTD	Week
Dow	11,043.9	12,928.5	85.4%	1.7%	(5.4%)	(3.1%)
S&P 500	1,163.0	1,370.6	84.9%	1.2%	(8.6%)	(3.4%)
NASDAQ	2,516.7	2,887.8	87.2%	5.8%	(6.5%)	(3.7%)
Russell 2000	665.6	868.6	76.6%	(0.8%)	(16.6%)	(5.2%)
AMEX Cleantech Index	899.3	1,298.6	69.2%	(91.0%)	(21.7%)	(6.9%)

Source: Bloomberg and ThomsonOne

Note: The select NAATBatt Index is a market-value-weighted average and includes ALTI, BASF, COP, ENS and XIDE. The Advanced Battery U.S. Index is a market-value-weighted average and includes HEV, MGA, MXWL, UQM and VLNC. The Advanced Battery China Index is a market-value-weighted average and includes BYD, CBAK, GS Yuasa, LG Chem and Panasonic.

**Exhibit 3: Supplier Performance**  
(From January 4, 2010)



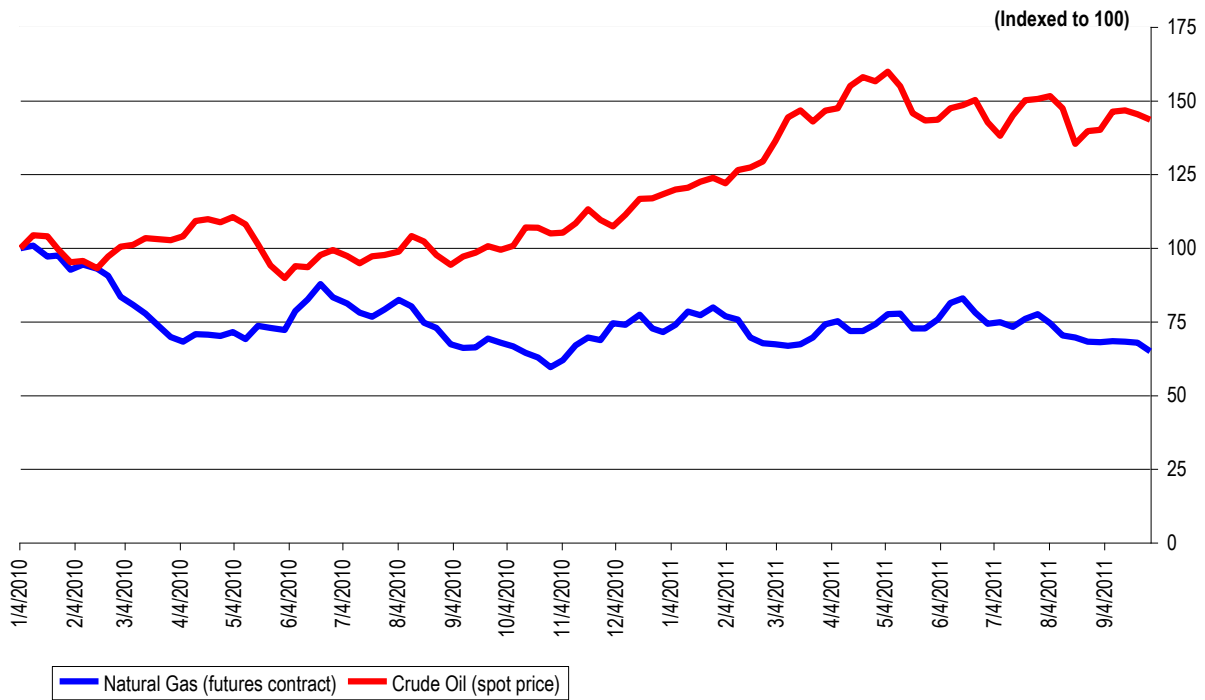
Source: Bloomberg

**Exhibit 4: Commodity Prices**

Commodity	Price on 9/26/2011	Price on 9/19/2011	Price on 8/26/2011	1 Week Change	1 Month Change
LME Copper (Cash, \$ per tonne)	7,225	8,415	9,090	(14.1%)	(20.5%)
LME Lead (cash, \$ per tonne)	1,992	2,320	2,470	(14.1%)	(19.4%)
LME Nickel (cash, \$ per tonne)	18,375	21,085	21,250	(12.9%)	(13.5%)

Source: LME

**Exhibit 5: Natural Gas and Crude Oil**  
 (From January 4, 2010)



Source: EIA

## Executive Director's Notes



### **COMMUNITY ENERGY STORAGE LEADS THE WAY**

This summer American Electric Power (AEP) became the first electric utility in the nation to deploy a community energy storage (CES) system in its service territory. AEP's CES system consists of 80 25 kW units, which were installed in a residential neighborhood in Columbus, Ohio. NAATBatt member firms S&C Electric and International Battery supplied the storage units and the lithium-ion batteries that the first units contain.

The launch of the first CES system is a watershed in the history of grid-connected electricity storage in the United States. Although the U.S. Department of Energy and electric utilities nationwide continue to investigate different ways to store electricity on the grid, many industry experts are coming to the view that CES will be the "killer app" in grid-connected energy storage.

The attractiveness of CES systems does not lie in their cost. On a pure cost per kilowatt basis, it is cheaper to store electricity in bulk, using pumped hydro storage, compressed air systems or multi-megawatt flow batteries, than in hundreds of small 25-100 kW units installed in basements or buried in residential neighborhoods around the country.

But cost per kilowatt is not a valid basis for evaluating electricity storage systems. Storage is not an objective itself; it is a means to an end. Storage serves the same end as all other grid infrastructure: providing safe, reliable electric power to consumers at the lowest possible cost. Judged by this metric, CES systems may have a leg up on their nominally cheaper storage and peak generation technology competitors.

The advantage of CES systems lies in their ability to provide multiple benefits to electricity customers and to the utilities that serve them. Because CES systems are located immediately proximate to the ultimate customer, they can provide back-up power, level peak loads and reduce the strain on, and necessary investment in, the complicated and often unsightly infrastructure needed to distribute centralized electric power. CES systems can facilitate the deployment and rational net metering of distributed solar and wind electricity generation and support the recharging of electric vehicles on demand. In addition, hundreds of CES units can be networked by utility operators to provide the same sort of transmission support and leveling of variable renewable energy generators that larger storage facilities and peak generators can provide.

The small size and low individual cost of CES units is also an advantage. Individual units are relatively inexpensive and can be deployed by ordinary utility work crews. Their deployment does not require complicated permits, environmental impact statements or complicated maintenance. Bulk storage units and peak generators can take years to permit and deploy; CES units can be deployed as part of a utility's ordinary capital improvement program.

The greatest advantage of CES systems, however, may be that their ability to provide back-up power is a benefit that can easily be explained to, and appreciated by, ordinary electricity customers. Ordinary consumers suffer tens of millions of dollars of damages each year due to power outages. Those who cannot afford or cannot deploy costly private back-up generators suffer disproportionately.

At the time the grid was designed, the impact of power outages was generally shared and grudgingly accepted by all electricity customers. There was no feasible technological fix. Today, however, there is, in the form of CES systems. Grid-connected energy storage will become viable in the United States when consumers start demanding from their utilities and PUC's the type of electricity reliability that 21<sup>st</sup> Century CES systems can provide. When they do, CES systems will lead the way in deploying energy storage technology on the grid.



James J. Greenberger  
Executive Director

September 30, 2011



## NAATBatt Membership Applications for 2011

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### **2012 Membership Applications and Dues Structure**

NAATBatt is now accepting applications for membership for the 2012 calendar year. Membership dues for 2012 are \$10,000 for Corporate Members, \$10,000 for OEM Members, \$10,000 for Utility Members, \$5,000 for Associate Members, \$1,000 for Individual Members, and \$500 for Non-Profit/Government Members. Companies purchasing 2012 memberships will be entitled to the benefits of membership during the balance of the 2011 calendar year. Please click on <http://naatbatt.org/membership-inquiry/> and indicate that you are interested in a 2012 membership.

### **Why Join NAATBatt?**

NAATBatt's mission is to grow the market for advanced electrochemical energy storage technology in North America. We concentrate primarily on two markets: electric drive for motor vehicles and distributed, grid-connected electricity storage.

NAATBatt members enjoy a variety of exclusive benefits including: discounted admission to NAATBatt conferences; admission to by invitation-only NAATBatt workshops, such as the Workshop on Distributed Energy Storage that NAATBatt co-sponsored last April in Chicago with the U.S. Department of Energy; admission to Members-Only Site Visits, at which one NAATBatt firm will host all other NAATBatt members for a tour of the host's facility; the opportunity to announce news and new product developments in the Member's News section of the widely read NAATBatt Advanced Battery Weekly; free access to speaker presentations made at NAATBatt programs and workshops; and invitations to attend private meetings with government leaders, such as the NAATBatt-sponsored trip to Washington last year to meet with Chairman Jon Wellinghoff of FERC.

NAATBatt membership also helps support the development of an important industry that could just change the world. NAATBatt provides educational programming on topics of interest to the advanced battery community, a weekly newsletter chronicling developments in the North American advanced battery market, networking opportunities for industry participants and their customers, and thought leadership on issues relating to energy storage markets and technology through the NAATBatt blog.

NAATBatt recently held its 2<sup>nd</sup> Annual Meeting and Conference in Louisville, Kentucky, which included the 1<sup>st</sup> Industry-Academic Advanced Battery Summit. The Summit is a new program that NAATBatt has started to encourage the more efficient transfer of advanced battery technology from leading U.S. research universities to industry. NAATBatt identified and brought to Louisville representatives from 15 of the top university advanced battery programs around the country to make flash presentations to industry about what those programs are working on and what technology they have available to license. In all there were 48 high quality presentations made at the Conference and the Summit, copies of which are available to conference attendees and NAATBatt members only.



NAATBatt will soon be announcing two other initiatives for the benefit of its members that will increase their access to capital and play an important role in growing the market for advanced electrochemical energy storage. Please stand by for some very interesting developments.

NAATBatt is a not-for-profit trade association qualified under Section 501(c)(6) of the Internal Revenue Code that is working for the benefit of the entire industry. **Every dollar spent on NAATBatt memberships and programs goes to recouping program costs and to supporting activities intended to benefit the entire advanced battery industry.** At a time when it seems that the only people making money on advanced lithium-ion technology are professional conference organizers, the advanced battery industry should take control of its own market and its own future. NAATBatt exists to market for the industry, not to the industry. But NAATBatt needs your support to do it. Please join us.

## North American Industry Announcements and Calendar

***Presentations from the NAATBatt 2011 Annual Meeting and Conference Now Available:***

Speaker presentations, speaker bios and attendee lists from the just concluded NAATBatt's 2011 Annual Meeting and Conference are now available on the NAATBatt Web site. Go to [www.naatbatt.org](http://www.naatbatt.org) and navigate to the 2011 Annual Meeting and Conference link to view them. The links are password protected, and the password is available to NAATBatt members and conference attendees for no charge. Others may purchase access to the presentations for \$250. Please contact Jim Greenberger at [jgreenberger@naatbatt.org](mailto:jgreenberger@naatbatt.org) for your password. Photos from the conference will be posted shortly.

***Presentations from the Workshop on Distributed Energy Storage Posted:*** Presentation materials, handbooks, attendee lists and working group discussion summaries from the April 21, 2011 DOE/NAATBatt Workshop on Issues in Distributed Energy Storage have been posted on the NAATBatt Web site at: [www.naatbatt.org](http://www.naatbatt.org). The materials are available for review to all Workshop registrants and to all NAATBatt members. Please contact Jim Greenberger at [jgreenberger@naatbatt.org](mailto:jgreenberger@naatbatt.org) for your password.

***Presentations from the NAATBatt 2010 Annual Meeting and Conference are Available:***

NAATBatt's 2010 Annual Meeting and Conference entitled "The Impact of PEV's on T&D Systems: Challenges and Solutions" was a great success. More than 40 industry experts presented and the conference on topics relating to how the grid was going to accommodate the new load that will be generated by plug-in electric vehicles. Copies of the speaker presentations are available on a secured portion of the conference Web site. Access to the Web site is free to NAATBatt members and conference attendees. Access to the presentations is now available to all other for the price of \$250. Please contact Jim Greenberger at [jgreenberger@naatbatt.org](mailto:jgreenberger@naatbatt.org) for more information about accessing the presentations.

***NAATBatt Membership Information.*** NAATBatt is taking applications for membership from well qualified industry participants and supporters. Membership in NAATBatt is a great way to keep abreast of developments in advanced technology batteries and to support the growth of a market for products that could change the world. Your support for NAATBatt programs, newsletters, and committees is essential to the success of our organization and our industry. To inquire about membership, please complete the following inquiry form: <http://naatbatt.org/membership-inquiry/>. NAATBatt will respond with additional information about membership.

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- ***Developing Grid Storage Projects:*** Infocast will produce the Developing Grid Storage Projects conference in Dallas, Texas on **October 5-6, 2011**. The conference will discuss the regulatory drivers and business models for grid storage projects in the United States. NAATBatt will be a supporting organization of the conference. Information about the conference can be found at: <http://infocastinc.com/index.php/conference/551>.
  - ***The Business of Plugging In:*** The Center for Automotive Research will host The Business of Plugging In conference at the Hyatt Regency in Dearborn, Michigan on **October 11-13, 2011**.

The conference will examine the challenges of moving EV's from early adoption to mass market acceptance and will feature a ride-and-drive event highlighting the newest EV's. More information can be found at: [www.bpiconference.com](http://www.bpiconference.com).

- **EESAT 2011:** The biannual international Electrical Energy Storage Applications and Technologies conference (EESAT) will be held at the San Diego Marriott Hotel and Marina in San Diego, California on **October 16-19, 2011**. The conference will highlight specific electrical energy storage applications and technologies, especially as they relate to the electricity grid. More information about EESAT 2011 can be found at: <http://www.sandia.gov/eosat/index.html>.
- **EV-HEV-PHEV Business Opportunities Seminar:** Menahem Anderman and Advanced Automotive Batteries will host a one-day seminar on business opportunities in electric vehicles on **October 24, 2011** at The Roosevelt Hotel in New York City. Information and registration for the seminar may be found at: <http://www.advancedautobat.com/seminar/index.html>.
- **The Battery Show:** The Battery Show conference and exposition will be held in Novi, Michigan on **October 25-27, 2011**. The Battery Show is North America's largest free to attend exhibition for advanced batteries. The exhibition showcases the latest battery technologies and solutions, ranging from electric vehicle applications to raw material suppliers. Its two-track business and technology conference examines battery market development and opportunities, including how technical advances are likely to impact performance, safety and cost. For more information on The Battery Show or to register, visit [www.thebatteryshow.com](http://www.thebatteryshow.com).
- **Lithium Battery Power Conference:** Knowledge Foundation will host the Lithium Battery Power Conference on **November 7-8, 2011** in Las Vegas, Nevada. The conference will provide a general survey of the lithium-ion battery industry. The conference Web site can be accessed at: [http://www.knowledgefoundation.com/viewevents.php?event\\_id=254&act=evt](http://www.knowledgefoundation.com/viewevents.php?event_id=254&act=evt).
- **Battery Safety Conference and Global Battery Tutorial:** Knowledge Foundation will host the Battery Safety Conference followed by Shmuel De-Leon Energy's Global Battery Tutorial on **November 9-10, 2011** in Las Vegas, Nevada. The conference will discuss safety incidents and product recalls regarding lithium-ion batteries. The conference Web site can be accessed at: [http://www.knowledgefoundation.com/viewevents.php?event\\_id=254&act=evt](http://www.knowledgefoundation.com/viewevents.php?event_id=254&act=evt).
- **1<sup>st</sup> NY-BEST Regional Technology Conference:** The 1<sup>st</sup> NY-Best Regional Technology Conference, highlighting developments in energy storage technology at leading New York universities, will be held on **November 15-16, 2011** at Woodcliff Hotel & Spa in Rochester, New York. Information about the conference can be found at: <http://www.ny-best.org/civicrm/event/info?id=7&reset=1>
- **1<sup>st</sup> North American & Asian Lithium-Ion Technology Conference:** The North American & Asian Lithium-Ion Technology Conference will be held on **January 12, 2012** at the University of Nevada Las Vegas in Las Vegas, Nevada. The conference is co-sponsored by UNLV and an affiliate of the Lion Battery Industry Association of South China. More information about the conference can be found at: <http://lbiana.org/industry-events/>
- **International Battery Association – Pacific Power Source Symposium Joint Meeting 2012:** The 2012 meeting of the International Battery Association and Pacific Power Source Symposium will be held on **January 9-13, 2012** at the Hilton Waikoloa Village in Hawaii. Information about the program may be viewed at: <http://www.soest.hawaii.edu/PPSS/index.htm>.

- **IEEE PES Conference on Innovative Smart Grid Technologies:** The IEEE PES Conference on Innovative Smart Grid Technologies will be held on **January 16-20, 2012** at the Washington Marriott Wardman Park hotel in Washington, D.C. The conference will examine a wide range of smart grid technologies, including energy storage. Information about the conference can be found at: <http://www.ieee-isgt.org/>
- **2<sup>nd</sup> Annual 10X Advanced Battery R&D:** The 10x Advanced Battery R&D conference: Breaking Barriers in Advanced Battery Performance and Value will be held on **January 23-24, 2012** in Santa Clara, California. The conference will examine next generation technologies that may dramatically reduce battery costs and/or increase battery energy density. NAATBatt is a supporting organization of the conference.
- **12 International Advanced Automotive Battery Conference:** The 2012 International Advanced Automotive Battery Conference (AABC) will be held on **February 6-10, 2012** in Orlando, Florida. The program will feature five days of intensive meetings, symposia and tutorials. Information about the program can be found at: <http://www.advancedautobat.com/>.
- **International Electric Vehicle Symposium:** The Electric Drive Transportation Association will produce the 26<sup>th</sup> international Electric Vehicle Symposium and exposition (EVS26) on **May 6-9, 2012** in Los Angeles, California. Information about EVS26 can be found at [www.EVS26.org](http://www.EVS26.org).
- **IEEE PES Transmission and Distribution Conference and Exposition:** The IEEE PES Transmission and Distribution Conference will be held in Orlando, Florida on **May 7-10, 2012**. The conference will focus on innovation in power delivery systems, including storage systems. Information about the conference can be viewed at: <http://www.ieceet-d.org/>.
- **5<sup>th</sup> Symposium on Energy Storage: Beyond Lithium Ion:** The 5<sup>th</sup> Symposium on Energy Storage: Beyond Lithium Ion will be held in Berkeley, California on June 5-7, 2012. The Symposium will focus on next generation battery technologies, such as silicon anode technology, lithium sulfur batteries and lithium air. More information can be found at: <http://bestar.lbl.gov/bli5/program/>.



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