MORE PEOPLE... MORE PROGRAMS...MORE POWER!

ADVANCED ENERGY 2013

THE PREMIER NEW YORK STATE PARTNERSHIP OF ENERGY CONFERENCES

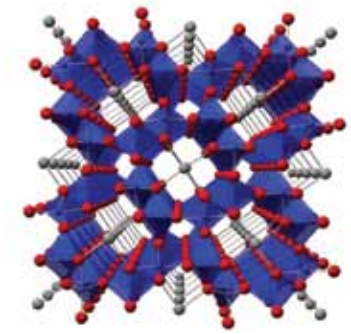
CONFERENCE PROGRAM




JACOB K. JAVITS CONVENTION CENTER
NEW YORK, APRIL 30 - MAY 1, 2013

ADVANCED ENERGY™
RESEARCH AND TECHNOLOGY CENTER

WELCOME TO ADVANCED ENERGY 2013



After a six-month delay caused by the untimely arrival of Superstorm Sandy last October, we are pleased to welcome you to both the latest edition of our annual Advanced Energy Conference and the inauguration of The New York State Partnership of Energy Conferences. Indeed, **Advanced Energy 2013** is a watershed event that brings together 19 individual energy conferences from throughout New York State to create what we believe to be the most complete and far-reaching event of its kind in the nation. It also underscores the importance of advanced energy research, development and implementation to New York State, its economy, and its leadership. Its significance was demonstrated last year when Governor Andrew M. Cuomo introduced the New York Energy Highway as a public-private initiative, and reinforced earlier this year with his announcement of the $1 billion NY Green Bank.

In his own right, New York City Mayor Michael R. Bloomberg is a vocal advocate for environmental and clean energy issues, and has been active in establishing programs focused on sustainable development in New York City and other major cities throughout the United States. We are proud that he has agreed to be a keynote speaker and participate in welcoming you to this landmark conference.

Advanced Energy 2013 represents a dramatic growth in scope since 2010, when it was last hosted in New York City. The number of conference tracks has doubled to 14, with over 90 separate sessions and 346 subject matter experts presenting to more than 2,000 attendees. This growth reflects the natural evolution of energy-related technologies and disciplines fostered by the increasingly critical challenges to be faced by an energy-dependent world. As a statewide partnership of conferences, **Advanced Energy 2013** provides a comprehensive range of content in a venue that is uniquely suited to the inter-disciplinary networking and cross-pollination that can result in tomorrow's breakthrough technologies. **Advanced Energy 2013** is where it all comes together.

We would like to thank our Host Sponsors – U.S. Department of Energy, NYSERDA, New York Power Authority (NYPA) and Stony Brook University; our Platinum Sponsors – National Grid, Brookhaven National Laboratory, and New York State Smart Grid Consortium; our Gold Sponsors – CA Technologies, The City College of New York, GE, Long Island Power Authority (LIPA), Polytechnic Institute of New York University, and SMM Advertising; and our Silver Sponsors – Carter, DeLuca, Farrell & Schmidt, LLP, CEWIT Korea, Deepwater Wind, LLC, IBM, Hydro Quebec, ANGA and PSE&G, for their support in helping to make this event the success that it is.

It is public and private sponsorship that fuels the Advanced Energy Conference, and we are fortunate that their support has kept pace with our expanding scope and overall growth. We truly appreciate the generous contributions of the many businesses and organizations that provided material resources, knowledge and expertise to ensure that **Advanced Energy 2013** would meet the highest expectations of all those who attend. These sponsors are recognized in this program, and in many other ways throughout the conference. There are several that deserve special attention, and we wish to extend our personal thanks to:

WELCOME TO ADVANCED ENERGY 2013

One year ago, the Advanced Energy Research & Technology Center moved into its permanent, Platinum LEED facility in the Stony Brook University Research and Development Park. We would be remiss if we did not acknowledge the extraordinary support provided by the government of New York State that made both that state-of-the-art facility and this conference possible. In addition to Governor Andrew M. Cuomo, we wish to express our gratitude to the entire Long Island delegation to the New York State Senate, including Temporary President and Senate Majority Coalition Leader Dean Skelos and Chairman of the Senate Higher Education Committee Kenneth P. LaValle, for their vision, leadership, and commitment to New York State's energy future.

With our best wishes for effective energy research and the early and rapid deployment of advanced technologies,

2013 CONFERENCE CO-CHAIRS

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Chairman, Advanced Energy Research and Technology Center
Chairman, New York State Smart Grid Consortium

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STATE OF NEW YORK
EXECUTIVE CHAMBER
ALBANY 12224

ANDREW M. CUOMO
GOVERNOR

April 2013

Dear Friends:

It is a pleasure to send greetings to everyone gathered for the 7th Annual Advanced Energy Conference in the Javits Center sponsored by the Advanced Energy Research & Technology Center at Stony Brook University.

The Empire State is among the leaders in the nation with its efforts to develop clean and efficient energy options, renewable energy sources, and sustainable energy programs. This week's conference provides an opportunity to examine a range of topics including energy storage, alternative energy, strategies for efficiency, electric transportation, emerging technologies, and others. I applaud this initiative, which brings together leaders in industry, academics, and government to explore the latest developments that will lead to further progress in the energy industry in New York.

By taking advantage of innovative developments that will lead to wise use of existing resources and more efficient production, we can address future energy needs and environmental concerns, while improving our economy and our world.

Warmest regards and best wishes for a productive conference.

Sincerely,

ANDREW M. CUOMO

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SPECIAL GUEST

Mayor Michael R. Bloomberg
Michael R. Bloomberg was elected the 108th Mayor of the City of New York in 2001. He began his career in 1966 at Salomon Brothers, and after being let go in 1981, he began Bloomberg LP, a start-up financial news and information company that now has more than 15,000 employees around the world.

As Mayor, Bloomberg has cut crime by more than 30 percent, revitalized the waterfront, implemented ambitious public health strategies, including the successful ban on smoking in restaurants and bars, and expanded support for arts and culture. His education reforms have driven graduation rates up by more than 40 percent since 2005.

The Mayor's economic policies have helped New York City avoid the level of job losses that many other cities experienced during the national recession. And since October 2009, New York added as many private sector jobs as the next ten largest U.S. cities combined. Mayor Bloomberg attended Johns Hopkins University and Harvard Business School, and is the father of two daughters, Emma and Georgina.

Dear Friends:

It is a great pleasure to welcome everyone to New York City for the Seventh Annual Advanced Energy Conference.

New York is proud to be a leader among cities building a more sustainable future. We have enacted the most comprehensive green building laws of any city in the country, and energy audits and retrofits are reducing pollution and greenhouse gas emissions across the five boroughs. We also understand that smart energy policies and economic growth are compatible goals, which is why we are happy to applaud the many government agencies, startups, universities, and good corporate citizens represented at this terrific annual conference.

On behalf of all New Yorkers, I offer my best wishes for a productive event and continued success.

Sincerely,

Michael R. Bloomberg
Mayor

A MESSAGE FROM OUR HOST SPONSORS

NYSERDA is pleased to continue our support and co-sponsorship of the Advanced Energy Conference, the premier energy conference in the Northeast. Participants are afforded an opportunity to learn from, and network with, researchers, entrepreneurs, policy makers and practitioners and engage in dynamic discussions that touch upon substantive and varied issues within the increasingly complex energy sector. The conference provides a tremendous opportunity for the State, NYSERDA and its partners to showcase its leadership and achievements in clean energy which includes a diversified approach using energy efficiency, renewable energy and new technologies. As the State continues to recover from Superstorm Sandy, it is more important than ever to find innovative solutions to meet the energy challenges not only of today but of tomorrow. Governor Cuomo's leadership and commitment ensures New York State will remain a national leader in growing and advancing the clean energy economy. Critical to the State's success are the public, private and academia partnerships featured throughout the conference that allow New York to compete in the global marketplace. On behalf of NYSERDA, we welcome you, and look forward to working beside you in identifying new opportunities and investments to grow New York's clean energy economy.

nyserda
Energy. Innovation. Solutions.

– Francis J. Murray, Jr.
President & CEO, New York State Energy Research & Development Authority

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Governor Cuomo has placed significant importance on improving New York State's energy infrastructure and enhancing its energy efficiency. The Advanced Energy Conference is a great opportunity for the energy industry to join together each year to share the latest information on emerging energy technologies, laying the groundwork for the Governor to achieve his ambitious energy goals for New York State.

New York Power Authority
Generating more than electricity

– Gil C. Quiniones
President & CEO, New York Power Authority

As President of Stony Brook University - home of the Advanced Energy Center – I am proud that the best energy researchers in the world are collaborating on our campus to develop state-of-the-art clean and renewable energy technologies. I wish to thank the dedicated team at the Advanced Energy Center for developing this conference and for bringing together record numbers of global energy and government leaders to exchange ideas for energy research and technology deployment. Future generations will look back on this event and your hard work knowing that we took the beginning steps on the path of clean and efficient energy distribution and storage.

Stony Brook University

– Samuel L. Stanley Jr., M.D.
President, Stony Brook University

A MESSAGE FROM OUR PLATINUM SPONSORS

The NYS Smart Grid Consortium is proud to join as a partner in the **Advanced Energy Conference 2013** which is rapidly becoming the preeminent discussion of our energy future in the US Northeast. The NYS Smart Grid Consortium brings together top research and academic institutions, global technology developers, some of our largest and most sophisticated utilities, and NYS agencies committed to energy regulation and innovation.

Super storm Sandy has reinforced the need for "resiliency" in the energy delivery grid and our membership is committed to incorporate what they have learned from their experiences and those of others in their future investment decisions.

As we modernize the grid, we must invest in the best available technologies to insure our future competitiveness. The Consortium offers a unique forum to support the strategic analysis and decision making required to achieve success.

NYS SmartGrid Consortium

– Mr. Robert B. Catell
Chairman, NYS Smart Grid Consortium

The success of Brookhaven Lab's energy research program is directly tied to our unique scientific facilities, our world-class staff, and our strong relationships with industry, educational institutions, and government and not-for-profit agencies. Each year, the Advanced Energy Conference gives us a one-of-a-kind opportunity to share our advances and develop new partnerships and alliances with those working daily to solve the energy challenges facing our state, region, and nation.

– Dr. Doon Gibbs
Director, Brookhaven National Laboratory

U.S. DEPARTMENT OF ENERGY

BROOKHAVEN NATIONAL LABORATORY

National Grid is proud to partner with the Advanced Energy Research and Technology Center to support the **Advance Energy 2013** conference. This is an excellent opportunity for universities, research institutions, energy providers and industrial corporations to share best practices on global energy solutions. National Grid has a long track record of providing award-winning, energy efficiency programs throughout our global business, which help customers use less energy and reduce their energy bills. We have a number of programs and initiatives that will provide information that can be applied across the energy industry, including infrastructure upgrades to improve reliability; Home Energy Reports to encourage energy-saving behavior changes; Smart Grid pilots to test the ability of new technologies and reduce customer outages, improve operational efficiency of the grid and fully integrate renewable energy and electric vehicles into the grid; renewable gas projects and solar generating facilities to reduce emissions; and record demand for conversions to clean, natural gas.

nationalgrid
THE POWER OF ACTION

– Ken Daly
President, National Grid New York

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SPECIAL THANKS

While many hardworking staff and volunteers have crafted and executed this year's Advanced Energy Conference, a few deserve our special thanks for going truly above and beyond. This small group has the vision and forsees the economic benefits of a strong, collaborative and united community of researchers, academics, municipal and utilities partners working in concert with the established and emerging energy companies in the region.

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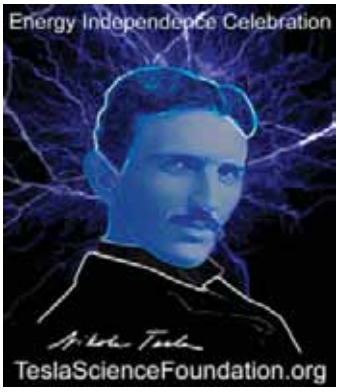
RIC TROTTA
President & Senior Consultant
Trotta Associates

Special thanks extend to the hard work and dedication of the TeslaScienceFoundation.org and to the inventor of our current poly-phase electrical grid – Nikola Tesla. We are pleased to have the National President of this organization providing demonstrations and discussions at our conference this year.



NIKOLA LONCHAR
Founder/President,
Nikola Tesla Inventors Club

2013 CONFERENCE PRESENTERS

ACADEMIC AND RESEARCH INSTITUTIONS

INDUSTRY AND UTILITY PRESENTERS

KEYNOTE SPEAKERS

Kenneth Adams

Kenneth Adams was confirmed by the Legislature as Empire State Development (ESD) President & CEO and Commissioner of the New York State Department of Economic Development on April 5, 2011. In these positions, Mr. Adams works to promote economic practices that attract business and create jobs throughout New York State. He also works closely with Lieutenant Governor Robert J. Duffy to implement the Regional Economic Development Councils across the state.

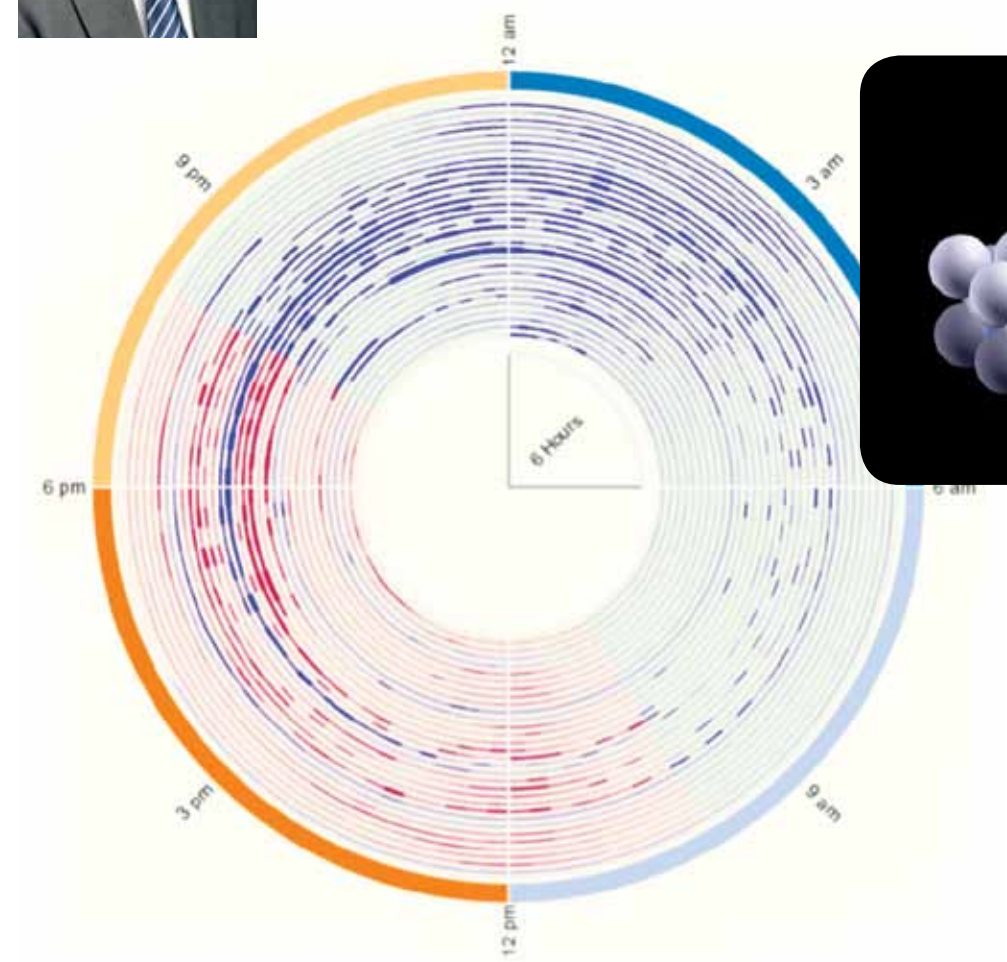
Mr. Adams came to ESD from The Business Council of New York State, the state's leading business association, where he served as President and CEO since 2006. He led the organization in its mission of creating "economic growth, good jobs and strong communities across New York State." The Business Council represents nearly 2,500 member businesses, chambers of commerce and professional and trade associations, employing a total of more than one million New Yorkers.

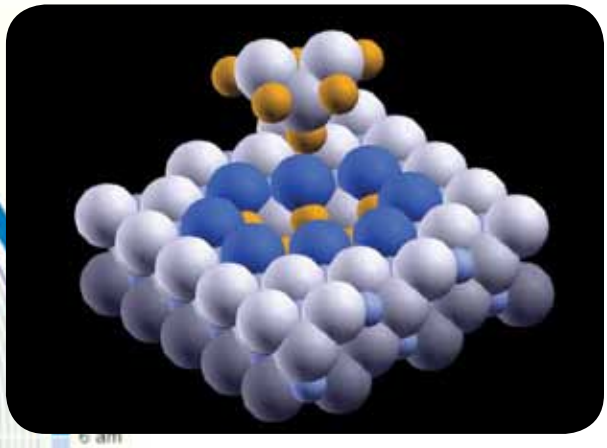
Prior to leading the Business Council, Mr. Adams was President of the Brooklyn Chamber of Commerce and Director of the MetroTech Business Improvement District in Downtown Brooklyn. He was also the founding Executive Director of New York Cares, New York City's leading volunteer organization, from 1988 to 1994.

Mr. Adams is a resident of Brooklyn, New York, where he lives with his wife and two children.

Chairman Garry Brown

Garry Brown is Chairman of the NYS Public Service Commission. He has more than 30 years of experience in the energy and electricity sectors. He serves on the NARUC-FERC Smart Grid Collaborative and the Advisory Council to the Board of Directors of EPRI. Mr. Brown chairs the NYS Board on Electric Generation Siting and the Environment. He sits on the NYS Energy Planning Board, the board of the NYS Energy Research and Development Authority, the NYS Environmental Board, and the Regional Greenhouse Gas Initiative board.





KEYNOTE SPEAKERS

Mr. Robert B. Catell

Mr. Catell was formerly the Chairman and Chief Executive Officer of KeySpan Corporation and KeySpan Energy Delivery, the former Brooklyn Union Gas. His career with Brooklyn Union Gas started in 1958. Following National Grid's acquisition of KeySpan Corporation, Mr. Catell became Chairman of National Grid, U.S. and Deputy Chairman of National Grid plc.

He currently serves as Chairman of the Board of the Advanced Energy Research and Technology Center (AERTC) at Stony Brook University, New York State Smart Grid Consortium, Cristo Rey Brooklyn High School (formerly Lourdes Academy), Futures in Education Endowment Fund, and the New York Energy Policy Institute's Advisory Council (NYEPI).

Mr. Catell serves on the Board of the following governmental organizations:
New York State Energy Research & Development Authority (NYSERDA) and the NYS Economic Development Power Allocation Board (EDPAB).

Mr. Catell serves on the Board of the following not-for-profit organizations:
Brooklyn Community Foundation, City College of New York 21st Century Foundation, Colin Powell Center for Policy Studies, Feinstein Institute for Medical Research, National Grid Foundation, Tomorrow's Hope Foundation, and the New York City Police Foundation.

Mr. Catell serves on the Board of the following business organizations:
First National Bank of New York (FNBNY), KEYERA Energy Management Ltd., Long Island Angel Network (LIAN), Long Island Association (LIA), National Petroleum Council, and the New York Academy of Science (NYAS).

Mr. Catell serves on the Advisory Board for:
Advanced Power North America (APNA), CAI Investments, EC Infosystems, Hudson Clean Energy Fund, Our Energy Policy Foundation, Posillico Inc., SUNY Farmingdale, the President's Advisory Council at Adelphi University, VNG.CO, the Winthrop Hospital Board of Regents, and the NYU Poly Advisory Committee of the New York City Accelerator for a Clean and Renewable Economy (NYC ACRE).

Mr. Catell is a former Chairman of the American Gas Association, Brooklyn Chamber of Commerce, Long Island Association, Partnership for New York City, Inc., U.S. Energy Association (USEA), Business Council of NYS, the Advisory Board of the City College of New York's School of Engineering, and the Downtown Brooklyn Partnership.

Mr. Catell was a board member of: the Brooklyn Public Library Foundation, Edison Electric Institute (EEI), Energy Association of NYS, Long Island Foreign Affairs Forum, the advisory board of Heart-Share for Human Services, and the Brooklyn Law School (Member Emeritus).

Mr. Catell is a member of the Association of Energy Engineers, CUNY Business Leadership Council, National Society of Professional Engineers, NYS Society of Professional Engineers, and the Society of Gas Lighting.

Mr. Catell received both his Bachelor's and Master's degrees in Mechanical Engineering from the City College of New York and is a registered Professional Engineer. He has attended Columbia University's Executive Development Program, and the Advanced Management Program at the Harvard Business School.

KEYNOTE SPEAKERS

Kenneth D. Daly, CFA

Kenneth D. Daly, CFA, is the President of the New York business of National Grid, which distributes electricity and natural gas. Mr. Daly joined the company's predecessors Brooklyn Union/KeySpan in 1988 as a Management Trainee and most recently served as Global Financial Controller, based in London. Mr. Daly graduated from St. Francis College with a BA in English and has earned both an MBA in Finance from St. John's University and an MS in Human Resource Management from Polytechnic University. Mr. Daly has been an adjunct professor at St. Francis College for 20 years and is also a member of their Board of Trustees. He has been the Director of the St. John's University Executive-in-Residence Program since 1992 and is also the past Chairman of the Kingsborough Community College Board of Directors. Mr. Daly is a David Rockefeller 'Fellows' graduate and is active in numerous New York civic organizations.

Dr. Daniel M. Gerstein

Dr. Daniel M. Gerstein has served as the Deputy Under Secretary for Science & Technology in the Department of Homeland Security since August 2011. He is also an Adjunct Professor at American University in Washington, DC at the School of International Service (SIS) where he teaches graduate level courses on biological warfare and the evolution of military thought.

Dr. Gerstein has extensive experience in the security and defense sectors in a variety of positions while serving as a Senior Executive Service (SES) government civilian, in uniform, and in industry. Before joining DHS, he served as the Principal Director for Countering Weapons of Mass Destruction (WMD) within the Office of the Secretary of Defense (Policy). He has served on four different continents participating in homeland security and counterterrorism, peacekeeping, humanitarian assistance, and combat in addition to serving for over a decade in the Pentagon in various high level staff assignments. Following retirement from active duty, Dr. Gerstein joined L-3 Communications as Vice President for Homeland Security Services, leading an organization providing WMD preparedness and response, critical infrastructure security, emergency response capacity, and exercise support to U.S. and international customers.

Dr. Gerstein also has extensive experience in international negotiations having served on the Holbrooke Delegation that negotiated the peace settlement in Bosnia, developed and analyzed negotiating positions for the Conventional Armed Forces in Europe (CFE) talks, and developed an initiative to improve cross border communications between Colombia and neighboring Andean Ridge nations. Additionally, Dr. Gerstein led an initiative to develop a comprehensive biosurveillance system for the Department of Defense (2010-2011), served on the leadership team for the Project for National Security Reform (PNSR) which was charged with developing a new national security act to reflect the changing security environment (2007-2008), co-led the Secretary of the Army's Transition Team (2004-2005), and led the Army's most comprehensive restructuring since World War II (2000-2001).

He has been awarded numerous military and civilian awards including an award from the Government of Colombia, the Department of State's Distinguished Service Award, and the U.S. Army Soldiers Medal for heroism. He has published numerous books and articles on national security, biological warfare, and information technology including Bioterror in the 21st Century (Naval Institute Press, October 2009), ICMA Report: Planning for a Pandemic (ICMA Press, Volume 39/Number 3 2007), Securing America's Future: National Strategy in the Information Age (Praeger Security International, September 2005); Leading at the Speed of Light (Potomac Books, November 2006); Assignment Pentagon (Potomac Books, May 2007). He has also served as a fellow at the Council on Foreign Relations and is a current member.

Dr. Gerstein graduated from the United States Military Academy at West Point and has masters degrees from Georgia Institute of Technology in Operations Research, the National Defense University in National Security & Strategic Studies and the Command & General Staff College in National Security Strategy & Policy, and a Doctor of Philosophy degree from George Mason University in Biodefense.

He resides in Alexandria, VA with his wife Kathy. They have two daughters.

KEYNOTE SPEAKERS

Dr. Doon Gibbs

Doon Gibbs leads Brookhaven National Laboratory, a multi-program lab with 3,000 employees, more than 4,000 facility users, and an annual budget of more than $700 million. Home to seven Nobel Prizes, Brookhaven has major programs in nuclear and high-energy physics, physics and chemistry of materials, environmental and energy research, nonproliferation, neurosciences and medical imaging, and structural biology.

Doon Gibbs earned a B.S. in physics and mathematics from the University of Utah in 1977, and an M.S. and Ph.D. in physics from the University of Illinois at Urbana-Champaign, in 1979 and 1982 respectively. He joined Brookhaven in 1983 as an assistant physicist and progressed through the ranks to become a senior physicist in 2000. Gibbs's managerial experience at Brookhaven includes the posts of Group Leader of X-ray Scattering, Associate and Deputy Chair of Physics, Head of Condensed Matter Physics, Interim Director of the Center for Functional Nanomaterials, and Associate Laboratory Director for Basic Energy Sciences. He became Deputy Laboratory Director for Science and Technology in 2007. Gibbs was honored with the 2003 Advanced Photon Source Arthur H. Compton Award "for pioneering theoretical and experimental work in resonant magnetic x-ray scattering, which has led to many important applications in condensed matter physics." Gibbs was instrumental in overseeing the design and construction of Brookhaven's Center for Functional Nanomaterials, and has played a significant role in advancing other major projects including the National Synchrotron Light Source II and Interdisciplinary Science Building. He has also overseen the growth of Brookhaven's basic energy sciences programs, including chemistry, materials science, nanoscience, and condensed matter physics. Gibbs is a Fellow of both the American Association for the Advancement of Science and the American Physical Society.

Richard L. Kauffman

Richard Kauffman joined the administration of New York State Governor Andrew M. Cuomo in February 2013 as the Chairman of Energy and Finance for New York. In this capacity he oversees and coordinates energy policy through a subcabinet of energy agencies and public authorities. His mission is to develop and implement a strategic plan to scale up clean energy, enhance New York's competitiveness for clean energy businesses, and make our energy systems more resilient and reliable.

He has worked in energy and finance at some of the highest levels of both the public and private sector. Prior to his current appointment, Mr. Kauffman served as Senior Advisor to Secretary Steven Chu at the U.S. Department of Energy.

In his private sector career, he was Chief Executive Officer of Good Energies, Inc., a leading investor in renewable energy and energy efficiency technologies, a partner of Goldman Sachs where he chaired the Global Financing Group, and vice chairman of Morgan Stanley's Institutional Securities Business and co-head of its Banking Department.

Mr. Kauffman has served as Board Chairman of Levi Strauss & Co., as well as on the boards of several organizations, including the Brookings Institution and the Wildlife Conservation Society.

Mr. Kauffman earned a bachelor's degree from Stanford University, a master's degree in international relations from Yale University and a master's in public and private management from the Yale School of Management. He is a member of the Council on Foreign Relations.

Dr. Harriet Kung

Dr. Harriet Kung has served as the Associate Director of Science for Basic Energy Sciences (BES) since June 9, 2008. With an annual budget of more than $1.5 billion in 2011, BES is the nation's leading supporter of fundamental research in materials sciences, chemistry, geosciences, and aspects of physical biosciences. BES is also a major supporter of scientific user facilities, including the nation's premier x-ray synchrotron light sources, neutron scattering facilities, electron-beam microcharacterization centers, and nanoscale science research centers. These facilities serve over 13,000 users annually, and they provide the tools for the preparation and examination of materials and the study of their physical and chemical properties and transformations.

During her tenure in BES, Dr. Kung led a number of Basic Research Needs workshops to define scientific research directions for science-to-technology pathways and was instrumental in the success of interagency collaborations, DOE research integration efforts, and international coordination activities.

Under her leadership, BES has pursued new funding modalities in advancing the science for the energy research agenda, including the establishment of 46 Energy Frontier Research Centers and the Fuels from Sunlight Energy Innovation Hub. In 2010, BES also successfully completed the world's first x-ray free electron laser user facility—the Linac Coherent Light Source.

Dr. Kung served as the Director of the Materials Sciences and Engineering (MSE) Division in BES from June 2004 to June 2008. Before joining DOE in 2002 as a program manager in MSE, Dr. Kung was a technical staff member and a project leader in the Materials Science and Technology Division at Los Alamos National Laboratory (LANL). Her research group focused on structure-property relationship in nanoscale materials. She also conducted research in high temperature superconductivity in the Superconductivity Technology Center at LANL. She has published approximately 100 refereed papers and has given over 50 invited technical presentations.

Dr. Kung received her Ph.D. in Materials Science and Engineering with a minor in Applied and Engineering Physics from Cornell University. She is the recipient of numerous awards including the DOE Distinguished Postdoctoral Fellowship award, several performance and leadership service awards at Los Alamos, and the Presidential Meritorious Executive Rank Award in 2010.

Francis J. Murray, Jr.

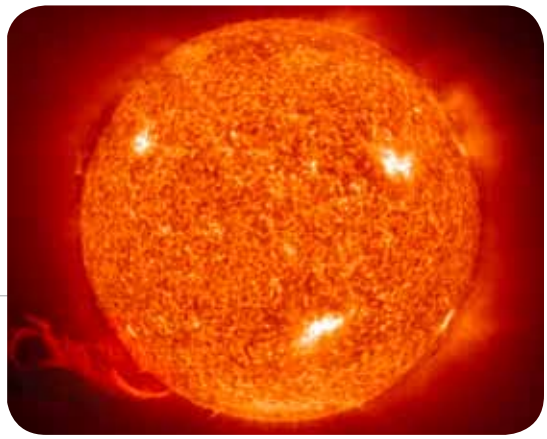
Francis J. Murray, Jr. was appointed President and Chief Executive Officer of the New York State Energy Research and Development Authority (NYSERDA) on January 26, 2009. Prior to his appointment, Mr. Murray served as Senior Advisor at the international environmental consulting firm Ecology and Environment, Inc., where he provided strategic policy and market development guidance on environmental and energy issues to a number of private sector and not-for-profit clients. Mr. Murray also represented the Pace Energy and Climate Center and the Natural Resources Defense Council in the New York Public Service Commission proceeding to establish an energy efficiency portfolio standard program.

From 1996 to 1997, Mr. Murray was policy advisor to the United States Secretary of Energy, assisting in the development of the Clinton Administration's national energy policy. Mr. Murray served from 1992 to 1994 as the New York State Commissioner of Energy and Chairman of the NYSERDA Board of Directors, then a statutory function of the State Energy Commissioner. At that time, he also served as Chairman of the State Energy Planning Board, a multi-agency statutory board charged with the responsibility of developing a comprehensive, integrated energy plan for the State that integrated State energy, environmental and economic development policies.

In 1985, Mr. Murray was appointed Deputy Secretary to the Governor for Energy and the Environment, a position he held until 1992. He served from 1983 to 1985 as Assistant Secretary for Energy and the Environment in the administration of New York State Governor Mario M. Cuomo. He represented New York in numerous national and regional energy and environmental activities, including the Coalition of Northeastern Governors, the National Governors' Association, and the Council of Great Lakes Governors. Mr. Murray began his work on New York State energy issues as legislative counsel and then as an energy and environmental policy advisor to Governor Hugh Carey from 1977 to 1982. He began his career in public service as a legislative assistant to Congressman James V. Stanton (D-Ohio).

Mr. Murray serves on the board of numerous not-for-profit organizations, including the Alliance to Save Energy, the American Council for an Energy-Efficient Economy (ACEEE), the National Association of State Energy Officials, the Northeast Energy Efficiency Partnership, the New York State Smart Grid Consortium (Vice Chair), and the New York Battery and Energy Storage (NY-BEST) Consortium.

Mr. Murray received his Bachelor of Science in Foreign Service cum laude from the Edmund A. Walsh School of Foreign Service at Georgetown University, and his Juris Doctor from Georgetown University Law Center.



KEYNOTE SPEAKERS

Gil C. Quiniones

Gil C. Quiniones is the President and Chief Executive Officer of the New York Power Authority. He joined the Power Authority in October 2007 and was confirmed as the President and CEO in January 2012. The Power Authority, the nation's largest state-owned electric utility, owns and operates 17 power plants and more than 1,400 circuit-miles of transmission lines in various parts of New York State. Its diverse customer base includes government entities, commercial and industrial businesses, not-for-profit organizations, municipal electric systems, and rural electric cooperatives.

Mr. Quiniones is responsible for developing and implementing the Power Authority's strategic vision and mission, and supervises the Power Authority's operations, legal, and financial matters. He also oversees the Power Authority's relationships with elected officials, governmental agencies, other authorities, commissions, and the public.

Mr. Quiniones is a member of the Board of Directors of the Electric Power Research Institute, the electric power industry's international research and development organization, and the Chair of the Board's Committee on Energy Efficiency, Energy Storage, and Smart Grid. He is also active in the affairs of two national public power organizations, serving on the Steering Committee of the Board of the Large Public Power Council (LPPC), as Co-Chair of the LPPC's Government Relations Task Force and as the Power Authority's principal representative to the American Public Power Association. He previously was a member of then-Lieutenant Governor David A. Paterson's Renewable Energy Task Force and Chair of the group's Subcommittee on Distributed Generation.

Before joining the Power Authority staff in October 2007 as Executive Vice President of Energy Marketing and Corporate Affairs, Mr. Quiniones served for more than four years as Senior Vice President of Energy and Telecommunications for the New York City Economic Development Corporation. In that capacity, he was the city's chief consultant on energy policy issues and established and led Mayor Michael R. Bloomberg's Energy Policy Task Force, a public-private group that developed a comprehensive strategy for meeting New York City's future energy needs. He also led the development of the energy chapter of PlaNYC 2030, the city's long-term sustainability plan. In addition, he served as Co-Chair of the New York City Telecommunications Task Force and of the city's Telecommunications Policy Advisory Group.

Previous to his positions in New York City government, Mr. Quiniones worked for Con Edison's regulated and unregulated businesses for 16 years and was one of four co-founders of Con Edison Solutions, the utility's unregulated energy services company.

Mr. Quiniones received a Bachelor of Science degree in mechanical engineering from De La Salle University in Manila and has completed graduate courses in engineering management and technology management at the Stevens Institute of Technology in Hoboken, N.J. He has also participated in executive education programs at the Columbia University Business School.

David Sandalow

As Under Secretary of Energy (Acting), David Sandalow helps oversee the Department's renewable energy, energy efficiency, fossil energy, nuclear energy and electricity delivery programs. As Assistant Secretary for Policy & International Affairs, he helps coordinate policy and manage international activities at the Department. Prior to being confirmed as Assistant Secretary, Mr. Sandalow was Energy & Environment Scholar and a Senior Fellow in the Foreign Policy Studies Program of the Brookings Institution, as well as Energy & Climate Change Working Group Chair at the Clinton Global Initiative. He is the author of *Freedom from Oil* (McGraw-Hill, 2008) and editor of *Plug-In Electric Vehicles: What Role for Washington?* (Brookings Press, 2009). Mr. Sandalow has written widely on energy and environmental policy, including op-eds in the *New York Times, Washington Post, Financial Times* and other publications. Previously, he served as Assistant Secretary of State for Oceans, Environment & Science, a Senior Director on the National Security Council staff, an Associate Director on the staff of the White House Council on Environmental Quality and Executive Vice President, World Wildlife Fund - U.S. Mr. Sandalow is a graduate of the University of Michigan Law School (JD) and Yale College (BA Philosophy).

KEYNOTE SPEAKERS

Allan Schurr

Allan Schurr is responsible for IBM's market strategy, business development, and policy management for the global electric, gas, and water industries. IBM's solutions in these markets include offerings in customer engagement, grid operations, work & asset management, and power generation that integrate IBM's hardware, software, and service offerings. In addition, Schurr leads IBM's utility initiatives for emerging solutions targeting energy in a Smarter Planet. In this role, Schurr is working with utility companies to accelerate energy system modernization and the integration of renewable energy sources and distributed energy assets like plug-in vehicles.

Schurr has authored several papers on new utility customer engagement models and the emerging participatory network. He is a recognized industry speaker and has testified before the US Congress regarding the benefits of smart grid technology and impediments to its development. He serves on the National Renewable Energy Lab Energy Systems Integration Technology Review Panel and holds two patents for residential demand response and plug-in hybrid vehicle grid integration.

Schurr formerly held management and executive positions at Pacific Gas and Electric, PG&E Energy Services, Silicon Energy, and Itron. He received a bachelor degree in mechanical engineering from the University of California Davis and a master degree in business administration from St. Mary's College in California. He is a registered engineer in the State of California.

Dr. Yacov Shamash

Dr. Shamash is Vice President for Economic Development and the Dean of the College of Engineering and Applied Sciences at Stony Brook University. As Vice President, Dr. Shamash supervises the University's three incubators, two New York State Centers for Advanced Technology, the Center of Excellence in Wireless and Information Technology (CEWIT), the Advanced Energy Research and Technology Center (AERTC), the Small Business Development Center, and the workforce development programs of the Center for Emerging Technologies. The College of Engineering and Applied Sciences has more than 2,000 undergraduate and 1,300 graduate students. During his tenure, College research expenditures have increased six fold to $30M per year. In 1994 he helped establish the highly successful state-wide SPIR (Strategic Partnership for Industrial Resurgence) program. During the past ten years, working through the SPIR program, the College has partnered with more than 395 companies to assist them with more than 2,127 projects.

Prior to joining SUNY Stony Brook in 1992, Dr. Shamash served as the Director of the School of Electrical Engineering and Computer Science at Washington State University when he established the National Science Foundation Industry/University Center for the Design of Analog/Digital Integrated Circuits.

He is a member of the Board of Directors of Keytronic Corp., American Medical Alert Corp., and Applied DNA, Inc. He is also a member of the Board of the Long Island Software & Technology Network (LISTnet) and the Board of the Long Island Angel Network.

Dr. Shamash has also held faculty positions at Florida Atlantic University, the University of Pennsylvania and Tel Aviv University. He received his undergraduate and graduate degrees from Imperial College of Science and Technology in London, England. He has authored more than 130 publications and is a Fellow of the IEEE.

Bill Shoettler

As General Manager and Sr. Vice President of National Accounts for Philips Lighting Americas, Bill Schoettler is responsible for understanding customer's needs and leveraging the full breadth and depth of the extensive Philips portfolio to deliver lighting systems that meet their goals. As LED technology continues to digitize lighting, Mr. Schoettler and his team play a crucial role in educating and supporting the Philips partner ecosystem, helping to deliver solutions and services that can help businesses and building owners meet energy and sustainability goals.

Most recently, Mr. Schoettler served as President of Lightolier, a premier Architectural interior luminaries brand that was acquired by Philips in 2008 and remains one of the largest divisions of the company. In addition to manufacturing nearly its entire product portfolio in North America, Philips Lightolier is also a flagship of sustainability for the company, using renewable wind energy to power its Fall River facility, where many of its energy-efficient lighting systems are made.

KEYNOTE SPEAKERS

During his twenty year history with Lightolier, Mr. Schoettler was responsible for growing the business exponentially and introducing the Energy Services Group, which demonstrated the shift in the lighting industry from product sales toward full turn-key lighting solutions. The Energy Services Group works with customers such as Ernst & Young, to develop meaningful solutions that can help them meet their energy and lighting goals.

Prior to joining Lightolier, Mr. Schoettler held several positions with the Siemens Energy and Automation division. Over his 13 year tenure, he rose through the ranks, going from sales management positions to ultimately being responsible for Commercial, Utility and OEM Sales as the Regional Manager for the Southwest based in Dallas, Texas.

Mr. Schoettler is a native of Chicago, Illinois and attended University of Illinois Champagne Urbana. He graduated with Bachelors of Science in Electrical Engineering and went on to attend Georgia State University, pursuing a Masters in Business Administration.

Samuel L. Stanley Jr., MD
On July 1, 2009, Samuel L. Stanley Jr., M.D., became the fifth president of Stony Brook University, taking the helm of one of the nation's most prestigious research institutions and one of just 62 members of the invitation-only Association of American Universities.

Before coming to Stony Brook Dr. Stanley served as Vice Chancellor for Research at Washington University in Saint Louis where he created multiple initiatives to aid faculty in obtaining extramural support, reducing their time in compliance issues, and improving their interactions with technology transfer. A highly distinguished biomedical researcher, Dr. Stanley was one of the nation's highest recipients of support from the National Institutes of Health (NIH) for his research focusing on enhanced defense against emerging infectious diseases.

Since becoming President of Stony Brook University, Dr. Stanley has been focused on obtaining the resources necessary to enable Stony Brook to attain the next level of excellence. He was a champion of the SUNY2020 legislation which will help Stony Brook hire more than 240 new faculty over the next five years. As the most effective fundraiser in the University's history, Dr. Stanley has already quadrupled the number of endowed professorships at the University since his arrival. He has presided over key faculty recruitments in the area of energy and serves on Governor Cuomo's Long Island Regional Economic Development Council, working to improve Long Island's economy, with a special emphasis on supporting projects related to the smart grid, energy storage and renewable energy.

Dr. Stanley currently is the Chairman of the National Science Advisory Board for Biosecurity, serves on the NIH NIAID Advisory Council, serves on the National Security for Higher Education Advisory Board, and is Vice-Chair of Brookhaven Science Associates, which manages Brookhaven National Laboratory.

Dr. Daniel Yergin
Dr. Daniel Yergin is a highly respected authority on energy, international politics and economics. He is Vice Chairman of IHS and Founder of IHS Cambridge Energy Research Associates (IHS CERA), one of the world's leading consulting and research firms in its field. He received the Pulitzer Prize for *The Prize: The Epic Quest for Oil, Money and Power*. Dr. Yergin is also the author of the new international bestseller *The Quest: Energy, Security and the Remaking of the Modern World*, which has been described by *The Economist* as "masterly". He authored the highly acclaimed book *Commanding Heights: the Battle for the World Economy* which chronicles the world's political and economic destiny since World War II. Dr. Yergin plays a leadership role in the global energy industry. He chaired the US Department of Energy's task force on strategic energy research and development. He is a director of the Board of the United States Energy Association, and a member of the US Secretary of Energy Advisory Board (SEAB) and the US National Petroleum Council. As a member of SEAB, he served on the committee that reported to the Secretary and the President on the environmental questions around shale gas. He is the only foreign member of the Russian Academy of Oil and Gas. He is a member of Singapore's International Energy Advisory Board and on the board of the Energy Initiative at the Massachusetts Institute of Technology. Dr. Yergin received his BA from Yale University, and his Ph.D. from Cambridge University, where he was a Marshall Scholar.

KEYNOTE SPEAKERS

Chancellor Nancy Zimpher
Chancellor Zimpher began her work at SUNY with a statewide tour of SUNY's 64 campuses, which became the first phase of a systemwide strategic planning process. This plan, called The Power of SUNY, was launched in April 2010, with the central goal of harnessing SUNY's potential to drive economic revitalization and create a better future for every community across New York.

As The Power of SUNY is put into action, Chancellor Zimpher is leading a diverse set of new initiatives at SUNY in several key areas, including research and innovation, energy, health care, global affairs, and the education pipeline. She has also been a vocal advocate for groundbreaking legislative reforms that ensure SUNY can continue to provide broad access to higher education in an environment of declining state support, while maximizing its impact as an engine of economic development.

Dr. Zimpher currently serves as chair of the Board of Governors of the New York Academy of Sciences and of CEOs for Cities; is vice chair of the NCAA Collegiate Model Enforcement sub-committee, and is a member of the Business-Higher Education Forum. From 2005 to 2011, Dr. Zimpher chaired the national Coalition of Urban Serving Universities.

Prior to coming to SUNY, Dr. Zimpher served as President of the University of Cincinnati, Chancellor of the University of Wisconsin-Milwaukee, and Executive Dean of the Professional Colleges and Dean of the College of Education at The Ohio State University. She has authored or co-authored numerous books, monographs, and academic journal articles on teacher education, urban education, academic leadership, and school/university partnerships.

Chancellor Zimpher holds a bachelor's degree in English Education and Speech, a master's degree in English Literature, and a Ph.D. in Teacher Education and Higher Education Administration, all from The Ohio State University.

In June 2009 Nancy Zimpher became the 12th Chancellor of the State University of New York. With more than 467,000 students, SUNY is the nation's largest comprehensive system of higher education.

Nikola Tesla memorial located at Niagara Falls

SESSION CHAIRPERSONS

DR. GERALD STOKES
Brookhaven National Laboratory
Energy Policy and Climate Change
Unconventional Oil and Gas: Opportunity or risk?
Regional Smart Grid Collaborations & Initiatives

PAUL DECOTIS
Long Island Power Authority
The Utility of the Future: Distributed or not?

GREG HALE
National Resources Defense Council
NYS Green Bank
Transformational Policies to Accelerate Retrofits

GUY SLIKER
NYPA
NY-Sun Initiative

DR. SERGEJ MAHNOVSKI
NYC Office of Long Term Planning & Sustainability
Climate Adaptations & Mitigation Strategies

DR. JIM MISEWICH
Brookhaven National Laboratory
Infrastructure Hardening Strategies & Technologies
State of the Art & Future Smart Grid

DR. DOON GIBBS
Brookhaven National Laboratory
Brookhaven National Laboratory User Facilities
United States Department of Energy User Facilities

GENE MARTIN
AECOM
Lessons Learned – Hurricane Preparation

ROBERT CURRY
United States Department of Energy
Advanced Data Centers & Strategic Directions

DR. ROGER SCHMIDT
IBM
Smart Data Centers Design

DAN MASCOLA
Vigilent, Inc.
Greening Data Centers

DR. XIAOHUI CUI
Oak Ridge National Laboratory & NYIT
Security & Education in Green Data Centers

MATT FRONK
NY-BEST
Storage Requirements for Electric Drive Vehicles

CHAIRMAN GARRY BROWN
New York State Public Service Commission
Grid Scale Energy Storage I

DR. RAJSHEKAR DASGUPTA
Electrovaya
Grid Scale Energy Storage II

MICHAEL STOSSER
Day Pitney
Energy Storage Policy

DR. ALI NOURAI
DNV KEMA Energy & Sustainability
Community Energy Storage

DR. ESTHER TAKEUCHI
Stony Brook University
Technology Advancements in Energy Storage

DR. SATHYA MOTUPALLY
UTC Power
Fuel Cell Advancements

SESSION CHAIRPERSONS

DR. CHRIS PYKE
United States Green Building Council
Retrofit revolution: Energy efficiency & occupant well-being

RICK COOK
Cook & Fox Architects
Rust-Belt Rebirth with Revolutionary Retrofits

CATHERINE HILL
CooperHill and Skidmore College
Revolutionizing retrofit financing

TIMOTHY BANACH
Pace Energy and Climate Center
Combining heat & power for retrofit excellence

SILDA WALL SPITZER
New World Capital
Investing in innovations for retrofits

DR. H. EZZAT KHALIFA
Syracuse University
Innovations for Revolutionary Retrofits

DR. STEVEN KOONIN
NYU Center for Urban Science and Progress
From Data to Urban Informatics

DR. CLAUDIO SILVA
NYU Center for Urban Science and Progress
Visualization of NYC Transportation Data

MICAH KOTCH
NYC ACRE
Towards the Next Quadrennial Technology Review

DR. CONSTANTINE KONTOKOSTA
NYU Center for Urban Science and Progress
Urban Building Energy Data Analytics

LAWRENCE J. WALDMAN
EisnerAmper
Business Innovation – The Long Island Region

MICHAEL FALTISCHEK
Ruskin Moscou Faltischek
Business Innovation – Buffalo

RAY FARRELL
Carter, DeLuca, Farrell & Schmidt LLP
Business Innovation – Syracuse

JIM MERCER
CA Technologies
Entrepreneurs in Innovation

DR. ALEXANDER COUZIS
CCNY
Business Innovation – NYC

DAVID GILFORD
New York City Economic Development Corporation
Promoting Entrepreneurship in New York City

DR. KIMBERLEY ELCESS
Brookhaven National Laboratory
Creating Successful Clean Energy Companies

ELISA KAHN
GBCI
Career Pathways & The Expanding Role of LEED

REBECCA STERLING
NYSERDA
Certification & Accreditations in the Clean Energy Economy

PATRICIA MALONE
Advanced Energy Training Institute
Training for Commercial Buildings

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SUSAN PETTY
AltaRock
Utility/Campus-Scale Geothermal

DR. VIJAY MODI
The Earth Institute at Columbia University
Urban Geothermal System Applications

DR. ARJUN MAKHIJANI
Institute for Energy and Environmental Research
Paths to a Carbon-Free Economy

DR. ANTHONY INGRAFFEA
Cornell University
Choices: Natural Gas or Renewables?

DR. TIMOTHY VOLK
SUNY College of Environmental Science & Forestry
Energy Feedstocks

RAYMOND ALBRECHT
Biomass Thermal Energy Council
Solid Biomass Energy – Residential

DR. ELLEN BURKHARD
NYSERDA
Solid Biomass Energy – Commercial

STEPHEN HOYT
NYSERDA
Biogas

DR. SURESH BABU
Brookhaven National Laboratory
Thermochemical Conversion to Fuels

STEPHEN CAPUTO
New York City
Alternative Liquid Fuels

DR. ANDREW POLLARD
Queen's University
Bio Energy & Products in the Canada – New York Region

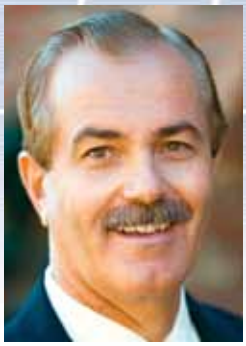
PATRICIA HOFFMAN
United States Department of Energy
Regional Smart Grid Challenges & Opportunities

ED REINFURT
NYSTAR
Smart Grid in T&D: Report on DOE Funded Projects

HG CHISSELL
Viridity
The Role of the Customer & Smart Grid

DR. ROB JOHNSON
Stony Brook University
Energy Cybersecurity I

JEFFREY KATZ
IBM
Energy Cybersecurity II



JOSEPH TARIO
NYSERDA
Advanced Technologies for Commercial Fleets I

SESSION CHAIRPERSONS

DR. DENNIS ASSANIS
Stony Brook University
Alternative Fuels for Heavy Vehicles: Natural Gas and Biodiesel

JOHN BOESEL
CALSTART
Advanced Technologies for Commercial Fleets II

JOHN MARKOWITZ
New York Power Authority
EV Infrastructure

ANDREW BATA
Metropolitan Transportation Authority
Urban Transportation Systems

RICHARD DRAKE
NYSERDA
Transportation Demand Management (TDM)

PAUL BEYER
New York State Department of State
Transportation Land Use (TLU)

DR. ROBERT KARLICEK
Smart Lighting ERC, RPI
Emerging Lighting Technologies

DR. SATYEN MUKHERJEE
Philips Research
Innovative Lighting Solutions & Services

DR. MARIANA FIGUEIRO
Rensselaer Polytechnic Institute
Lighting and Health

DR. FRANK FELDER
Rutgers University
Challenges for Renewables Integration

JESSICA HARRISON
DNV-KEMA
Grid Integration: Role of Storage

ROBERT LOFARO
Brookhaven National Laboratory
Systems Performance & Impact on Electricity Infrastructure

DR. HARRY EFSTATHIADIS
SUNY Albany CNSE
Advanced Photovoltaics – Materials

GARY COHEN
RadTech
UV/EB Curing Enables Advanced Energy Products

DR. DANIEL WALCZYK
Rensselaer Polytechnic Institute
Green Composites Manufacturing - A View From Upstate NY

MIRIAM PYE
NYSERDA
Innovations in Manufacturing of Clean Tech

DR. MARK DRISCOLL
SUNY College of Environmental Science & Forestry
UV/EB Curing - NYS Activities and Opportunities

ANTHONY BEREJKA
Ionicorp
Fiber Reinforced Composites: Energy Savings in Downstate NY

CHRIS GARVIN
Terrapin Bright Green
Biomimetic Approaches to Advanced Manufacturing

WENDY MACPHERSON
NYSERDA
Energy Efficiency in Industry: Case Studies

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DAN KOLUNDZIC
Nanos Research
Energy Policy Challenges in the Canada-New York Region

RICHARD KESSEL
Energy Consultant
OnShore/OffShore Wind 2.0

DR. MARK GLAUSER
Syracuse University
Canada/NY Region Wind Energy Research & Facilities

MR. ROBERT B. CATELL
National Grid
Role of Natural Gas in U.S. Energy Future

JOHN LARSON
IHS Global Insight
Components of a Sustainable Energy Outlook

WILLIAM FREEMAN
Chesapeake Energy
A Path Forward with NGVs

TRIA CASE
CUNY
SMART NY- Setting precedence with NYC's Rooftop Challenge

DR. SEAN AHEARN
CUNY Hunter
Tackling Soft BOS Costs with Smarter IT

JARED HAINES
Mercury Power
We Can Do it Here – NYC Case Studies

WILSON RICKERSON
Meister Consultants Group
Smart. Hot. Water.

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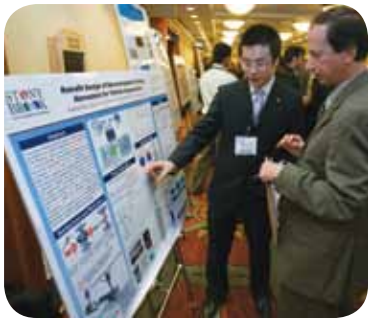
LIST OF CATEGORIES:

- **Undergraduate College student** (judged session)
- **Graduate College Student** (judged session)
- **Industry/Academic Representative**



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ADVANCED ENERGY™ RESEARCH AND TECHNOLOGY CENTER

DAY 1 – APRIL 30

	TRACK A Energy Policy (DAY 1)	TRACK B Research, Technology & Commercialization (DAY 1)	TRACK C Energy Storage (DAY 1)
CONTINENTAL BREAKFAST 7:00AM - 9:15AM **PANEL DISCUSSION** 8:05AM - 9:15AM	**Welcome** – Dr. Yacov Shamash, Stony Brook University **The New York State Energy Highway Task Force** – Moderator, Gil Quiniones, NYPA Frank Murray, NYSERDA; Chairman Garry Brown, New York State Public Service Commission; Kenneth Adams, Empire State Development; Jared Snyder, NYS Department of Environmental Conservation		
BREAK 9:15AM - 9:30AM			
SESSION I 9:30AM - 10:45AM	**• Unconventional Oil and Gas: Opportunity or risk?** **PANEL** **CHAIRPERSON** Dr. Gerald Stokes, Brookhaven National Laboratory John Allocca, National Grid Dr. Steven Hamburg, Environmental Defense Fund	**• Brookhaven National Laboratory User Facilities** **CHAIRPERSON** Dr. Doon Gibbs, Brookhaven National Laboratory Dr. Steven Dierker, Brookhaven National Laboratory Dr. Emilio Mendez, Brookhaven National Laboratory Dr. Robert Harrison, Brookhaven National Laboratory	**• Storage Requirements for Electric Drive Vehicles** **CHAIRPERSON** Matt Fronk, NY-BEST Jaycie Chitwood, Toyota Tim Wells, BAE Systems Dr. Amy Marschilok, Stony Brook University
LUNCH 11:30AM - 2:00PM	Mr. Robert B. Catell, Advanced Energy Center & NYS Smart Grid Consortium; Richard Kauffman, NYS Chairman of Energy & Finance; Acting Undersecretary of Energy, David Sandalow, United States Department of Energy; Allan Schurr, IBM Global Energy & Utilities Industry Dr. Daniel Gerstein, United States Department of Homeland Security		
BREAK 2:00PM - 3:30PM			
SESSION II 2:30PM - 3:45PM	**• Energy Policy and Climate Change** **PANEL** **CHAIRPERSON** Dr. Gerald Stokes, Brookhaven National Laboratory Dr. Sergej Mahnovski, NYC Mayor's Office	**• United States Department of Energy User Facilities** **CHAIRPERSON** Dr. Doon Gibbs, Brookhaven National Laboratory Dr. G. Brian Stephenson, Argonne National Laboratory Dr. Mike Simonson, Oak Ridge National Laboratory Dr. Roger Falcone, Lawrence Berkeley National Laboratory	**• Grid Scale Energy Storage I** **CHAIRPERSON** Chrmn. Garry Brown, New York State Public Service Commission John Zahurancik, AES Storage Matthew Maroon, GE Energy Bill Radvak, American Vanadium Akira Morise, Toshiba
BREAK 3:45PM - 4:15PM			
SESSION III 4:15PM - 5:30PM	**• The Utility of the Future: Distributed or not?** **PANEL** **CHAIRPERSON** Paul DeCotis, Long Island Power Authority Robert Kendall, Navigant Consulting William Zarakas, The Brattle Group Kimberly Harriman, NYS Public Service Commission	**• Lessons Learned – Hurricane Preparation** **PANEL** **CHAIRPERSON** Gene Martin, AECOM Dave Daly, PSEG Timothy Cawley, Con Edison Granville Martin, JPMorgan Chase	**• Grid Scale Energy Storage II** **CHAIRPERSON** Dr. Rajshekar DasGupta, Electrovaya Roger Lin, A123 Dr. Valerio DeAngelis, Urban Power Electric Bikram Chatterji, Third Power
RECEPTION/EXHIBITS/POSTER SESSION 5:30PM - 7:30PM			

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TRACK D	TRACK E	TRACK F	TRACK G
Advanced Building: Revolutionizing Retrofits (DAY 1)	**(DAY 1)**	**Energy Entrepreneur & Start-ups Funding (DAY 1)**	**Clean Energy Workforce Training & Certification (DAY 1)**

Welcome – Dr. Yacov Shamash, Stony Brook University
The New York State Energy Highway Task Force – Moderator, Gil Quiniones, NYPA
Frank Murray, NYSERDA; Chairman Garry Brown, New York State Public Service Commission;
Kenneth Adams, Empire State Development; Jared Snyder, NYS Department of Environmental Conservation

BREAK 9:15AM - 9:30AM

• Retrofit Revoltion: Energy Efficiency & Occupant Well-Being **CHAIRPERSON** Lane Burt, United States Green Building Council William Browning, Terrapin Bright Green Tim Wagner, UTRC	**NOT SCHEDULED**	**• Business Innovation – The Long Island Region** **CHAIRPERSON** Lawrence J. Waldman, EisnerAmper Paul Schwartz, ThermoLift Dr. George Hendrey, COAWAY Young Lee, SubSea	**• Career Pathways & The Expanding Role of LEED PANEL** **CHAIRPERSON** Elisa Kahn, GBCI Neil Rosen, North Shore LIJ Pamela Mendez, WSP Flack & Kurtz

Mr. Robert B. Catell, Advanced Energy Center & NYS Smart Grid Consortium;
Richard Kauffman, NYS Chairman of Energy & Finance;
Acting Undersecretary of Energy, David Sandalow, United States Department of Energy;
Allan Schurr, IBM Global Energy & Utilities Industry
Dr. Daniel Gerstein, United States Department of Homeland Security

BREAK 2:00PM - 3:30PM

• Transformational Policies to Accelerate Retrofits **CHAIRPERSON** Greg Hale, National Resources Defense Council Elena Alschuler, United States Department of Energy Peter Douglas, NYSERDA Lloyd Kass, NYPA	**NOT SCHEDULED**	**• Business Innovation – Buffalo** **CHAIRPERSON** Michael Faltischek, Ruskin Moscou Faltischek Dr. Charles Akers, Isolation Sciences Brian Schultz, University of Buffalo Rob Anstey, Graphene Devices Dr. Vladimir Mitin, OptoElectronic Nanodevices	**• Certification & Accreditations in the Clean Energy Economy PANEL** **CHAIRPERSON** Rebecca Sterling, NYSERDA Joe Sarubbi, Interstate Renewable Energy Council Kristen Ferguson, Interstate Renewable Energy Council Matthew Anderson, Building Performance Institute Richard Lawrence, NABCEP

BREAK 3:45PM - 4:15PM

• Rust-Belt Rebirth with Revolutionary Retrofits **CHAIRPERSON** Richard Cook, Cook + Fox Architects Peter King, King & King Architects Tom Fernandez, The Woodbine Group	**NOT SCHEDULED**	**• Business Innovation – Syracuse** **CHAIRPERSON** Ray Farrell, Carter, DeLuca, Farrell & Schmidt LLP Alessandro Anzani, Wavelectric Nathan Ball, NOHMs Technologies Dr. Shreefal Mehta, Paper Battery Company John McMahon, Cortland Research	**• Training for Commercial Buildings PANEL** **CHAIRPERSON** Patricia Malone, Advanced Energy Training Institute Lia Webster, PECI Michael Bobker, CUNY Baruch Paul Meyer, WSP Flack & Kurtz Don MacDonald, ULDQS Paul Reale, United States Green Building Council

RECEPTION/EXHIBITS/POSTER SESSION 5:30PM - 7:30PM

ADVANCED ENERGY™
RESEARCH AND TECHNOLOGY CENTER

DAY 1 – APRIL 30

	TRACK H BioEnergy (DAY 1)	TRACK I Smart Grid Technology (DAY 1)	TRACK J Advanced Transportation (DAY 1)
CONTINENTAL BREAKFAST 7:00AM - 9:15AM **PANEL DISCUSSION** 8:05AM - 9:15AM	**Welcome** – Dr. Yacov Shamash, Stony Brook University **The New York State Energy Highway Task Force** – Moderator, Gil Quiniones, NYPA Frank Murray, NYSERDA; Chairman Garry Brown, New York State Public Service Commission; Kenneth Adams, Empire State Development; Jared Snyder, NYS Department of Environmental Conservation		
BREAK 9:15AM - 9:30AM			
SESSION I 9:30AM - 10:45AM	• **Energy Feedstocks** **CHAIRPERSON** Dr. Timothy Volk, SUNY College of Environmental Science & Forestry Dan Conable, Cato Analytics Matt McArdle, Mesa Reduction Engineering and Processing	• **Regional Smart Grid Challenges & Opportunities PANEL** **CHAIRPERSON** Patricia Hoffman, U.S. Department of Energy Frank Murray, NYSERDA Stuart Nachmias, Con Edison James Gallagher, NYS Smart Grid Consortium	• **Advanced Technologies for Commercial Fleets I** **CHAIRPERSON** Joseph Tario, NYSERDA Nick Cohn, TomTom Steve Sprouffske, Kapsch TrafficCom Richard McDonough, New York State Department of Transportation
LUNCH 11:30AM - 2:00PM	Mr. Robert B. Catell, Advanced Energy Center & NYS Smart Grid Consortium; Richard Kauffman, NYS Chairman of Energy & Finance; Acting Undersecretary of Energy, David Sandalow, United States Department of Energy; Allan Schurr, IBM Global Energy & Utilities Industry Dr. Daniel Gerstein, United States Department of Homeland Security		
BREAK 2:00PM - 3:30PM			
SESSION II 2:30PM - 3:45PM	• **Solid Biomass Energy – Residential** **CHAIRPERSON** Dr. Ellen Burkhard, NYSERDA Nathan Russell, NYSERDA Dr. Dan Loughlin, U.S. EPA Christopher Brown, Brookhaven National Laboratory	• **Smart Grid in T&D: Report on DOE Funded Projects** **CHAIRPERSON** Ed Reinfurt, Empire State Development Tom Magee, Con Edison Michael Swider, New York Independent System Operator Rob Rowe, National Grid	• **Alternative Fuels for Heavy Vehicles: Natural Gas & Biodiesel** **CHAIRPERSON** Dr. Dennis Assanis, Stony Brook University Paul Kerkhoven, NGVAmerica Steven Levy, Sprague Operating Resources Rocco DiRico, NYC Department of Sanitation Bill Dawson, Volvo
BREAK 3:45PM - 4:15PM			
SESSION III 4:15PM - 5:30PM	• **Solid Biomass Energy – Commercial** **CHAIRPERSON** Dr. Ellen Burkhard, NYSERDA Michael Kelleher, SUNY College of Environmental Science & Forestry Robert Braun, Genesys Engineering	• **The Role of the Customer & Smart Grid** **CHAIRPERSON** H. G. Chissell, Viridity Matthew Enstice, Buffalo Niagara Medical Edward White, National Grid Mohan Wanchoo, Jasmine Systems	• **Advanced Technologies for Commercial Fleets II** **CHAIRPERSON** John Boesel, CALSTART Tom Brotherton, CALSTART Gino Porter, PepsiCo Dana DeMeo, EMD
RECEPTION/EXHIBITS/POSTER SESSION 5:30PM - 7:30PM			

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TRACK K	TRACK L	TRACK M	TRACK N
Advanced Lighting (DAY 1)	**Advanced Manufacturing (DAY 1)**	**OnShore/Offshore Wind & Canada-U.S. Energy Challenges (DAY 1)**	**(DAY 1)**
Welcome – Dr. Yacov Shamash, Stony Brook University **The New York State Energy Highway Task Force** – Moderator, Gil Quiniones, NYPA Frank Murray, NYSERDA; Chairman Garry Brown, New York State Public Service Commission; Kenneth Adams, Empire State Development; Jared Snyder, NYS Department of Environmental Conservation			
BREAK 9:15AM - 9:30AM			
• Emerging Lighting Technologies **CHAIRPERSON** Dr. Robert Karlicek, Rensselaer Polytechnic Institute Dr. Hany Elgala, Boston University Tom Hamilton, Ketra Joseph Adiletta, Digital Lumens	**• UV/EB Curing Enables Advanced Energy Products** **CHAIRPERSON** Gary Cohen, RadTech Dr. Mike Idacavage, EssTech Dr. Mark Tilley, MT Global Partners Eileen Weber, RedSpot	**• Energy Policy Challenges in the Canada-New York Region** **CHAIRPERSON** Dan Kolundzic, Nanos Research Edward Arlitt, Independent Electricity System Operator Dr. Stephen Bird, Clarkson University John Witjes, Queen's University	**NOT SCHEDULED**
Mr. Robert B. Catell, Advanced Energy Center & NYS Smart Grid Consortium; Richard Kauffman, NYS Chairman of Energy & Finance; Acting Undersecretary of Energy, David Sandalow, United States Department of Energy; Allan Schurr, IBM Global Energy & Utilities Industry Dr. Daniel Gerstein, United States Department of Homeland Security			
BREAK 2:00PM - 3:30PM			
• Innovative Lighting Solutions & Services **CHAIRPERSON** Dr. Satyen Mukherjee, Philips Research Dr. Jennifer Veitch, National Research Council of Canada Deborah Burnett, Benya Burnett Consultancy Dr. Francis Rubinstein, Lawrence Berkeley National Laboratory	**• Green Composites Manufacturing – A View From Upstate NY** **CHAIRPERSON** Dr. Daniel Walczyk, Rensselaer Polytechnic Institute Zachary August, Automated Dynamics Gavin McIntyre, Ecovative Design, LLC Dr. Ronald Bucinell, Union College	**OnShore/Offshore Wind 2.0** **CHAIRPERSON** Richard Kessel, Energy Consultant Arthur Kaliski, MilWind Jeff Grybowski, DeepWater Wind Bruce Bailey, AWS Truepower Dr. Kiruba Haran, GE Global Research	**NOT SCHEDULED**
BREAK 3:45PM - 4:15PM			
• Lighting and Health **CHAIRPERSON** Dr. Mariana Figueiro, Rensselaer Polytechnic Institute Dr. Mark Rea, Rensselaer Polytechnic Institute Dr. Usha Satish, SUNY Upstate Medical University Mary Beth Gotti, General Electric Lighting Institute	**• Innovations in Manufacturing of Clean Tech** **CHAIRPERSON** Miriam Pye, NYSERDA Dr. Craig Moe, Crystal IS Dr. Joseph Pegna, Free Form Fibers Dr. Raja Pulikollu, Sentient Science	**Canada/NY Region Wind Energy Research & Facilities** **CHAIRPERSON** Dr. Mark Glauser, Syracuse University Dr. Horia Hangan, University of Western Ontario Dr. Ken Visser, Clarkson University Dr. Dave Johnson, University of Waterloo	**NOT SCHEDULED**
RECEPTION/EXHIBITS/POSTER SESSION 5:30PM - 7:30PM			

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DAY 2 – MAY 1

	TRACK A Energy Policy (DAY 2)	TRACK B Green Data Centers (DAY 2)	TRACK C Energy Storage (DAY 2)
BREAKFAST 7:00AM - 8:45AM **KEYNOTES** 7:45AM - 8:45AM	**Welcome** – Dr. Doon Gibbs, Brookhaven National Laboratory; Ken Daly, National Grid; Dr. Harriet Kung, United States Department of Energy		
SESSION IV 9:00AM - 10:15AM	• **New York State Green Bank** **PANEL** **CHAIRPERSON** Greg Hale, National Resources Defense Council Susan Leeds, NYC Energy Efficiency Corporation Granville Martin, JPMorgan Chase Douglass Sims, NRDC Jeff Pitkin, NYSERDA Richard Kauffman, New York State	• **Advanced Data Center & Strategic Directions** **CHAIRPERSON** Robert Curry, U.S. Department of Energy Robert Huang, The Cadmus Group Jeff Burke, OptiCool, Dr. Ken Birman, Cornell University Paul Bonaro, Yahoo	• **Energy Storage Policy** **PANEL** **CHAIRPERSON** Michael Stosser, Day Pitney Comm. John Norris, Federal Energy Regulatory Commission Robert Pike, NYISO Dr. William Acker, NY-BEST
BREAK 10:15AM - 10:45AM			
SESSION V 10:45AM - 12:00PM	• **NY-Sun Initiative** **PANEL** **CHAIRPERSON** Guy Sliker, NYPA Michael Deering, LIPA Janet Joseph, NYSERDA	• **Smart Data Centers Design** **CHAIRPERSON** Dr. Roger Schmidt, IBM Brad Thrash, GE Dr. H. Ezzat Khalifa, Syracuse University Jack Glass, CitiGroup	• **Community Energy Storage** **CHAIRPERSON** Dr. Ali Nourai, DNV-KEMA Brad Roberts, S&C Electric Dr. Glenn Skutt, PowerHub Systems
BREAK 12:00PM - 12:25PM			
LUNCH 12:25 PM - 1:55	**Welcome** – Dr. Samuel Stanley, Stony Brook University; Chancellor Nancy Zimpher, SUNY; Mayor Michael R. Bloomberg, City of New York; Bill Schoettler, Philips Lighting; Dr. Daniel Yergin, IHS Cambridge Energy Research Associates		
BREAK 1:55PM - 2:15PM			
SESSION VI 2:15PM - 3:30 PM	• **Climate Adaptations & Mitigation Strategies** **PANEL** **CHAIRPERSON** Dr. Sergej Mahnovski, NYC Major's Office Robert Schimmenti, Con Edison Dr. Cynthia Rosenzweig, NASA Goddard Institute for Space Studies John Reese, US Power Generating Company Richard Cohen, NYU Medical Center	• **Green Data Centers** **CHAIRPERSON** Dan Mascola, Vigilent Dr. Nicole Peill-Moelter, Akami Technologies William Amann, M&E Engineers Jim Mercer, CA Technologies	• **Technology Advancements in Energy Storage** **CHAIRPERSON** Dr. Esther Takeuchi, Stony Brook University Chad Hall, Ioxus Larry Thomas, Primet Precision Materials Dr. Stanley Whittingham, Binghamton University
BREAK 3:30PM - 3:45PM			
SESSION VII 3:45PM - 5:00PM	• **Infrastructure Hardening Strategies & Technologies** **CHAIRPERSON** Dr. Jim Misewich, Brookhaven National Laboratory Dr. Ralph Masiello, DNV-KEMA Asim Hussain, Bloom Energy Kevin Peterson, U.S. Department of Homeland Security	• **Securtiy & Education in Green Data Centers** **CHAIRPERSON** Dr. Xiaohui Cui, ORNL & NYIT Dr. Ziqian Dong, NYIT Dr. Roberto Rojas-Cessa, NJIT	• **Fuel Cell Advancements** **CHAIRPERSON** Dr. Sathya Motupally, UTC Power Arkady Malakhov, Solid Cell Andy Marsh, Plug Power Dr. Doreen Edwards, Alfred University

TRACK D	TRACK E	TRACK F	TRACK G
Advanced Building: Revolutionizing Retrofits (DAY 2)	**Informatics in Urban Energy Systems (DAY 2)**	**Energy Entrepreneur & Start-ups Funding (DAY 2)**	**Geothermal & Renewables (DAY 2)**
Welcome – Dr. Doon Gibbs, Brookhaven National Laboratory; Ken Daly, National Grid; Dr. Harriet Kung, United States Department of Energy			
• Revolutionizing Retrofit Financing **CHAIRPERSON** Catherine Hill, Cooper Hill Sidney Davidson, Utilities Conservation Company Thomas Polich, Monolich Solar Associates	**• From Data to Urban Informatics** **CHAIRPERSON** Dr. Ari Patrinos, NYU-CUSP	**• Entrepreneurs in Innovations** **CHAIRPERSON** Jim Mercer, CA Technologies Harry Epstein, Quadrant Management Jennifer Indovina, Tenrehte Ryan McGann, Solar Cool Technologies	**• Utility/Campus-Scale Geothermal** **CHAIRPERSON** Susan Petty, AltaRock Jeff Urlaub, MEP Associates Paul Boyce, P.W. Grosser Consulting
BREAK 10:15AM - 10:45AM			
• Combining Heat & Power for Retrofit Excellence **CHAIRPERSON** Timothy Banach, Pace Energy & Climate Center Gearoid Foley, Inegrated CHP Systems Corp. Joseph Camean, van Zelm Engineers	**• Visualization of NYC Transportation Data** **CHAIRPERSON** Dr. Claudio Silva, NYU-CUSP Dr. Carlos Scheidegger, AT&T	**• Business Innovation – New York City** **CHAIRPERSON** Dr. Alexander Couzis, CCNY Frank Zammataro, Rentricity Jonathan McClelland, DG Energy Partners Mei Shibata, ThinkEco David Mahfouda, Weeels	**• Urban Geothermal Systems Applications** **CHAIRPERSON** Dr. Vijay Modi, Earth Institute of Columbia University John Rice, AKF Group Engineers John Rhyner, P.W. Grosser Consulting Alex Posner, NYC Dept. of Design & Construction
BREAK 12:00PM - 12:25PM			
Welcome – Dr. Samuel Stanley, Stony Brook University; Chancellor Nancy Zimpher, SUNY; Mayor Michael R. Bloomberg, City of New York; Bill Schoettler, Philips Lighting; Dr. Daniel Yergin, IHS Cambridge Energy Research Associates			
BREAK 1:55PM - 2:15PM			
• Investing in Innovations for Retrofits **CHAIRPERSON** Silda Wall Spitzer, New World Capital Group Louis Schick, New World Capital Group Curtis Ravenel, Bloomberg Pat Sapinsely, Build Efficiently/Watt Not	**• Toward the Next Quadrennial Technology Review** **CHAIRPERSON** Micah Kotch, NYC-ACRE Jayanth Eranki, InfoSys Joe O'Connor, VisorPoint	**• Promoting Entrepreneurship in New York City** **CHAIRPERSON** David Gilford, NYC EDC Jeffrey Peterson, NYSERDA Dr. Reed Philips, Energystics Seth Frader-Thompson, EnergyHub	**• Paths to a Carbon-Free Economy** **CHAIRPERSON** Dr. Arjun Makhijani, Institute for Energy & Environmental Research Dr. Georg Maue, Embassy of the Republic of Germany Kristopher Stevens, Ontario Sustainable Energy Association Valerie Strauss, Alliance for Clean Energy NY
BREAK 3:30PM - 3:45PM			
• Innovations for Revolutionary Retrofits **CHAIRPERSON** Dr. H. Ezzat Khalifa, Syracuse University Steve Slayzak, Coolerado William Shultes, NuClimate Tony Abate, Atmos Air Solutions	**• Urban Building Energy Data Analytics** **CHAIRPERSON** Dr. Masoud Ghandehari, NYU-CUSP Laurie Kerr, NYC Office of LTP & Sustainability Andrew Padian, The Community Preservation Corporation	**• Creating Sucessful Clean Energy Companies** **CHAIRPERSON** Dr. Kimberley Elcess, Brookhaven National Laboratory John Freer, GE Trudy Lehner, SuperPower, Inc.	**• Choices: Natural Gas or Renewables?** **CHAIRPERSON** Dr. Anthony Ingraffea, Cornell University Alexander Ochs, Worldwatch Institute Geoff Keith, Synapse Energy Economics Dr. Pat Looney, Brookhaven National Laboratory

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DAY 2 – MAY 1

	TRACK H	TRACK I	TRACK J
	BioEnergy (DAY 2)	**Smart Grid Technology & Cybersecurity (DAY 2)**	**Advanced Transportation (DAY 2)**
BREAKFAST 7:00AM - 8:45AM **KEYNOTES** 7:45AM - 8:45AM	**Welcome** – Dr. Doon Gibbs, Brookhaven National Laboratory; Ken Daly, National Grid; Dr. Harriet Kung, United States Department of Energy		
SESSION IV 9:00AM - 10:15AM	• **Biogas** **CHAIRPERSON** Stephen Hoyt, NYSERDA Donald Chahbazpour, National Grid Lauren Toretta, CH4 Biogas Anthony Fiore, NYC DEP Dave Robau, National Energy	• **Energy Cybersecurity I** **CHAIRPERSON** Dr. Rob Johnson, Stony Brook University Andy Bochman, IBM William Miller, MaCT Christian Glover Wilson, Tigerspike	• **EV Infrastructure** **CHAIRPERSON** John Markowitz, NYPA Richard Lowenthal, Coulomb Technologies Cassandra Powers, Georgetown Climate Center Brian Valenza, Beam Charging
BREAK 10:15AM - 10:45AM			
SESSION V 10:45AM - 12:00PM	• **Thermochemical Conversion to Fuels** **CHAIRPERSON** Dr. Suresh Babu, Brookhaven National Laboratory Dr. Thomas Butcher, Brookhaven National Laboratory Dr. Thomas Amidon, SUNY ESF Dr. Rebecca Boudreaux, Oberon Fuels	• **Energy Cybersecurity II** **CHAIRPERSON** Jeffrey Katz, IBM Dr. Rae Zimmerman, New York University Ernest Hayden, Verizon Special Agent, FBI Cyber Branch	• **Urban Transportation Systems** **CHAIRPERSON** Andrew Bata, MTA Dr. John Tipaldo, NYC DOT Collette Ericsson, MTA Tom Lamb, MTA
BREAK 12:00PM - 12:25PM			
LUNCH 12:25 PM - 1:55	**Welcome** – Dr. Samuel Stanley, Stony Brook University; Chancellor Nancy Zimpher, SUNY; Mayor Michael R. Bloomberg, City of New York; Bill Schoettler, Philips Lighting; Dr. Daniel Yergin, IHS Cambridge Energy Research Associates		
BREAK 1:55PM - 2:15PM			
SESSION VI 2:15PM - 3:30 PM	• **Alternative Liquid Fuels** **CHAIRPERSON** Steven Caputo, NYC Major's Office Isabelle Silverman, Environmental Defense Fund Raymond Albrecht, National Biodiesel Board Dr. Steven Fitzpatrick, Biofine	• **State of the Art & Future Smart Grid** **CHAIRPERSON** Dr. Jim Misewich, Brookhaven National Laboratory Carl Imhoff, Pacific Northwest National Laboratory Dr. Mani Vadari, Modern Grid Solutions Dr. Anjan Bose, Washington State University Dr. Heiko Lehmann, Deutsche Telekom AG	• **Transportation Demand Management (TDM)** **CHAIRPERSON** Richard Drake, NYSERDA Ellwood Hanrahan, NYS DOT Deron Lovass, NRDC Jesse Kafka, vRide
BREAK 3:30PM - 3:45PM			
SESSION VII 3:45PM - 5:00PM	• **Bio Energy & Products in the Canada-New York Region** **CHAIRPERSON** Dr. Andrew Pollard Queen's University Dr. Jon Pharoah, Queen's University Dr. Jeongmin Ahn, Syracuse University Dr. Heather Coleman, Syracuse University	• **Regional Smart Grid Collaborations & Initiatives** **CHAIRPERSON** Dr. Gerald Stokes, Brookhaven National Laboratory Rebecca Norman, VSE Corp Omar Saad, Hydro Quebec Matt Futch, IBM Bruce Fardanesh, NYPA	• **Transportation Land Use (TLU)** **CHAIRPERSON** Paul Beyer, NYS Dept. of State Thomas Madden, Town of Greenburgh Paul Krekeler, NYS DOT Daniel Hernandez, Jonathan Rose Planning Companies

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TRACK K	TRACK L	TRACK M	TRACK N
Northeast Renewable Energy Integration & Advanced Photovoltaics (DAY 2)	**Advanced Manufacturing (DAY 2)**	**Natural Gas: A Critical Resource for Our Energy Future (DAY 2)**	**SMART Tools for Large Scale Solar Deployment (DAY 2)**
Welcome – Dr. Doon Gibbs, Brookhaven National Laboratory; Ken Daly, National Grid; Dr. Harriet Kung, United States Department of Energy			
• Challenges for Renewables Integration **CHAIRPERSON** Dr. Frank Felder, Rutgers University Bruce Bailey, AWS Truepower Robin Shanen, NYPA	**• UV/EB Curing – NYS Activities and Opportunities** **CHAIRPERSON** Dr. Mark Driscoll, SUNY ESF Joseph Bringley, Transparent Materials Tim Shaughnessy, Rapid Cure Technologies	**• Role of Natual Gas in U.S. Energy Future** **CHAIRPERSON** Mr. Robert B. Catell, AERTC & NYSSGC Michael Ruiz, National Grid Russ Young, GE	**• SMART NY – Setting Precedence wih NYC's Rooftop Challenges** **CHAIRPERSON** Tria Case, CUNY Robin Gray, Con Edison Gina Bocra, NYC Dept. of Buildings Jeremiah Couey, CUNY
BREAK 10:15AM - 10:45AM			
• Grid Integration: Role of Storage **CHAIRPERSON** Jessica Harrison, DNV-KEMA Dr. Xiaoyu Wang, Brookhaven National Laboratory Dr. Stephen Bird, Clarkson University	**• Fiber Reinforced Composites: Energy Savings in Downstate NY** **CHAIRPERSON** Tony Berejka, Ionicorp Dr. Marshall Cleland, IBA Industrial Dan Dispenza, Nordon Composite	**• Components of a Sustainable Energy Outlook PANEL** **CHAIRPERSON** John Larson, IHS Global Insight Dr. Sergej Mahnovski, NYC Mayor's Office Dr. Scott Cline, Petroleum Engineering Adam Peltz, Environmental Defense Fund	**• Tackling Soft BOS Costs with Smarter IT** **CHAIRPERSON** Dr. Sean Ahearn, CUNY Hunter Boris Vishnevsky, IBM Darren Hammel, Princeton Power Systems
BREAK 12:00PM - 12:25PM			
Welcome – Dr. Samuel Stanley, Stony Brook University; Chancellor Nancy Zimpher, SUNY; Mayor Michael R. Bloomberg, City of New York; Bill Schoettler, Philips Lighting; Dr. Daniel Yergin, IHS Cambridge Energy Research Associates			
BREAK 1:55PM - 2:15PM			
• Systems Performance & Impact on Electricity Infrastructure **CHAIRPERSON** Robert Lofaro, Brookhaven National Laboratory Robert Schaefer, Also Energy Michael Voltz, LIPA Walter Levesque, DNV-KEMA	**• Biomimetic Approaches to Advanced Manufacturing** **CHAIRPERSON** Chris Garvin, Terrapin Bright Green Dr. Nathanial Cady, SUNY Albany Dr. Magnus Bergkvist, SUNY Albany	**• A Path Forward with NGV's** **CHAIRPERSON** William Freeman, Chesapeake Energy Jim Bruce, UPS Barry Carr, BAF Technologies Paul Kouroupas, VNG.CO	**• We Can Do it Here – NYC Case Studies** **CHAIRPERSON** Jared Haines, Mercury Power Systems Rob Ashmore, Aeon Solar Anthony Pereira, altPower
BREAK 3:30PM - 3:45PM			
• Advanced Photovoltaics-Technology **CHAIRPERSON** Dr. Harry Efstathiadis, University of Albany CNSE Glen Finkel, Pureti Dr. Matthew Eisaman, Brookhaven National Laboratory Patrick Thompson, New Energy Technologies	**• Energy Eficiency in Industry: Case Studies** **CHAIRPERSON** Wendy MacPherson, NYSERDA Peter Serian, Energy & Resource Solutions Lucy Neiman, Energy & Resource Solutions George Zuniga, Energy & Resource Solutions	**NOT SCHEDULED**	**• Smart. Hot. Water** **CHAIRPERSON** Wilson Rickerson, Meister Consultants Group David Gilford, NYC EDC Richard Klein, Quixotic Systems Alison Kling, CUNY

EXHIBIT HALL & BOOTH ASSIGNMENTS

BREAKFAST/LUNCH AREA

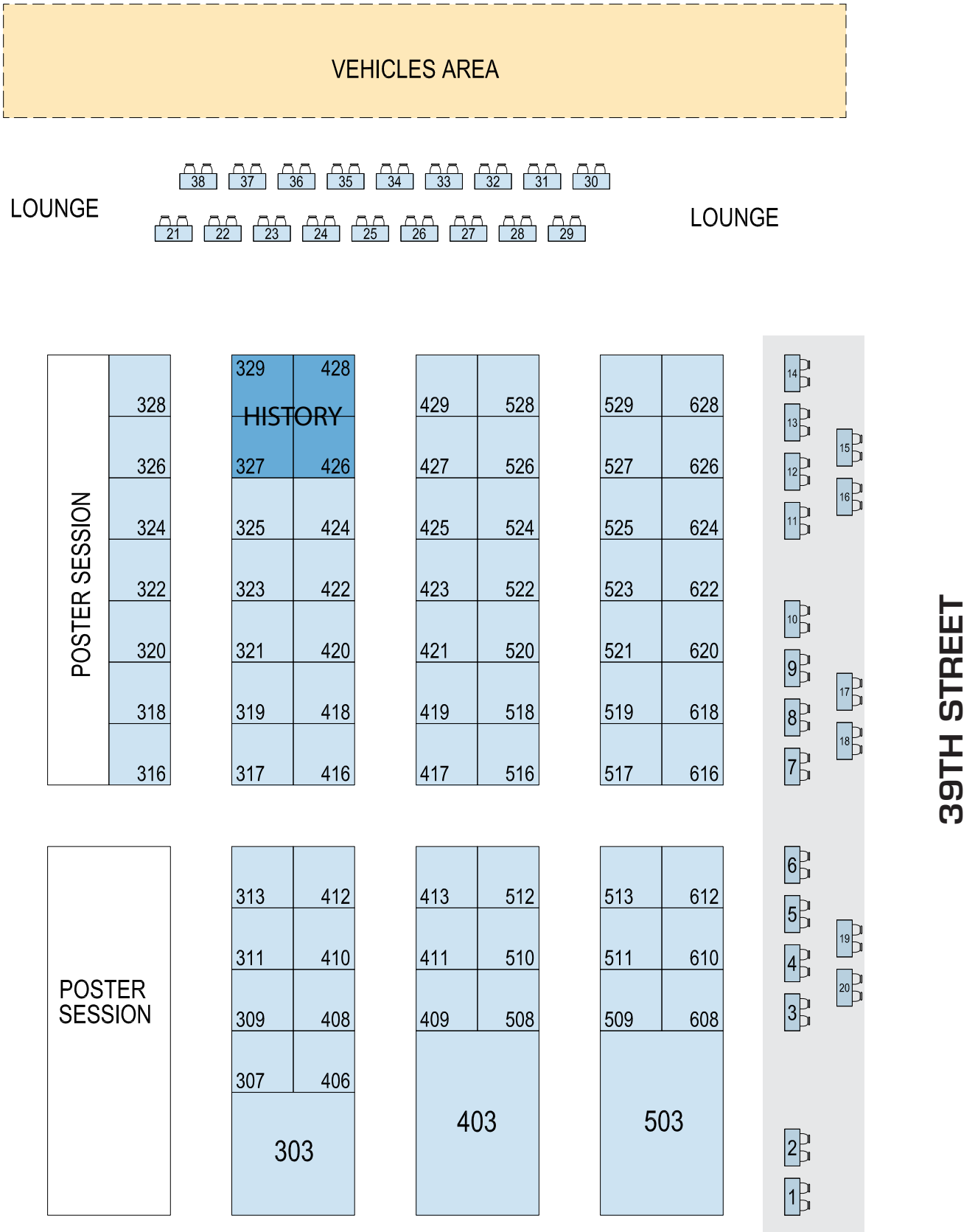

EXHIBIT HALL & BOOTH ASSIGNMENTS

EXHIBITOR	BOOTH #
AEC History	327/329-426/428
Advanced Energy Center	406
Advanced Energy Job Connection	624
AECOM Energy	311
AES Energy Storage	38
Alfred University (CACT)	413
Also Energy LLC	618
ANGA	522/vehicle
American Petroleum Institute	418
Applied Power Systems	520
AtmosAir	526
Ascension Industries, Inc.	610
Binghamton University	35
Brookhaven National Laboratory (BNL)	410/412
CA Technologies	411
CEBIP	608
City College of New York (CCNY)	317
City University of New York (CUNY)	316
Clean Energy	23
ClearEdge Power	420
ConEd	512
ConEd	vehicle area
Cooper Development Association	36
Corix Utilities	322
DNV Kema Energy & Sustainability	303/305-420/404
Division 7 Inc.	324/326
EisnerAmper LLP	22
Eldor Electric	309
Electroveya	32
Empower CES, LLC	25
EnergyCAP, Inc	320
Energy Smart NY	424
Evans Cooling Systems, Inc.	423
Farmingdale State College	509
Frito-Lay	vehicle area
Fisonic	37
G4 Synergetics	321
GE	517/616
GT Power Systems	429/528
GEM Energy	525
Greenway Solutions, Inc.	527
IBM	416
IMT Solar	612
jaga canada climate systems inc.	33
Jasmine Systems Inc.	21
JETRO	27
Leviton Mfg Co.	524
LIFT	510
Long Island Power Authority (LIPA)	419/421
National Grid	417/516
New York Power Authority (NYPA)	403
Networking Magazine	29
NYSERDA	503
NYIT	319
New York State Smart Grid Consortium	409
Nissan Leaf	vehicle area
Northrup Grumann	426
Polytechnic Institute of New York University	512
O'Brien & Gere	521
Philips/Lightolier	519
PowerPHASE LLC	422
PSE&G	313
Ravino Green Power USA	318
RSP	518
Ruskin Moscou Faltischek, PC	24
SATEC, Inc.	322
Sentient Science Corp.	620
SMM Advertising	508
SOLAIREGENERATION	523
Stony Brook University	408
Stony Brook Hybrid Bus	vehicle area
Suffolk County Community College	28
SVAM International, Inc.	511
The Star	vehicle area
The Tesla Society	527-529
Toyota	vehicle area
The Valley Group, a Nexans Co.	307
Twitter	328 & Reg
Toyota Fuel Cell Hybrid	vehicle area
US Energy Group	26
ClearEdgePower	420
Wellen Synergy	311

NYSERDA ENERGY INCUBATOR START UPS & ENTREPRENEURS

Clean Energy Business Incubator Program (CEBIP)
ThermoLift™, Inc. & Watt Fuel Cell Corporation (WATT)
Priority Cool Refrigerants, Inc. & Subsea Energy, N.A., LLC (SSENA
Solar Cool Technologies Inc.
DG Energy Partners
Enertiv
Bandwagon
Radiator Labs
Energy Solutions Forum
Directed Energy, Clean-Tech Incubator & UB Biosciences Incubator
Cortland Research LLC & Paper Battery Company
WavElectric Inc. & NOHMs Technologies
MILWIND LLC
Tenrehte Technologies, Inc.
ElectroMotive Designs LLC
ThermoAura Inc.
Teleos Solar
US Applied Physics Group (USAPG)
Sentient Science Corporation

New York Power Authority (NYPA)

The New York Power Authority (NYPA) is the nation's largest state power organization and one of New York State's leading electricity suppliers. Approximately 80 percent of NYPA's generation comes from hydropower.

NYPA operates 17 generating facilities and more than 1,400 circuit-miles of transmission lines across the state, and uses no taxpayer dollars or state credit in its operations. It is a national leader in demonstrating and promoting the use of energy efficiency, renewables and electric transportation.

In 2012, NYPA announced participation in two major undertakings initiated by Gov. Andrew M. Cuomo. Under the Governor's NY-Sun initiative, NYPA's Solar Market Acceleration Program (Solar MAP) will provide up to $30 million to help reduce solar power costs. NYPA is also helping lead the Governor's New York Energy Highway initiative to upgrade and modernize the state's electric power system.

Discover how the Power Authority is generating more than electricity for New York at www.nypa.gov.

NYSERDA

NYSERDA, a public benefit corporation, offers objective information and analysis, innovative programs, technical expertise and funding to help New Yorkers increase energy efficiency, save money, use renewable energy, and reduce their reliance on fossil fuels. NYSERDA professionals work to protect our environment and create clean-energy jobs. NYSERDA has been developing partnerships to advance innovative energy solutions in New York since 1975. To learn more about NYSERDA programs and funding opportunities visit www.nyserda.ny.gov.

Stony Brook University

Stony Brook University has established itself as one of America's most dynamic public universities, a center of academic excellence and an essential part of the region's economy.

U.S. News & World Report ranks Stony Brook among the top 100 universities in the nation, and the Times Higher Education World University Rankings places us among the top 1 percent of all the universities in the world. A member of the prestigious, invitation-onlyAssociation of American Universities, Stony Brook is one of the 61 leading research institutions in North America and the co-manager of Brookhaven National Laboratory.

Stony Brook's 1,040-acre campus on Long Island's North Shore encompasses not only the main academic areas of the University, but also Stony Brook Medicine, which includes the five health sciences schools,Stony Brook University Hospital, Stony Brook Long Island Children's Hospital, the Long Island State Veterans Home, and our major healthcare centers, programs and clinics.

Brookhaven National Laboratory

The U.S. Department of Energy's Brookhaven National Laboratory conducts research in the physical, biomedical, and environmental sciences, energy technologies, and national security. Brookhaven also builds and operates major scientific facilities available to university, industry and government researchers. Brookhaven is managed by Brookhaven Science Associates, a 50/50 partnership between Stony Brook University and Battelle. Visit us at www.bnl.gov; follow us on Twitter, or like us on Facebook.

National Grid

National Grid (LSE: NG; NYSE:NGG) is an international energy delivery company that connects consumers to energy sources through its networks. In the United States, National Grid delivers electricity to approximately 3.3 million customers in Massachusetts, New York and Rhode Island, and manages the electricity network on Long Island under an agreement with the Long Island Power Authority (LIPA). National Grid owns over 4,000 megawatts of contracted electricity generation that provides power to over one million LIPA customers. It is the largest distributor of natural gas in the northeastern U.S., serving approximately 3.4 million customers in Massachusetts, New York and Rhode Island.

New York State Smart Grid Consortium

The New York State Smart Grid Consortium, a not-for-profit 501(c)6 corporation, is a unique public/private partnership that promotes broad statewide implementation of an efficient, reliable, and secure modernized grid while enabling customers to reduce cost and energy consumption. As the only such organization of its scale in the United States, the Consortium represents all major contributors across the entire energy value chain, including major utilities, global-scale technology developers, research and academic institutions, and public agencies and policy makers. The Consortium serves as a resource and gathering of New York's thought leaders when it comes to the future of New York's grid.

CA Technologies

CA Technologies (NASDAQ: CA) is an IT management software and solutions company with expertise across all IT environments – from mainframe and distributed, to virtual and cloud. Its powerful energy and sustainability management solution, CA ecoSoftware, helps organizations measure, analyze, report, and take action on energy, water, waste, and carbon. CA ecoSoftware helps organizations monitor energy across their enterprise, and more effectively manage their energy and sustainability programs. For more information, visit CA Technologies at www.ca.com.

The City College of New York

Since 1847 The City College of New York has provided low-cost, high-quality education for New Yorkers in a wide variety of disciplines. Over 16,000 students pursue undergraduate and graduate degrees in the College of Liberal Arts and Sciences; The Bernard and Anne Spitzer School of Architecture; The School of Education; The Grove School of Engineering, and The Sophie Davis School of Biomedical Education. For additional information, visit www.ccny.cuny.edu.

GE

GE (www.ge.com) works on things that matter. The best people and the best technologies taking on the toughest challenges. Finding solutions in energy, health and home, transportation and finance. Building, powering, moving and curing the world. Not just imagining. Doing. GE works. In 2011, GE delivered solid results despite the tough economic climate with earnings of $14.8 billion. Industrial cash flow from operating activities for the year remained strong at over $12.1 billion. www.ge.com.

LIPA

The Long Island Power Authority (LIPA) was created in 1998 as a non-profit state authority and Long Island's primary electric service provider. It owns the retail electric transmission and distribution system on Long Island and provides electric service to more than 1.1 million customers in Nassau and Suffolk counties and the Rockaway Peninsula in Queens. LIPA is the 2nd largest municipal electric utility in the nation in terms of electric revenues, 3rd largest in terms of customers served and the 7th largest in terms of electricity delivered. LIPA's mission is to provide highly reliable and economical electric service through our valued workforce with a commitment to superior customer service, accountability and transparency in all of our operations, while being recognized as a leader in the advancement of efficiency and renewable energy.

Polytechnic Institute of New York University

Polytechnic Institute of New York University (formerly Polytechnic University), an affiliate of New York University, is a comprehensive school of engineering, applied sciences, technology and research, and is rooted in a tradition of invention, innovation and entrepreneurship: i2e. Founded in 1854, it is the nation's second-oldest private engineering school. In addition to its main campus in downtown Brooklyn, it offers programs at sites throughout the region and around the globe. For more information, visit www.poly.edu.

SMM Advertising

SMM is the **Advanced Energy 2013** official marketing agency. It is a member firm of the American Association of Advertising Agencies and has a 28-year history of serving technology-based clients. The agency has deep roots in the energy industry, as well as electronics, bioscience, healthcare and employee recruitment. SMM has also been recognized by Crain's B-to-B magazine as one of America's top business-to-business advertising agencies since 2003. Visit us at: www.smmadvertising.com

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America's Natural Gas Alliance (ANGA)
America's Natural Gas Alliance (ANGA) represents 28 of the nation's leading independent natural gas exploration and production companies. ANGA members are dedicated to increasing the appreciation of the environmental, economic and national security benefits of clean, abundant, American natural gas. Learn more about ANGA at www.anga.us

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Carter, DeLuca, Farrell & Schmidt, LLP
Carter DeLuca Farrell & Schmidt, LLP, a leader in intellectual property law, provides cost effective services to a large cadre of national and international clients. Throughout the phases of product or brand development, we form a critical part of our client's development teams to provide preparation, prosecution and clearance services to maximize protection while steering clear of freedom-to-operate obstacles. We also provide extensive IP due diligence services and follow on IP asset assimilation and prosecution to maximize our clients' business objectives.

CEWIT Korea
Founding of CEWIT KOREA is the fruition of high-tech exchange and cooperation of both Korea and the US. This center is certain to spur the studies on commercialization of the mutual supplementation and integration of the strengths of CEWIT Research Center at Stony Brook University in the US and the strengths of Korea.

Deepwater Wind, LLC
Deepwater Wind is the U.S. leader in offshore wind power and transmission projects. Deepwater has proposed to supply Long Island with renewable energy from a 900 MW windfarm located 30 miles east of Montauk via a new transmission system that will also link the island to New England. Deepwater is also preparing to construct in 2013 the first U.S. offshore wind farm, the 30 MW Block Island Wind Farm.

IBM
IBM supports the sustainability business imperative by helping utilities and power consumers add digital intelligence to their grids and facilities. These smart grids and buildings use sensors, meters, digital controls and analytic tools to monitor, control and automate energy management—from power plant to the consuming device.

PSE&G
Public Service Electric and Gas Company (PSE&G) is one of the largest combined electric and gas companies in the United States and is New Jersey's oldest and largest publicly owned utility. PSE&G serves nearly three quarters of New Jersey's population and is the largest subsidiary of PSEG.

Hydro Quebec
Hydro-Québec generates, transmits and distributes electricity. Its sole shareholder is the Québec government. It uses mainly renewable generating options, in particular large hydro, and supports the development of other technologies—such as wind energy, biomass and small hydro—through purchases from independent power producers. It also conducts R&D in energy-related fields, including energy efficiency. The company has four divisions:

Hydro-Québec Production Hydro-Québec TransÉnergie
Hydro-Québec Distribution Hydro-Québec Équipement et services partagés

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Alfred University's Center for Advanced Ceramic Technology (CACT)
The Center for Advanced Ceramic Technology (CACT) specializes in applied and technical research of engineered materials which are a key component of most technologies for generating, storing, distributing, and utilizing energy. Our energy research includes: Fuel cells, including anode, cathode, electrolyte, and vitreous sealants; Hydrogen storage materials; Photocatalytic materials for hydrogen production: Optical coatings for solar energy devices; Membranes for hydrogen purification and biomedical; Materials for energy storage batteries; High temperature thermoelectric materials. Contact Barry Watkins Tel: (607) 871 2473 Email: watkinsb@alfred.edu Web: cact.alfred.edu

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Caithness Long Island, LLC

Caithness Long Island, LLC sited, permitted, financed and constructed of one of the cleanest, most energy efficient and water conserving power plants in New York State. The Caithness Long Island Energy Center was brought online in the summer of 2009, and is currently providing Long Island, NY with approximately 350 MW of clean, reliable power.

Con Edison, Inc.

Consolidated Edison, Inc., is one of the nation's largest investor-owned, energy-delivery companies, with approximately $13 billion in annual revenues and $39 billion in assets. It operates two regulated subsidiaries: Con Edison of New York, and Orange and Rockland Utilities, and three competitive energy businesses: Con Edison Solutions, Con Edison Energy, and Con Edison Development.

The City University of New York

As this nation's largest urban university, the City University of New York (CUNY) seeks to play a transformational role in America's sustainable future. Through our Energy Institute, industry partnerships within our NYCleantech Collaborative at CUNY SustainableWorks, our leadership of the NYC Solar America City Partnership and CUNY's commitment to reduce its carbon footprint, we strive to create a more sustainable future.

EisnerAmper LLP

EisnerAmper LLP is a leading full-service accounting and advisory firm and among the largest in the United States. We provide audit, accounting, and tax services, as well as corporate finance, internal audit and risk management, litigation consulting, forensic accounting, and other professional advisory services to a broad range of clients across many industries. We work with high net worth individuals, closely held businesses, middle market and Fortune 500 companies. EisnerAmper provides services to more than 150 public companies and over 1,000 financial services entities. As companies grow, we assist them with a full complement of services to help them reach their goals every step of the way. With offices in New York, New Jersey, Philadelphia, California and the Cayman Islands, and as an independent member of PKF International, EisnerAmper serves clients worldwide.

LIFT

LIFT is a multi-faceted non-profit economic development organization serving New York State as an intermediary between industry, academia and government creating collaborative environments for technology commercialization and manufacturing. LIFT's goal is to strengthen the economy of the State through the advancement of its technology-based industry as the most effective means for regional economic development. LIFT's program includes activities that educate, promote, attract, stimulate, develop, and expand science and technology oriented economic activities.

Ravano Green Power USA

Ravano Green Power USA is your direct and bankable EPC contractor supplying Turnkey solutions for industrial, commercial, agricultural roof, ground mount and innovative car-port solar PV systems. This service includes all stages of project development: sites surveys, system design, project management, components purchasing, installation, testing, connection and operation & maintenance.

Ruskin Moscou Faltischek P.C.

The firm has an active Energy practice which includes: development of power plants, electric and gas transmission lines, negotiation of power purchase agreements, site selection and approvals, asset acquisitions, regulatory approvals, zoning, real property tax planning, environmental, financing, incentives and, where necessary, litigation. We bring together these wide-ranging disciplines and provide comprehensive advice and counsel to meet challenges faced by providers of energy resources.

SVAM International, Inc.
Founded in 1994, SVAM International Inc is a global Information Technology (IT) services provider that delivers value and competitive advantage to our customers by providing technology expertise quickly. Headquartered on Long Island, NY, with multiple offices in the United States and development centers in India and Mexico, SVAM's global network of highly experienced and knowledgeable technology consultants is focused on meeting our customers' needs for the highest quality, most cost effective software solutions and services.

Farmingdale State College
Green then. Green now. A pioneering institution in sustainability and renewable energy since its founding in 1912, Farmingdale State College hosts the Institute for Research and Technology Transfer (IRTT), the Solar Energy Center (SEC), and the Green Building Institute (GBI), which are all involved with energy-related education and research.

AECOM Energy
With over 100 years of experience in more than 125 countries around the world, AECOM is a global leader in providing full turnkey services for a broad range of markets, including educational and health care facilities, state and local governments, and major utilities and power companies. We have conceived, planned, built and provided ongoing management for energy projects of every type and size, totaling more than 120,000 MW of installed generating capacity, 16,777 miles of transmission lines and $800MM in various applications, including substantial central utilities/districts, energy efficiency and carbon management, and packaged HVAC solutions.

Advanced Energy Training Institute
The Advanced Energy Training Institute, part of Stony Brook University Corporate Education and Training (CET), is the training division of the Advanced Energy Research and Technology Center. Working with core partners and leaders in the clean energy economy, AETI is establishing a platform for skills, knowledge, and credentials necessary in this evolving area.

AES Energy Storage, LLC
AES Energy Storage develops, owns and operates grid-scale advanced energy storage projects. AES serves power markets, generators and utilities with 76MW of battery based energy storage in operation or construction and over 500MW in development. AES's industry leading projects are bringing the next generation of flexible capacity to the power grid. Visit us at www.aesenergystorage.com

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AtmosAir Solutions/Clean Air Group
AtmosAir's air purification technology allows for significant energy reduction while improving indoor air quality. Our green patented bi-polar ion technology reduces airborne contaminants and odors and also allows buildings to lower outside ventilation rates and reduce HVAC energy costs. These systems can be designed into both new and existing buildings.

Center of Excellence in Wireless and Information Technology (CEWIT)
To best capitalize on the IT revolution, spur economic growth, advance scientific research and develop the technologies of tomorrow, the Center of Excellence in Wireless and Information Technology (CEWIT) was created in 2003. The Center is a next generation research and educational facility whose mission is three-fold: become recognized as a world leader in inter-disciplinary research in the emerging, critical technologies of the information age, address the skilled technology worker shortage, and foster new enterprise development.

SUNY Energy Smart New York Office of Sustainability
Posters and PowerPoint highlighting SUNY energy and sustainability initiatives throughout the system, not only with facilities but also research.

Clean Energy Business Incubator Program (CEBIP)
CEBIP, under direction of the Long Island High Tech Incubator (LIHTI), provides mentoring to developers of clean energy technologies to help them establish successful enterprises to bring their technologies to market. CEBIP's goal is to incubate "green" technologies by helping to develop and commercialize them, and to create and sustain growth companies.

ClearEdge Power
ClearEdge Power provides clean, dependable power systems that scale from 5kW to multiple megawatts. As the most experienced fuel cell producer, ClearEdge Power is transforming power generation with innovative solutions that help customers reduce electricity bills, improve energy efficiency and reduce carbon emissions. For more information, please visit www.clearedgepower.com

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Eldor Contracting Corporation
Eldor Contracting Corporation is one of the New York-Tri State region's largest electrical construction and renewable energy companies. Recognized for its effective performance on the most complex, challenging projects, Eldor offers end-to-end services, including: electrical construction, value engineering, procurement, construction and renewable energy solutions.

Japan External Trade Organization (JETRO)
Japan External Trade Organization (JETRO) is a Japanese governmental organization that facilitates international trade and investments between Japan and the world. JETRO helps U.S. companies set up an office in Japan quickly and cost effectively by providing various services. Stop by our section for more information about business opportunities in Japan.

LIHTI and the Stony Brook Incubator System
Stony Brook University has 4 technology incubators; LIHTI (www.LIHTI.org), Calverton Incubator (www.stonybrook.edu/calverton), CEWIT Incubator (www.CEWIT.org/incubator), and the AERTC Incubator (http://aertc.org/incubator) offering high space to high tech companies. Multiple programs assist our entrepreneurs with their technology businesses.

Northrop Grumman
Northrop Grumman is a leading global security company providing innovative systems, products and solutions in aerospace, electronics, information systems, and technical services to government and commercial customers worldwide. Please visit www.northropgrumman.com for more information.

Philips/Lightolier
Philips Electronics: A Health and Well-being company, focused on improving people's lives through meaningful innovations. A world leader in healthcare, lifestyle and lighting, Philips integrates technologies into solutions, based on customer insights and the brand promise of "sense and simplicity".

The Valley Group, Inc., a Nexans company
The Valley Group, a Nexans company, is the world leader in providing Dynamic Line Ratings (DLR), a technology whose significance has skyrocketed with the advent of the Smart Grid. Benefits include: improving network reliability; relieving congestion; accelerating integration of wind farm generation into the existing network; and improving grid efficiency. The industry-leading Valley Group has provided DLR systems to over 100 utilities on 5 continents.

AlsoEnergy, LLC
AlsoEnergy provides the most comprehensive energy monitoring and financial management software solutions for renewable energy developers, manufacturers and investors.

American Petroleum Institute
API is a national trade association that represents all segments of America's technology-driven oil and natural gas industry.

Applied Power Systems
U.S. designer and manufacturer of power systems: Inverters, Converters, rectifier assemblies, and power supplies. Air or liquid cooled versions. Drivers for IGBTs, SCRs and MOSFETS

Ascension Industries
Ascension Industries - Your Green Energy Partner for innovative product development, engineering, design and contract manufacturing. ISO 9001:2008

Corix Utilities
Corix is a fully integrated provider of utility infrastructure products, services and systems including measurement field services. We focus on delivering flexible and innovative solutions.

Division 7, Inc.
Division 7 Inc. was established in 1994 by principals Kerry Coburn, President, W.B.E. and Richard Ciota, CEO. Combined, they have over 40-years experience in commercial/residential roofing, vegetative/green roofing and residential solar.

DNVKema Energy
DNV KEMA Energy & Sustainability is a global, leading authority in business and technical consultancy, testing, inspections & certification, risk management, and verification, along the energy value-chain.

EnergyCAP Energy Management Software
EnergyCAP software is used by over 1,500 organizations, including the entire SUNY System, for utility bill management, energy and greenhouse gas tracking, auditing, benchmarking, bill processing, reporting, and analyzing.

Evans Cooling Systems
Evans Cooling Systems manufactures a waterless engine coolant that helps reduce fuel consumption and CO2 emissions. A permanent coolant, Evans reduces future coolant replacement and disposal and avoids corrosion, electrolysis and cavitation erosion.

GT Power Systems Inc, of New York and Mac Boring of New Jersey
Are full Yanmar CHP Co. generation distributors. Yanmar CHP Systems reduce operating cost for residential and commercial applications.

G4 Synergetics
G4 Synergetics is an energy storage company focused on high power storage solutions. Located in Alachua, Fl., G4 has 100 acres available for battery manufacturing.

GEM Energy
GEM Energy optimizes the efficiency of facilities for reduced lifetime operating costs through comprehensive energy services and technologies including integration of power generation, advanced heating/cooling systems, supply-side procurement/management, demand-side load reduction and building controls for commercial, industrial, institutional and mission critical facilities.

Leviton Mfg. Co.
Leviton is a leading global manufacturer of lighting and energy management systems. Save energy, meet code compliance, achieve LEED certification with our award-winning products.

O'Brien & Gere
O'Brien & Gere develops comprehensive energy programs tailored to the unique needs of each client, delivering energy efficient demand and reliable, low cost supply solutions.

PowerPHASE
15% more peaking power from your gas turbine plant. Half the cost of peaker GT. 10-40% more efficient. Installed in 6-9 months.

RSP Systems
RSP Systems is the exclusive regional Capstone Turbine distributor who helps our clients develop an on-site cogeneration strategy utilizing microturbines.

SATEC Inc.
SATEC is a solutions-oriented global leader of intelligent power measurement instrumentation. SATEC's "Smart & Simple" approach to digital design is revolutionizing the industry. www.satec-global.com

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Sentient Science Corporation
Sentient Science's DigitalClone technology was developed with $20M+ and was validated by NASA to reduce physical design, testing, and maintenance expense and time by 50%.

Solaire Generation
Solaire Generation is the market leader for design, fabrication and installation of innovative solar carport structures, and is now offering a Photovoltaic/Electric Vehicle carport kit.

Syracuse Center of Excellence in Environmental and Energy Systems
Syracuse Center of Excellence engages collaborators at 200+ companies and institutions to address global challenges in clean and renewable energy, indoor environmental quality, and water resources. Our members conduct targeted research, demonstrate new technologies, commercialize innovations, and educate the workforce.

Wellan Synergy
Wellan nonchemical water treatment based on cancelling the waves of rust scale to clean and maintain boilers, CT and biofilms. NonMagnetic, no coils or electricity.

The Center for Autonomous Solar Power (CASP) at Binghamton University
The Center for Autonomous Solar Power (CASP) at Binghamton University conducts research on thin film solar cells fabricated from earth abundant elements on flexible substrates.

Clean Energy
Clean Energy is the largest provider of natural gas fuel for transportation in North America and a global leader in the expanding natural gas vehicle market.

Copper Development Association
CDA, is the market development, engineering and information services arm of the copper industry in North America. For information contact CDA at www.copper.org.

EmPower CES, LLC
EmPower Solar is a premier solar installation company serving residential and commercial markets. EmPower was the #1 installer in LIPA territory in 2011.

Electrovaya
Electrovaya is a manufacturer of Lithium Ion SuperPolymer® batteries and battery-related products. Based in North America, Electrovaya products have been successfully implemented in the utility, automotive, and healthcare markets.

Fisonic
Fisonic's breakthrough EnergyMAX heat exchange technology will save Manhattan steam customers billions of gallons of water and millions of gallons of fossil fuel annually.

IMT Solar
IMT Solar, located near Buffalo, NY, is in the business of selling and supporting quality control, test, and measurement equipment into the renewable energy market across North America.

jaga Canada Climate Systems, Inc.
Jaga is one of the world's leading specialists in the manufacture of energy-saving hydronic heating and cooling solutions. More information: www.jaga-usa.com.

Jasmine Systems, Inc.
Jasmine Systems enables consumers to save energy and money using HAN technology. Utilities can also implement Demand Response programs and interact one-on-one with consumers.

juwi Solar Inc.
juwi solar Inc. (JSI) is a privately-held solar energy generation company based in Boulder, Colorado. JSI's primary business is the development, design, construction, operation and maintenance of utility-scale (1MW and larger) solar energy generation facilities in North America. To date JSI has successfully built large-scale solar projects in Arizona, Florida, Nevada, New Jersey, North Carolina, Ohio and Texas. JSI is majority-owned by juwi Holding AG of Germany. With over 600 employees worldwide, juwi's solar group has built more than 1,500 solar photovoltaic installations globally, totaling more than 1GW of operating capacity.

Networking Magazine
Networking® Magazine, launched in 1991, the only monthly providing readers "who's who, what's what and who and what's green" in NY and around the world. The resource for decision makers, critical link between B2B and NFP worlds to advance corporate interests, vital causes and environmental sustainability; kept as a reference for months. www.NetworkingMagazineUSA.com

Suffolk County Community College
Suffolk County Community College is a leader in energy efficiency education, training and certification, including LEED, energy auditing (BPI certification) and solar technology (NABCEP certification).

The Tesla Science Foundation
The Tesla Science Foundation 501(c)3 was formed to promote the legacy of Nikola Tesla by raising awareness of his accomplishments and contributions to the 21st Century to include introducing his many patents and inventions that remain applicable to our current needs. We bring together those with a genuine interest in Tesla through educational programs, workshops, meetings, and public events. TeslaScienceFoundation.org

US Energy Group
US Energy Group's system provides comprehensive and cost-effective building energy management that can reduce energy costs for residential and commercial properties.

Frito-Lay
When you think of Frito-Lay, you probably think of our wonderful snacks, whether it is, Lays Chips, Doritos or Cheetos, our snacks are everywhere. What you may not associate Frito-Lay with is what we are doing to improve environmental sustainability. Frito-Lay has a long history of conserve and preserve efforts, from our Plants and Distribution Centers who are focused on achieving zero landfill, to our fleet which is focused on reducing our GHGE and traditional fossil fuels by 50% by the year 2020.

Nextek Power Systems, Inc.
Nextek Power Systems, Inc. and Dynamic Supplier Alignment, Inc. present DC Coupling and the STAR ™ Solar Generator providing DC efficiencies and renewable energy globally.

Toyota
The Toyota Fuel Cell Hybrid Vehicle advanced (FCHV-adv) is based on the popular Toyota Highlander mid-size SUV. It utilizes the same core hybrid synergy drive (HSD) technology utilized in the Toyota Prius. The FCHV-adv fuel cell system features four compressed hydrogen fuel tanks, an electric motor, a nickel-metal hydride battery, and a power control unit. Hydrogen gas is fed into the fuel cell stack where it is combined with oxygen. The electricity produced by this chemical reaction is used to power the electric motor and to charge the battery.

NYSERDA ENERGY INCUBATOR START UPS & ENTREPRENEURS
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ThermoLift™, Inc. & Watt Fuel Cell Corporation (WATT)
Priority Cool Refrigerants, Inc. & Subsea Energy, N.A., LLC (SSENA
Solar Cool Technologies Inc.
DG Energy Partners
Enertiv
Bandwagon
Radiator Labs
Energy Solutions Forum
Directed Energy, Clean-Tech Incubator & UB Biosciences Incubator
Cortland Research LLC & Paper Battery Company
WavElectric Inc. & NOHMs Technologies
MILWIND LLC
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ElectroMotive Designs LLC
ThermoAura Inc.
Teleos Solar
US Applied Physics Group (USAPG)
Sentient Science Corporation

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Individuals Attending

	2007	2008	2009	2010	2011	2012*	2013**
Attendees	270	960	1080	1441	443	1640	1460

Corporate/Organizational Participation

	2007	2008	2009	2010	2011	2012*	2013**
Represented	100	375	466	533	214	237	254
Exhibiting	18	47	67	114	49	90	128

Individuals Presenting

	2007	2008	2009	2010	2011	2012*	2013**
Presenters	21	136	192	232	123	342	363

Academic Participation

	2007	2008	2009	2010	2011	2012*	2013**
College/Universities Represented	6	17	31	37	25	31	31
Posters Presented	8	36	48	59	37	60	96

* Advanced Energy 2012 cancelled due to Hurricane Sandy. (estimates)

** Estimates based on Data as of April 2013

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RAVANO greenpower
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The Valley Group
a Nexans company

NORTHROP GRUMMAN

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