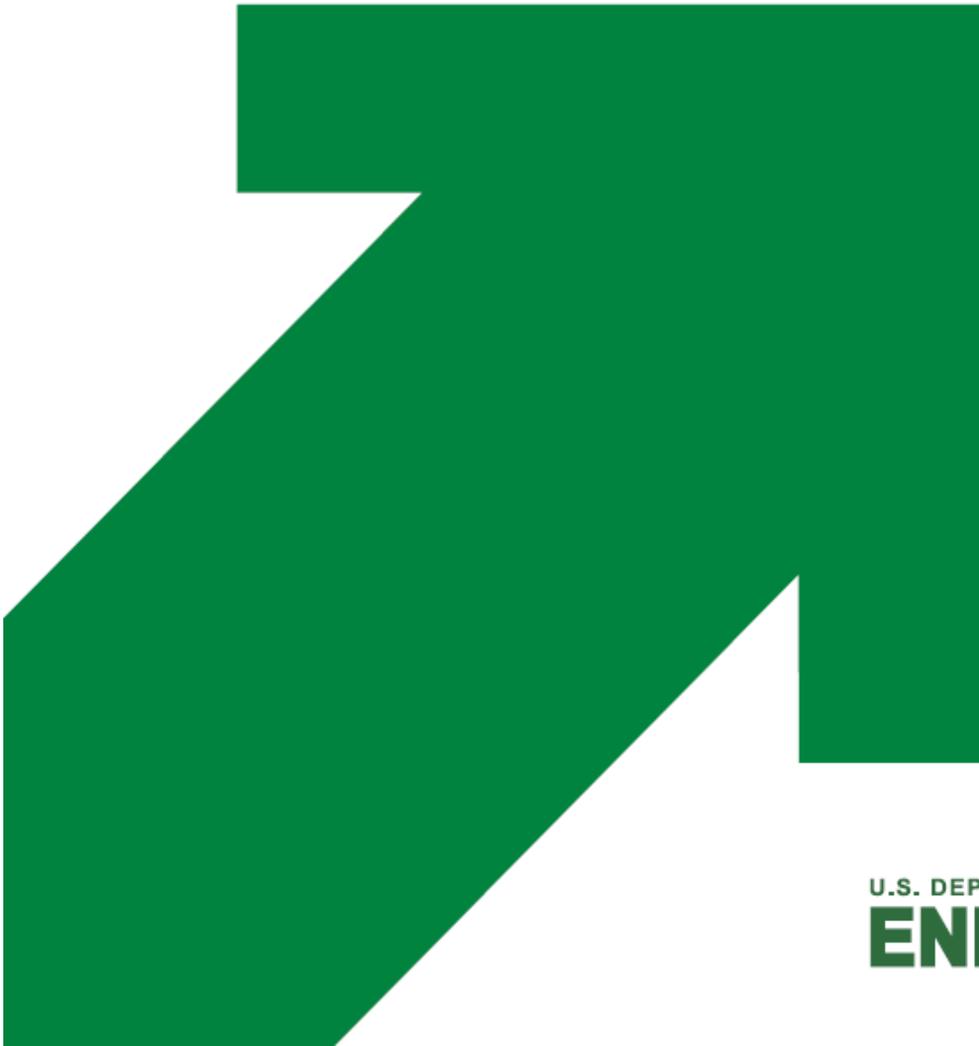




Better Buildings Case Competition



U.S. DEPARTMENT OF
ENERGY

Better Buildings Case Competition

Thank you for helping to make the 2014 Better Buildings Case Competition (BBCC) a great success.

Since its launch in 2012, the annual BBCC has supported President Obama's Better Buildings Initiative goal to reduce energy consumption by at least 20% by 2020 in commercial and industrial buildings across the U.S. by providing actionable solutions to barriers to energy efficiency. Over the years, the BBCC has grown as an industry-recognized forum for innovative problem-solving.

Drawing together skills and experience in engineering, real estate, finance and urban planning, the competition provides the next generation of entrepreneurs and policymakers with an opportunity to tackle real-world problems and identify creative solutions that can be used as models for other businesses and organizations across the marketplace. This annual competition also helps launch students' careers in clean energy and energy efficiency.

The barriers being addressed this year are some of the hardest problems of the market today:

- **Welcome Home to Savings: Distributed Generation in Multifamily Housing** - Students were challenged to develop a replicable strategy to expand energy efficiency and distributed generation at federally assisted housing complexes.
- **Picking up PACE: Taking Commercial PACE Financing to Scale** - Students were challenged to develop a program structure and a business plan that states can use to effectively implement PACE financing and achieve scale.
- **Electri-City: Energy Management in Public Buildings** - Students were challenged to recommend a scalable, sustainable, and replicable data acquisition and management strategy for publicly owned buildings.
- **Experimenting with Efficiency: Greening the Grant Process for Research Institutions** - Students were challenged to develop the business case and implementation strategy for universities to promote energy efficiency in all projects funded with external grant funds, considering every perspective (research facility, grant management, and researcher).
- **Here Comes the Sun: Satisfying RPS with Solar** - Students were challenged to develop a cost effective solar incentive program strategy for utility companies charged with RPS satisfaction, including a solar carve out.
- **A Side of Savings: Energy Efficiency in the Restaurant Franchise Model** - Students will develop a strategy for franchise's to promote energy efficiency in franchisee locations, including consideration of the complicated ownership, investment, and management.

Students will be awarded for Best Proposal - *Solution would be effective and is also feasible to implement. This strategy and approach could be replicable by many entities in similar situations, and Most Innovative Proposal- While still being feasible, proposal represents a distinct departure from current industry practice and could be a break-through solution that catalyzes market growth.*

Let The Games Begin.

Better Buildings Case Competition

U.S. Department of Energy

1000 Independence Ave. SW Washington DC 20585

Metro: Blue/Orange Line , Smithsonian stop OR

Yellow Line L'Enfant Plaza stop

Top of the Hill

319 Pennsylvania Ave. SE Washington DC 20003

Metro: Blue/Orange Line, Capital South stop



wmata.com
Customer Information Service: 202-637-7000
TTY Phone: 202-638-3780

Legend

- RD** Red Line • Glenmont to Shady Grove
- OR** Orange Line • New Carrollton to Vienna
- BL** Blue Line • Franconia-Springfield to Largo Town Center
- GR** Green Line • Branch Ave to Greenbelt
- YL** Yellow Line • Huntington to Fort Totten
- SV** Silver Line • Future Dulles Corridor Line

Station Features

- Bus to Airport
- Parking
- Hospital
- Airport

Connecting Rail Systems

- MARC
- VRE
- MARC

Station Status Legend:

- Transfer Station
- Planned Station
- Under Construction
- Full-Time Service
- Station in Service
- Rush-Only Service: Monday-Friday 6:30am - 9:00am, 3:30pm - 6:00pm



MetroRail Operating Times

- Mon-Thu** 5am-midnight
- Fri** 5am-3am
- Sat** 7am-3am
- Sun** 7am-midnight

Times are approximate; check station kiosks or online for exact times.

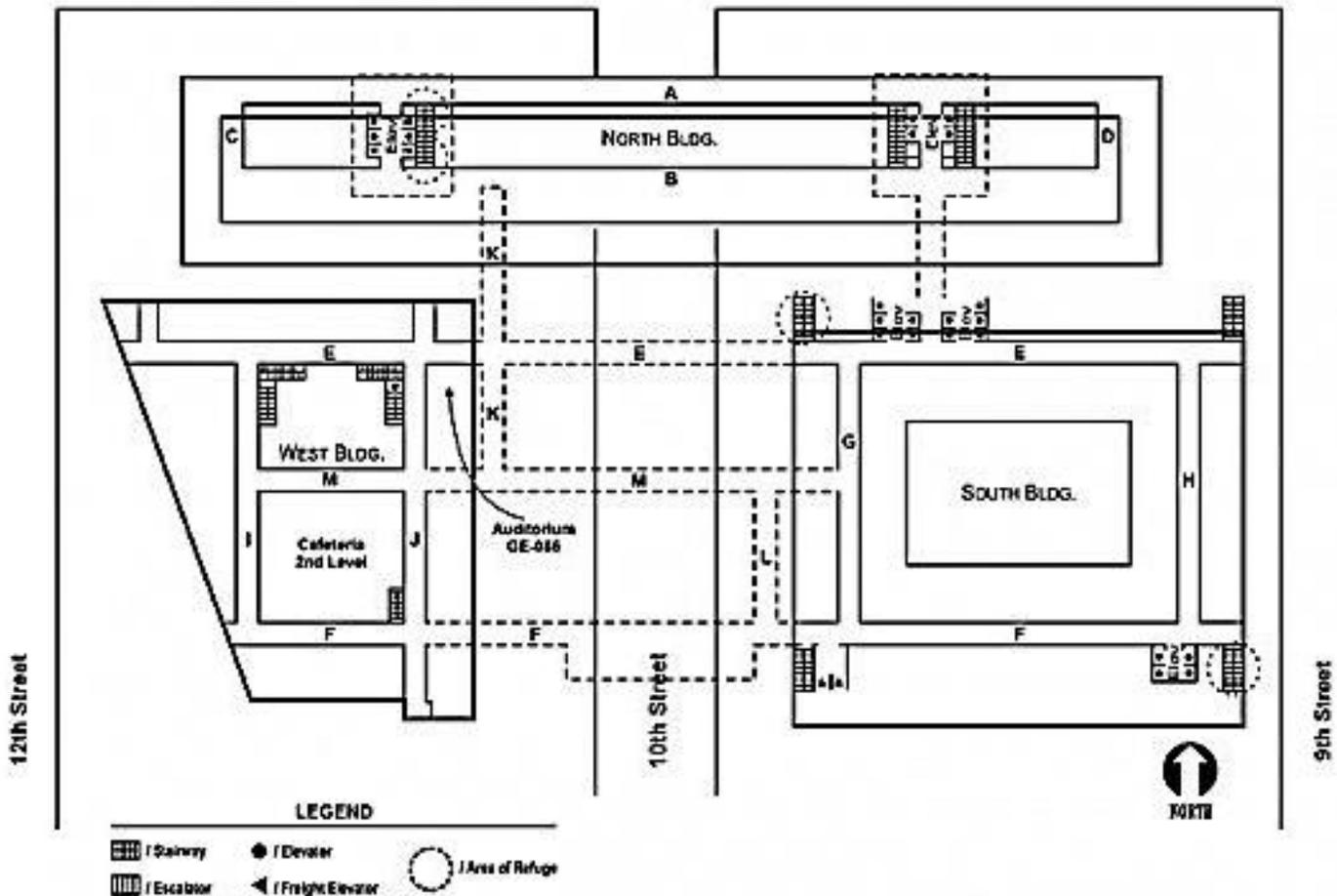
Metro is accessible.



Students may move between the Speakers Series and the Student Collaboration Room throughout the day. Case Ushers will escort teams to and from their presentations. Students should not enter floors or corridors where there is no Case Competition activity.

JAMES FORRESTAL BUILDING

Independence Ave.



Address: 1999 Jefferson Davis Hwy, Arlington, VA 22202

Phone: (703) 413-5500

Metro: Yellow Line, Crystal City stop

Reservation Dates: Thursday, March 13 and Friday, March 14

Check-in: 4:00 PM Thursday, March 13. Provide your last name at the Reservation Desk to receive a key.

Check-out: 1:00 PM, Saturday, March 15

Features: Indoor pool, fitness room, and complimentary in-room Wi-Fi , complimentary meeting room available upon request.

The following students will room together. Students not listed have single occupancy rooms:

Dhruv Varma and Aman Mehra

Addison Ardolino and Yichen Zhao

Adithya Dahagama and Mohammad Golrokhian

Alex Schapira and Brian Rassel

Brendan Sullivan and Brian Sullivan

Brian Bowen and Cheetiri Smith

Casey Canfield and Matthew Plunkett

Chris Wolff and John Dooley

Gideon Grossman and Lucas Amber

Harsh Vijay Singh and Maria Alegre

Hilary Staver and Marley Urdanick

Jayanth Aadithya and Sahas Singh

Jennifer Moore and Jennifer Wheller

John Serron and Jae Beom Bae

Julian Lee and Kenneth Teeter

Kaiyang Tang and Yi Xia

Lindy Jepsen and Steven Scott Larsen

Matthias Seel and Michael Didyk

Michael Brod and Rob Youngs

Misha Semenov and Stephanie Liu

Myron Lozano and Peggy Chen

Olivia Meek and Ricardo Vargas

Ozan Ogus and David McSweeney

Peter Pak and Sharon Gao

Philip Kreycik and Samir Luther

Ping Liu and Andrew Cummings

Robbie Orvis and Simon Gore

Sze Wun Wong and Wan Yin (Wendy) Cheung

Theodore Groben and Tristan Turner

Young Jin Kim and Akshay Dayal

Better Buildings Case Competition

Below are a list of the Foreign Nationals Attending, please come with all of the required identification listed on the HQ-FNVA forms that you filled out or you will not be able to enter the building (for those presenting offsite, be sure to bring your passport).

Adithi Murthy

Adithya Dahagama

Aman Mehra

Asiya Natekel

Caroline Nowacki

Daniel Tjandra

Deotima Ganopadhyay

Dhruv Varma

Eman Eruz

Eunhee Kim

Harsh Vijay Singh

Jayanth Aadithya

Jihyun Park

Jorge Lopez

Kaiyang Tang

Kavitha Nambiar

Maria Alegre

Matthias Seel

Michael John Didyk

Mohammad Golrokhian

Ozan Ogus

Parit Yadav

Ping Liu

Sahas Singh

Shankar Das

Sharath Chandra

Sharath Patil

Shwetha Bhadravathi Mallikarjuna

Suveer Bahirwani

Sze Wun Wong

Vedran Lesic

Wendy Cheung

Yi Xia

Yichen Zhao

Young Jin Kim

Jae Boem Bae

Maria Agustina Sclarandi

Better Buildings Case Competition

Students who were accepted to attend the White House East Wing tour on March 15th at 10:30am are listed below. These students should have received an email with an attachment outlining the details/logistics of the tour. If you did not receive this information sheet and you are listed below, please contact us immediately.

You must meet at the White House Visitor's Center at 10:15am at the latest on March 15th. All participants must bring a photo ID and Foreign Nationals must bring a passport.

Prohibited: Cameras are, but camera-phones are not. Purses, backpacks, and other bags. Food, drink and tobacco products.

Akshay Dayal	Harry Bergmann	Michael Didyk
Alexander Schapira	Harsh Vijay Singh	Miriam Fuchs
Aman Mehra	Ian Creelman	Olivia Meek
Ashish Paul	Irmak Eruz	Ozan Ogun
Ashley Brooks	Jennifer Moore	Parit Yadav
Ashwin Mysore	Jennifer Wheeler	Peggy Chen
Asiya Natekal	John Dooley III	Philip Kreycik
Brandon Burgess	John Serron	Robert Orvis
Brian Bowen	Jorge Lopez Orendain	Robyn Hall
Brian Rassel	Julia Sokol	Samir Luther
Caroline Nowacki	Julian Lee	Sana Ouji
Casey Canfield	Justin Yeh	Seth Lippincott
Casey O'Hara	Katherine Tejano	Shankar Das
Cheetiri Smith	Kenneth Teeter	Sharath Patil
Christopher Wolff	Kseniya Shelkovskaya	Shwetha Bhadravathi Mallikarjuna
Daniel Hall	Lakeasha Williams	Skyler Murphy
David McSweeney	Laura Nicholson	Stephanie Harris
Delphine Kaiser	Lauren White	Suveer Bahrwani
Deotima Gangopadhyay	Le Yu	Thomas Luginbill
Devon Weiss	Leah Grossman	Truman Mak
Dhruv Varma	Maria Alegre	Vedran Lesic
Dylan Anthony	Maria Jiang	Vinu Varghese
Eric Shrago	Marley Urdanick	Youngjin Kim
Ethan Heil	Matthew Plunkett	Zhang Kai
Gideon Grossman	Matthias Seel	

Address: 1999 Jefferson Davis Hwy, Arlington, VA 22202

Phone: (703) 413-5500

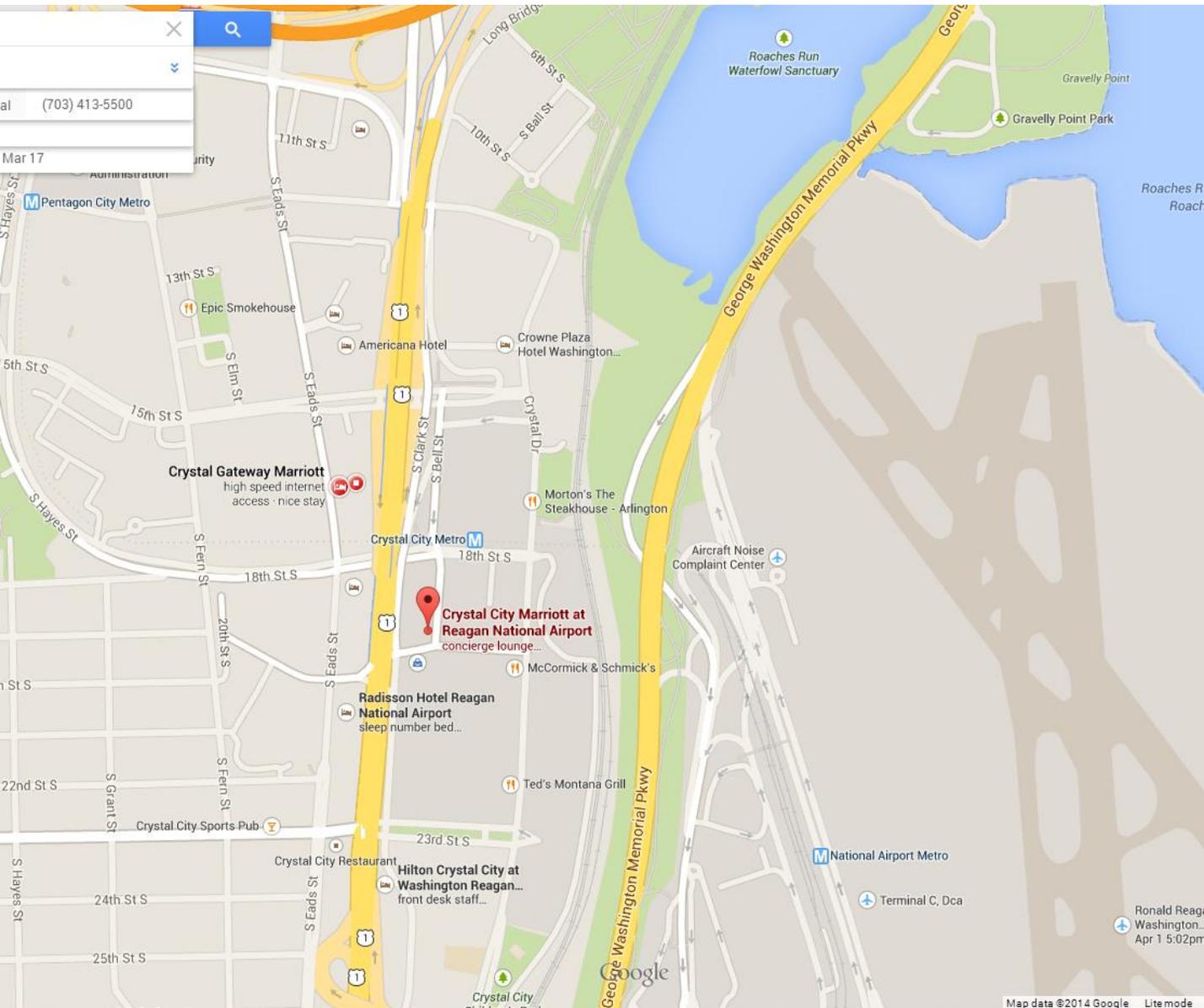
Metro: Yellow line, Crystal City

Reservation: Thursday, March 13 and Friday, March 14.

Check-in: 4:00 PM Thursday, March 13. Provide your last name at the Reservation Desk to receive a key.

Check-out: 1:00 PM, Saturday, March 15

Features: Indoor pool, fitness room, and complimentary in-room Wi-Fi , complimentary meeting rooms available upon request.



Better Buildings Case Competition

Student Guidelines

- Students will receive two badges upon entry to the Department of Energy (DOE). You MUST retain both badges all day.
- Student Teams should limit the number of laptops you bring to the DOE to the absolute minimum as additional security procedures are required for each laptop on site.
- Student Teams may not make changes to presentations on site. And may not hand out materials.
- Students may move between the Speakers Series and the Student Collaboration Room throughout the day. Case Ushers will escort teams to and from their presentations. Students should not enter floors or corridors where there is no Case Competition activity.
- Students must be present in the Practice/Networking Room (Room: 1.00 E-245) at least 15 minutes before they are scheduled to present
- Presentations are limited to 10 minutes with an additional 10 minutes of Q&A.

8:00am	Students Arrive and go through security (DOE HQ- Forrestal Building)					
9:00-9:10am	Event Briefing (Large Auditorium)					
9:30am	Dismiss students for first presentations					
9:30am	Introduce first speaker (Large Auditorium)					
	Room: 4A 104 Electri City	Room: GH 027 Experimenting with Efficiency	Room: GH 035 Welcome Home to Savings	Room: GH 019 Picking Up PACE	Room: 5E 81 Here Comes the Sun	Room: 5E 69 A Side of Savings
Usher	NYLA	BECCA	KIM	JACK	ADAMA	LINDSAY
9:35-9:55am	Green Dream Video and ConCall	First Fuel	BEEC Potential	Crown Joules	Interdisciplinary Instigation	Greenolution
10:00-10:20am	MGI	Oorja	Building Revolutionaries	Sun Saluters	2030	Lean Green Machines
10:25-10:45am	R.E.A.C.T. (electricity)	Green Dinosaurs	Bulldog	Adhoc	Delta Eta	Proteus
10:50-11:10am	Smart Power ConCall	JUDGE BREAK				
11:15-11:35am	2030	Xenergy	Greenolution	Everpower ConCall	Bulldog	Crown Joules
11:40-12:00pm	Delta Eta	Millenial Makers	Smart Power	Green Dinosaurs	Victorious Secret	Building Revolutionaries
12:00-1:00pm	LUNCH/ DELIBERATION	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
1:00-1:20pm	Lean Green Machines	Golden EnergyTech	Millenial Makers	Move to offsite	Networking Room (1E245)/ Speakers (Large Auditorium)	Everpower ConCall
1:25-1:45pm	First Fuel	Get Green	Xenergy	Market Efficiency OFFSITE		
1:50-2:10pm	Oorja	Move to offsite				
2:15-2:35pm	Victorious Secret	Sun Saluters OFFSITE	Networking Room (1E245)/ Speakers (Large Auditorium)	Networking Room (1E245)/ Speakers (Large Auditorium)		Networking Room (1E245)/ Speakers (Large Auditorium)
2:40-3:00pm	Interdisciplinary Intimidation	Networking Room (1E245)/ Speakers (Large Auditorium)				
3:00-3:30pm	Networking Room (1E245)/ Speakers (Large Auditorium)					
4:00-5:00pm	Awards Ceremony (DOE Cafeteria)					
6:00-9:00pm	Reception (Location: Top of the Hill)					

Student Guidelines

- Students can enter and exit Forrestal for lunch when they are ready but must be back at the student collaboration room 15 minutes before their scheduled presentation times
- Students must keep their badges to move in, out, and around the buildings
- Wireless Internet may be available in some Case Rooms. The password is “energy.wireless”.
- The Twitter handle for the Competition is #BBCC2014. Follow us @BetterBldgsDOE.

In Forrestal

Forrestal Cafeteria (2nd floor, West Building)

Hours: Monday-Friday 6:45am to 3:00pm (Breakfast served 6:45am to 10am; lunch served until 2pm;

Subway (Forrestal Basement, GE-234)

Dunkin’ Donuts (Forrestal Basement, GE-234)

Other Forrestal Options

4th Floor Snack Bar 4F-052 6:45 a.m.-3:30 p.m. -- (limited grill/deli)

6th Floor Snack Bar 6B-037 7:30 a.m.-4:00 p.m. -- (pre-made sandwiches, snacks)

In L'Enfant Plaza Promenade

L'Enfant Plaza Promenade Foodcourt

McDonald's

Au Bon Pain

Moe's Southwest Grill

Potbelly Sandwich Shop

Roti Mediterranean Grill

Mamma Ilardo's Pizza

Crumbs Bake Shop

Five Guys Burgers and Fries

Starbucks

In L'Enfant Plaza Hotel

American Grill

Foggy Brew Pub

Around The Mall

Smithsonian Castle Café (Smithsonian Castle Building 1000 Jefferson Drive, S.W.)

Mitsitam Café (National Museum of the American Indian 4th and Independence Avenue)

Department of Agriculture Cafeteria (South Building) (14th & Independence, S.W.)

Wall Street Deli (400 C Street, S.W.)

Vie de France: Capital Gallery (600 Maryland Avenue, S.W.)

Starbucks: Capital Gallery (600 Maryland Avenue, S.W.)

Food Carts and Food Trucks on 7th Street: See Food Truck Fiesta website or app.

Better Buildings Case Competition

9:30-10:00am

Jaime Van Mourik; US Green Building Council

The Center for Green Schools at the U.S. Green Building Council



10:00-10:30am

Itamar Goldminz; Opower

Purpose Beyond Profit: A Business Model for Saving Energy Using Behavior Science

10:30-11:00am

Maureen Guttman; Alliance to Save Energy

Alliance Commission on National Energy Efficiency Policy



11:00-11:30am

Cara Giudice; First Fuel

Using Building Energy Analytics to Unlock Energy Savings

11:30-12:00pm

Jennifer Amann; American Council for an Energy Efficient Economy

ACEEE and Zero Net Energy (ZNE)



1:30-2:00pm

Chris Riso; Environmental Defense Fund

Make a Difference, Launch Your Green Career with EDF Climate Corps

2:00-2:30pm

Joe Indvik; SparkFund

Can Crowd Investment Unlock Energy Efficiency?



2:30-3:00pm

Laurie Kerr; Natural Resources Defense Council

The City Energy Project

3:00-3:30pm

David Gabrielson; PACENow

Commercial PACE Market Overview



Jaime Van Mourik, Director of Higher Education

Jaime is a leader for colleges and universities “going green,” offering institutions guidance through the green building planning and implementation process and advising on how the LEED Green Building Rating System® can act as a framework for shaping sustainability initiatives. In her role, she directs the development of tools and resources for the sector, maintains customer relations and presents on the benefits of a sustainable campus to a range of audiences. Jaime also oversaw the development of the Center for Green Schools’ most comprehensive higher education strategy guide, *Roadmap to a Green Campus*.

Jaime has taught design to students of all ages including collegiate teaching positions at the Catholic University of America School of Architecture and Planning and Northern Virginia Community College and serves as both a visiting lecturer and critic for local D.C. schools. She is an active member of the building industry community and served as a communications juror in the 2005, 2007 and 2009 Solar Decathlon.

Jaime is an Associate AIA member and LEED Accredited Professional. She holds a Bachelor of Architecture from Virginia Tech and a Master of Architectural History from the University of Virginia. Jaime is an avid traveler seeking to learn from the diverse cultures and architecture around the globe.



The Center for Green Schools at the U.S. Green Building Council

The Center for Green Schools at the U.S. Green Building Council has a bold vision: transform all schools and campuses into healthy, safe and efficient places to learn while also prepare the next generation of leaders and global citizens for the world’s challenges. Jaime Van Mourik, director of higher education, will share insights from industry and discuss innovative opportunities that you can take advantage of on your campus and in your community that will equip you with the skills, knowledge and training required of a complex and dynamic 21st century workplace.

Maureen Guttman, AIA - Vice President for Buildings and Utilities, and Executive Director of the Building Codes Assistance Project

Maureen Guttman is a licensed architect with over 25 years of experience in energy-efficient and green building design. Ms. Guttman oversees a nationwide campaign to support the adoption and implementation of today's model energy codes. In addition, she directs several technical, outreach and advocacy projects to help various stakeholder groups realize the benefits of energy codes and efficient buildings. Prior to joining the Alliance, Ms. Guttman spent four years as Executive Director of the Pennsylvania Governor's Green Government Council, where she managed programs that provided over \$34 million in consumer incentives for

energy efficiency projects, developed construction incentive programs that required high-performance building standards, and other policies that encouraged efficiency and green buildings. Ms. Guttman has served on several energy and green construction code development boards, the Pennsylvania Green Energy Loan Fund Advisory Board, and the International Code Council Sustainable Building Technology Committee. In 2010, Ms. Guttman was awarded the President's Award by the Pennsylvania Chapter of the American Institute of Architects in recognition of a career dedicated to advancing building code adoption and enforcement, and incorporation of sustainability into regulated building practices. Ms. Guttman holds a Bachelor's in Architecture from Carnegie Mellon University.



Alliance Commission on National Energy Efficiency Policy

The Alliance Commission on National Energy Efficiency Policy was created in 2012 to identify solutions for increasing U.S. energy productivity and aid in jump-starting the economy. At the core of the Commission's work is Energy 2030, a comprehensive set of recommendations with the potential to double U.S. energy productivity by 2030. This presentation will provide an overview of the Commission recommendations, specifically highlighting those policies focused on energy efficiency in the building sector, and how the work of the Building Codes Assistance Project (BCAP) is advancing those specific recommendations at the state and local level.

Cara Giudice, Client Project Manager

Cara brings deep project development and management experience in dealing with complex customers within the cleantech sector. At FirstFuel, Cara has led management of the firm's first several utility and government client projects. She works closely with FirstFuel's engineering delivery team to manage the engagement of building operators and owners – from initial outreach through to delivered energy efficiency savings. Prior to FirstFuel, Cara worked for a cleantech start-up called Ze-gen, where she managed the company's regulatory and project development efforts. Cara led the company's successful attempts at securing the initial regulatory approval for Ze-gen's first commercial gasification facility. Cara graduated Phi Beta Kappa from the University of Richmond, where she was a double major in History and Rhetoric & Communication Studies.



Using Building Energy Analytics to Unlock Energy Savings

FirstFuel helps customers drive scale in their energy efficiency efforts through the Remote Building Analytics platform, which uses advanced meter data analytics to identify, enable, and track efficiency opportunities behind the meter in commercial buildings - all without onsite visits or device installations. Cara, client project manager, will share how the company got started, how FirstFuel promotes energy efficiency in buildings, and offer perspective on where the industry is headed.

Jennifer Thorne Amann, Buildings Program
Director



Since joining ACEEE in 1997, Jennifer has authored dozens of publications and articles on appliances, lighting, consumer electronics, equipment installation practices, emerging residential and commercial building technologies, and the progress of market transformation initiatives, among others. In addition, Jennifer is lead author of ACEEE's popular Consumer Guide to Home Energy Savings, now in its tenth edition.

Her current work includes advancing strategies for improved whole building energy performance, addressing the growing energy consumption of miscellaneous energy loads, and analyzing the role of appliance efficiency standards and building codes in meeting national energy reduction goals. Jennifer serves on the Board of Directors of the National Home Performance Council. She brings to ACEEE several years' experience in the environmental technology field and has experience in community organizing and education on a variety of environmental and consumer issues.

Jennifer is an NCQLP Lighting Certified Professional. She earned a Master of Environmental Studies degree from the Yale School of Forestry and Environmental Studies and a Bachelor of Arts in Environmental Studies from Trinity University.

ACEEE and Zero Net Energy (ZNE)

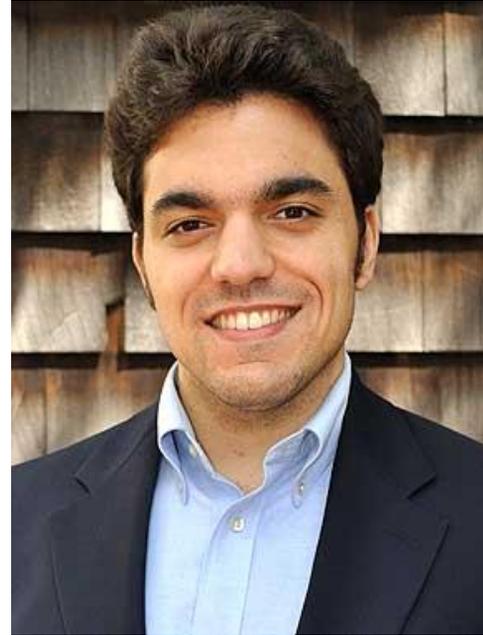
A number of high-profile public and private goals have been announced calling for a full transition to zero net energy (ZNE) construction for new residential and commercial buildings by 2030. By establishing minimum requirements for the energy performance of new construction and major renovations, building energy codes must evolve to ensure that homes and buildings are built to deliver the ultra-low energy performance required to meet ZNE goals in 2030. ACEEE is developing a roadmap for ongoing research, policy coordination, market transformation and advocacy efforts needed to achieve these goals including milestones for the intervening code development cycles.

Chris Riso, Analyst

Chris is a member of the EDF Climate Corps team, helping to deliver the innovative fellowship program that places top tier MBA and MPA students in leading companies, cities and universities to develop practical, actionable energy efficiency plans.

Chris focuses on developing training materials for EDF Climate Corps fellows, evaluating the program's impact with robust financial and environmental metrics, and contributing to EDF's thought leadership.

Prior to joining EDF, Chris managed annual corporate disclosure at the Carbon Disclosure Project, where he worked with companies in all sectors of the US economy to disclose emissions performance and climate change-related risks and opportunities to the investment community. Chris received a Bachelor's of Science in Business Administration in finance and international business from Georgetown University McDonough School of Business.

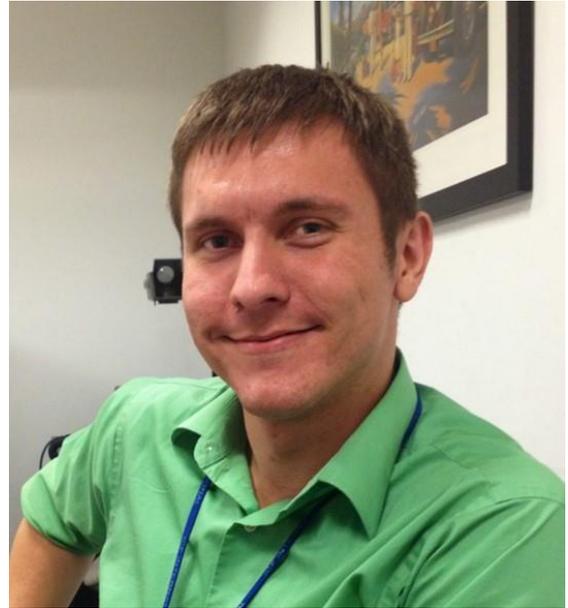


Make a Difference, Launch Your Green Career with EDF Climate Corps

Make a tangible environmental impact while gaining professional experience with Environmental Defense Fund (EDF) Climate Corps. EDF Climate Corps is a summer fellowship program that trains and places graduate students in leading organizations to help save energy, money and cut carbon emissions. EDF Climate Corps fellows have backgrounds in business, environmental science, engineering, economics and policy. EDF Climate Corps selects and trains fellows to develop and deliver concrete and actionable energy management recommendations for cities, universities, nonprofits and companies. Chris Riso, Analyst with EDF Climate Corps, will highlight the value of launching a career in sustainability with EDF Climate Corps, providing insight into the fellowship experience and the program's professional network.

Joe Indvik, Co-Founder and President

Joe is an entrepreneur and innovator focused on finding cost-effective strategies to deploy energy efficiency and clean energy at scale. He is the Co-Founder and President of SparkFund (www.sparkfund.co), a start-up that is building a crowd investment platform to connect individual investors to energy efficiency projects. Prior to that, Joe was a consultant at ICF International, where he led the creation of a new service offering to help clients—including Fortune 500 companies, cities, universities, and agencies—design financing solutions for energy efficiency projects. As an undergraduate and independent consultant, Joe led a team to establish a \$1M green revolving fund at Dartmouth College and has subsequently had the pleasure of working with dozens of institutions to establish similar funds. Joe is an experienced thought leader and speaker on energy policy and finance, with publications in Energy Policy, GreenBiz, the Sustainable Endowments Institute, AASHE, and others. Joe graduated magna cum laude from Dartmouth College with a BA in Economics and Environmental Studies.



Can Crowd Investment Unlock Energy Efficiency?

More often than not, investing in energy efficiency is a win-win. Making our buildings smarter cuts costs, reduces greenhouse gas emissions, and produces a compelling return on investment. Despite this, several market barriers prevent capital from flowing into efficiency as fast as it should—including a scarcity of low-cost financing and the costly pain of aggregating small projects into investable clusters. Fortunately, new financing models are emerging to drive broader investment in energy efficiency, and the pace of change is accelerating.

Crowd investment presents an exciting opportunity for individuals to put their money directly into high-return efficiency projects, opening up a brand new class of investment. Third-party finance for efficiency has historically been a game played between big professional investors and big projects. Crowdfunding creates the possibility of a more decentralized model that matches investors both big and small to a range of efficiency projects, but at a large scale.

To bring this idea to market, Joe and his team founded SparkFund (www.sparkfund.co), a start-up that is building an online crowd investment platform for energy efficiency projects. Joe will report some tales from the front lines of building this company—including a quick primer on market barriers in efficiency finance, how Spark is building partnerships and deploying new technologies to overcome these barriers, and some tips of the trade for aspiring innovators in energy efficiency and clean energy.

Laurie Kerr, Senior Policy Analyst at NRDC & Director of the City Energy Project

Laurie Kerr is a Senior Policy Analyst at the Natural Resources Defense Council and the Director of the City Energy Project, a partnership between NRDC and the Institute for Market Transformation. The City Energy Project is an ambitious new initiative which is promoting bold, integrated policies in energy efficiency in leading American cities. Previously, Laurie was the Deputy Director for Green Building and Energy Efficiency in the New York City Mayor's Office, where she helped develop PlaNYC, New York's influential plan for sustainable growth through 2030, and led the development of the Greener, Greater Buildings Plan and the NYC Green Codes Task Force.

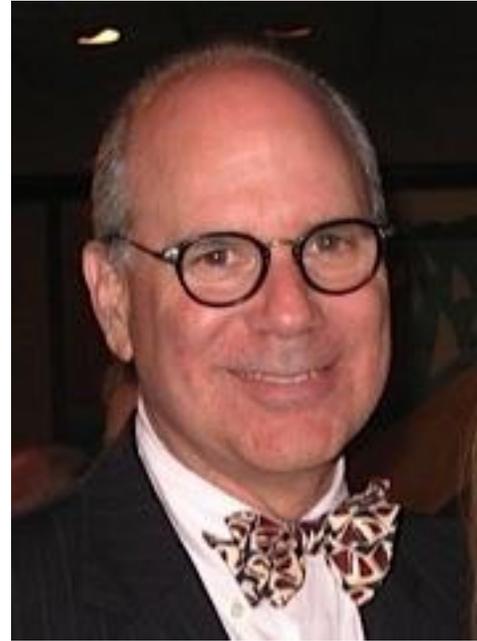
Laurie is a licensed architect with over 15 years' experience practicing architecture and has written on architecture for Slate, and the Wall Street Journal. Prior to receiving her Master's in Architecture from Harvard, Laurie earned degrees in engineering and applied physics from Yale and Cornell, respectively. She serves on the boards of the New York Chapter of the AIA, Green Light New York, and the Global Cool Cities Alliance, and was given the AIANY Public Architect Award for 2011



David Gabrielson Executive Director

David Gabrielson is PACENow's Executive Director and has been a leader in the PACE industry since 2009. PACENow is recognized as the source of information and resources for a growing universe of PACE stakeholders from government, industry, and the not-for-profit sectors.

David was introduced to PACE while developing Energize Bedford, an energy efficiency financing program in Bedford, New York, where he has served as an elected Councilman since 2008. The Energize Program is recognized in New York today as the statewide provider of PACE financing for non-residential buildings. Before his careers in energy and politics, David spent over 20 years as an investment banker to state and local governments, financing a wide range of capital facilities and programs at national firms including Credit Suisse First Boston and J.P. Morgan. David earned a bachelors degree in Economics at the University of California at Berkeley and holds a Masters Degree in Public and Private Management from Yale University.



Drew Torbin -- Vice President, Renewable Energy, Prologis

Drew Torbin is Vice President of Renewable Energy for Prologis, a leading global provider of distribution facilities with over 550 million square feet of industrial space in 21 countries. Mr. Torbin founded the renewable energy group in late 2008 after spending two years focused on a variety of corporate responsibility initiatives. Since that time, the group has developed 100+ megawatts of distributed solar projects across North America, Europe and Asia. Mr. Torbin is a graduate of the National Renewable Energy Laboratory's Energy Executive Leadership Program and serves on the Colorado New Energy Improvement District board as well as the advisory board of Blue Oak Energy.



Prior to joining Prologis in 2006, Mr. Torbin worked for Litchfield Capital Management, LLC, a U.S. equity long/short hedge fund based in Connecticut where he specialized in the consumer cyclical sector. Mr. Torbin received his M.B.A. with a concentration in Finance from the University of Pittsburgh, his B.S. from the University of Colorado at Boulder.



Susannah Pedigo, M.B.A. - Manager, Renewable Energy, Xcel Energy (XLS)

Susannah has overseen Xcel Energy's customer-facing renewable energy products team, Solar*Rewards and Windsource, for about three years in multiple states across Xcel Energy's service territory. She brings more than 15 years of experience in the renewable energy and energy efficiency fields to her leadership role. Through year-end 2013, Xcel Energy has more than 18,000 photovoltaic (PV) systems, with a capacity of about 300 MW (DC) on its system in three states. In Colorado, we launched one of the first utility programs to support community-based solar in 2012. Susannah has played an integral role in the development and deployment of Xcel Energy's solar accomplishments.

Susannah has worked at Xcel Energy for more than six years in the energy efficiency and renewable energy product areas. Previously Susannah worked for the U.S. Department of Energy's National Renewable Energy Laboratory's Solar Research Program and was a U.S. delegate to the International Energy Agency's Photovoltaic Power Systems Programme. She attended Purdue University and Heriot-Watt University (Scotland) to obtain a Bachelor of Science in Landscape Architecture. She has a Masters in Business Administration from Daniels College of Business, University of Denver.

Ivy Wheeler -- Senior Program Officer, National Association of Regulatory Utility Commissioners (NARUC)



Ivy Wheeler has been with the National Association of Regulatory Utility Commissioners (NARUC) since 2009. Ivy manages the State's Electricity Regulators Capacity Assistance and Training (SERCAT) programs within the domestic grants and research department, overseeing more than twenty capacity assistance projects for NARUC members over four years. And most recently she oversaw and managed the logistics for the 170 person Energy Risk Training. She also manages the Clean Coal Technology & Carbon Capture & Storage Partnership between NARUC and the Department of Energy, organizing meetings and site visits of educational value to the membership. She also recently started managing the Nuclear energy partnership with the Department of Energy. Additionally she supports the National Council on Electricity Policy (NCEP) and acts as a liaison between NARUC and the other members. She also serves as a resource to members on Federal agency activities and Recovery Act funding, manages Federal grant-funded activities including member travel support, grants reporting, and meeting logistics. Ivy holds a bachelors of science from Southern Oregon University.



Michael Cummings -- Senior Vice President, Asset and Risk Management with Enfinity America Corporation (SunEdison)

Michael Cummings is a Senior Vice President, Asset and Risk Management with Enfinity America Corporation - a leading developer, financier and owner/operator of large-scale solar projects. Previously, he has held various positions with ClearPeak Advisors and MMA/Fotowatio Renewable Ventures (now part of SunEdison). Prior to joining MMA Renewable Ventures, Michael worked as a Business/Solutions Fellow at the Pew Center on Global Climate Change (now the Center for Climate and Energy Solutions), and studied Iceland's plan to transition to a renewable hydrogen economy through the support of a Fulbright fellowship. He received his B.S., B.A., and M.S. from Stanford University, and a J.D. from the Georgetown University Law Center.

Katie Bolcar -- Director of Mid-Atlantic States, Solar Energy Industries Association

Katie Bolcar joined SEIA in January 2012 as the Director for Mid-Atlantic States, to oversee regulatory and legislative activity in the Mid-Atlantic. Prior to joining SEIA, Katie held the same title at the Solar Alliance. From 2007-2011, she worked at the U.S. Department of Energy's Solar Energy Technologies Program where she managed market transformation activities, including workforce development. She also managed the Solar Program's international activities was detailed to the U.S. Embassy in New Delhi for 6 months. She is a graduate of the University of Virginia and earned her Masters in Public Policy and Environmental Management from Duke University. Katie currently lives in Maryland and enjoys traveling, hiking, doing yoga, cooking, and a myriad of other creative outlets.



Blaine Collison - Director Of The United States Environmental Protection Agency's Green Power Partnership

Blaine Collison is the Director of the US Environmental Protection Agency's Green Power Partnership. Joining the EPA in 1996, Collison has managed elements of the ENERGY STAR Homes and ENERGY STAR HVAC programs and lead outreach efforts to institutional investors. Prior to joining the Agency, Mr. Collison worked on renewable energy and energy efficiency issues in the private sector and for the US Congress. He holds a political science degree from the University of Pennsylvania in Philadelphia.



Christina Nichols - Senior Executive Technical Advisor with ManTech, Supporting the US DOE SunShot Program

Christina Nichols serves the U.S. Department of Energy's SunShot Initiative, Balance of System ("soft cost") team, as a Senior Technical Advisor with Mantech International. She focuses on solar workforce development, coordination of research on soft cost issues from the National Laboratories, large system DG business modeling, and state energy regulatory education. She was previously the Green Jobs Liaison with the Department of Labor, and joined the Department of Energy in fall, 2010 to assist the Office of Weatherization and Intergovernmental Programs create national credentials and workforce standards for residential building weatherization occupations. Ms. Nichols brings a long history of renewable energy and energy efficiency program management, including serving as a senior marketing manager for SunEdison and Communications Director for the federal Energy Star program as a contractor with D&R International. She holds a BA from Duke University and an MBA from the Robert H. Smith School of Business, University of Maryland.



Genevieve Sherman -- Senior Manager, Clean Energy Finance and Investment Authority

Genevieve Rose Sherman is the Senior Manager of Commercial and Industrial Programs at the Clean Energy Finance and Investment Authority, where she manages Connecticut's Commercial Property Assessed Clean Energy (C-PACE) program and coordinates the Authority's efforts surrounding district energy and microgrids.



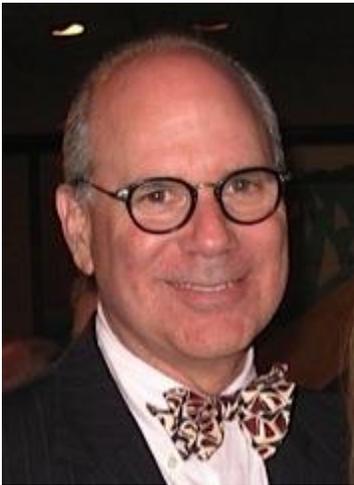
Genevieve graduated from the Massachusetts Institute of Technology with a Master in City Planning, where she developed innovative financing and governance strategies that engage commercial buildings in their energy production and consumption. Previously as a consultant to Clean Energy Solutions Inc. and Earth Markets, she conducted market research and outreach on behalf of utilities and state energy agencies to design new smart metering, information feedback, and energy efficiency programs. As a Summer Analyst at HR&A Advisors, a New York-based real estate consulting firm, she worked directly with large commercial property owners to prioritize and assess energy conservation measures for their buildings. Prior to MIT, Genevieve worked as a city planner for the City of Cape Town, South Africa and for the Municipal Art Society in New York. Genevieve holds a BA in Urban Studies from Columbia University and a Certificate in Environmental Planning and Policy from MIT.

David Gabrielson – Executive Director, PACENow

David Gabrielson is PACENow's Executive Director and has been a leader in the PACE industry since 2009. PACENow is recognized as the source of information and resources for a growing universe of PACE stakeholders from government, industry, and the not-for-profit sectors.

David was introduced to PACE while developing Energize Bedford, an energy efficiency financing program in Bedford, New York, where he has served as an elected Councilman since 2008. The Energize Program is recognized in New York today as the statewide provider of PACE financing for non-residential buildings. Before his careers in energy and politics, David spent over 20 years as an investment banker to state and local governments, financing a wide range of capital facilities and programs at national firms including Credit

Suisse First Boston and J.P. Morgan. David earned a bachelors degree in Economics at the University of California at Berkeley and holds a Masters Degree in Public and Private Management from Yale University.



Kristina Klimovich -- Director, Communications and Market Research, *PACENow*

Kristina Klimovich is a Director, Communications and Market Research at *PACENow* and a passionate advocate of sustainability in the built environment. She joined *PACENow* in March 2012 and began driving *PACENow*'s marketing, communications, and market data analysis efforts. She holds a Master's degree in International Affairs from the New School University in New York City. She was directly exposed to international energy efficiency and renewable energy projects throughout her work with Islands First, an NGO supporting sustainability initiatives undertaken on small islands in the Pacific. Kristina has a broad non-profit experience working for advocacy, research, and aid organizations. She is a member of the Urban Land Institute, American Political Science Association, Western Political Science Association, and Young Non-profit Professionals Association.



Richard Chien -- City and County of San Francisco, Department of the Environment

Rich Chien is a Senior Environmental Specialist with the Department of the Environment (SF Environment) and currently serves as Program Manager for San Francisco's PACE program "GreenFinanceSF," which provides low-cost, long-term financing for clean energy upgrades to privately owned buildings. Mr. Chien was also instrumental in developing the city's existing commercial buildings benchmarking and audit ordinance, and helps to monitor and update implementation of the green building code for new construction. In addition, he is currently working with multiple public agencies and a broad range of private stakeholders to establish a model "Eco-district" in the Central Corridor neighborhood of San Francisco.

Prior to joining the department, Mr. Chien worked as a city planner, and practiced architecture, construction/project management, and sustainability consulting at a number of Bay Area design firms. Rich holds a B.A. in Urban Planning from the University of California, San Diego, an M.Arch from the San Francisco Institute of Architecture, and is a LEED Accredited Professional.

Patrick Finch - Director, Client Delivery And Partner Relations, Waypoint Building Group



Patrick leads and manages the execution of numerous Waypoint programs, including work on behalf of the U.S. Department of Energy, utility and NGO clients. Patrick has ten years of experience in project management and market analysis, with seven concentrated in the energy and financial sectors. Prior to joining Waypoint, Patrick worked as a market analyst and management consultant for the firm Booz Allen Hamilton, delivering results on over 20 different energy efficiency and renewable energy-related projects during this time. His expertise is in the usage of market intelligence to design and implement energy efficiency programs. Past projects include the creation of a commercial building engagement model for utility and government clients, and the creation of an energy efficiency and renewable energy plan for the State of Hawaii. He holds an M.A. in International Trade and Investment Policy from the George Washington University and a B.A. in Classics and International Business from Washington University in St. Louis.

Tom Bregman – Director, Energize New York



Tom is Director of Energize New York. He's led the DOE-NYSERDA funded residential energy efficiency program since its inception in 2010. A resident of New York's Hudson Valley, Tom comes to Energize with experience in corporate marketing and management, information technology, environmental advocacy, political campaigns and high-tech start ups. He has been involved in local land preservation and sustainability projects in New York State for over two decades. In 2007-09 he built and managed the sales and marketing operations at a cutting edge DC-based political data operation. Tom holds a B.A. in International Relations from SUNY Stony Brook and is currently pursuing an executive M.B.A. in Environmental and Organizational Sustainability at the Antioch University New England graduate center

Robert Fischman - Director of Commercial Programs, Energize New York

Robert leads the outreach and support initiatives for the Energize NY Finance program – New York State’s commercial PACE finance resource. Energize NY is a community based program operating through the Energy Improvement Corporation, a public benefit corporation of participating municipalities in New York State whose mission is to help property owners save energy dollars and reduce greenhouse gas emissions through innovative local outreach and marketing.

Robert brings three decades of professional experience in the building industry,, having directed more than \$500 million in capital construction programs for commercial, residential, educational & cultural institutions, municipal facilities, research laboratories, hotels and athletic facilities. He has long been an advocate for sustainable building and facility management practices, emphasizing energy efficiency and the elimination of waste in the industry. He devotes much of his time to helping lead community efforts toward a more sustainable future, having served on Westchester County’s Climate Change Task Force and on Sustainability Advisory Committees for the Town of Lewisboro and the Katonah-Lewisboro School District. Robert holds a Bachelor of Science in Civil Engineering from Union College and a Master of Science in Sustainability Management from Columbia University, where he has researched and written extensively on energy and water policy matters and on resiliency in the face of climate change



Chris Lohmann - Senior Finance Policy Advisor at U.S. Department of Energy

Chris Lohmann is with the Office of Energy Efficiency and Renewable Energy and works on developing more private capital investment in clean energy. He has provided support to state and local governments in establishing over 50 financing programs for clean energy, including most of the PACE programs in the nation.

Chris’ experience includes roles in finance, operations, and strategy with several start-up companies, General Electric, and the U.S. Marine Corps. He holds an MBA from the University of Southern California and a BA from Yale University.

Gavin Dillingham, PhD - Research Scientist, Clean Energy Policy HARC

Dr. Gavin Dillingham holds a Ph.D. in Political Science from Rice University. He joined HARC as a Research Scientist in 2012, and conducts research related to factors that predict energy policy adoption and the outcomes of these policies based on program design and implementation.

Dr. Dillingham's research is informed by practical experience through real-world application of policies and technologies. Prior to joining HARC, he was the Energy Manager at the Houston Independent School District and the Director of Sustainability for the General Services Department at the City of Houston. In these positions, he led large energy efficiency and renewable energy programs which included large-scale energy performance contracting, behavioral energy management programs, retro-commissioning and installation of solar powered systems.

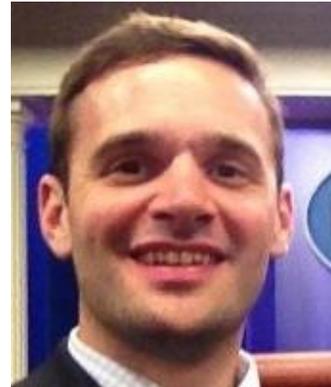


During his time at HARC, Dr. Dillingham has led the Gulf Coast Clean Energy Application Center. He is also leading the development of the City of Houston's Climate Action Plan. His current research projects include a study of energy management programs in the K-12 market; a study on the longevity of residential weatherization program benefits over time; and researching policy innovation and diffusion related to the adoption of energy efficiency standards at the state and local governmental level.

**Dave Good - Government of the District of Columbia, District Department of the Environment**

Dave Good is a Program Manager with the Government of the District of Columbia's District Department of the Environment. Dave is responsible for the development of policy and programs that encourage commercial and multi-family property owners to improve energy and resource performance. Dave oversees the DC PACE program and is currently working on a number of initiatives to drive energy efficiency investment in the District. Prior to joining the District, Dave was a project manager for a Chicago based real estate development firm. Dave has an MBA from the Ross School of Business at the University of Michigan.

Kevin Bush -- Senior Analyst, U.S. Department of Housing and Urban Development (HUD)



Kevin Bush is part of a small team at the U.S. Department of Housing and Urban Development focused on implementing HUD's role in President Obama's Climate Action Plan. In that capacity, he leads efforts to expand the Better Buildings Challenge into the multifamily housing sector. Prior to that, he was responsible for multiple special projects on the President's Hurricane Sandy Rebuilding Task Force. There, he coordinated efforts, across multiple federal agencies, to establish a uniform flood risk reduction standard for all major federally-funded Sandy-related rebuilding projects and led efforts to design and launch Rebuild by Design, a multi-stage regional planning and design competition to promote resilience in the Sandy-affected region. Prior to his role on the Task Force, Mr. Bush served as a Climate Change Adaptation Analyst at the White House Council on Environmental Quality, where he supported the efforts of the Interagency Climate Change Adaptation Task Force.

Mr. Bush has served as both a Presidential Management Fellow and City of Chicago Mayoral Fellow. Kevin earned a Master of Urban Planning from the University of Michigan and a bachelor's degree in marketing from Michigan State University. While in graduate school, Kevin coauthored "Green Building and Climate Resilience," published by the U.S. Green Building Council. Outside of work, Kevin spends his free time brewing beer and training for triathlons.

Kevin McMahan – Founding Partner, Federal Practice Group



Kevin McMahan is a founding partner of Federal Practice Group, a woman-owned small business in Arlington, VA, that consults to Federal and State governments on low income multifamily housing. FPG's work includes activities that preserve affordable apartments, improve energy efficiency, and make them better places to live. The company's largest client is the U.S. Department of Housing and Urban Development (HUD), where FPG has been financial advisors since 1999.

Kevin has been a key member of the financial advisory team consulting to HUD's Mark to Market Program since its inception. More recently his work has focused on greening multifamily housing through retrofits, both in the ongoing Mark to Market Program, and then in the Recovery Act funded Green Retrofit Program. He participates in policy and transactional work in HUD's Rental Assistance Demonstration (RAD) and in Section 236 prepayments. Kevin participated in the USGBC-sponsored Arkansas Green Schools Program in 2012, and the school he mentored won the Platinum Award as Best Overall Elementary School.

Kevin lives in Little Rock, Arkansas, with his wife Sandi. They have three adult children, and seven grandchildren ages 8 to 20, living in Arkansas, Alaska, and Ohio. Sandi and Kevin are active members of Journey Church, in North Little Rock, where he has served as a pastor since June 2012.

Lindsay Robbins – Senior Project Manager, NYSERDA

Lindsay Robbins works in NYSERDA's New York City office where she manages NYSERDA's NYC multifamily team and works on the development and implementation of green building and energy efficiency programs for multifamily residential buildings. She also managed Phase I of NYSERDA's Cleaner Greener Communities Program, which provided funding for the development of regional sustainability plans. Before coming to NYSERDA, Ms. Robbins worked at New York University's Office of Strategic Assessment, Planning & Design where she worked on the development of NYU's Design Standards & Guidelines and NYU's 25-year real estate expansion plan.



Rebecca Schaaf -- Vice President, SAHF Energy Division, Stewards of Affordable Housing for the Future

Rebecca joined Stewards of Affordable Housing for the Future (SAHF) in 2011 and leads efforts to improve the energy and water performance of affordable multifamily housing through innovative financing tools and retrofit approaches. SAHF's energy division is working on three demonstration projections across the country: a DOE-funded Energy Performance Contracting demonstration, a HUD-funded EZ Retrofit program, and a California On-Bill Repayment demonstration being implemented in conjunction with



the California Housing Partnership Corporation with support from Living Cities and the MacArthur Foundation. Rebecca also supports SAHF's members in their goal of reducing energy and water consumption 20% by 2020 as part of the Better Buildings Challenge. Prior to joining SAHF, Rebecca helped implement energy efficiency programs in China, Russia, and Ukraine at Pacific Northwest National Laboratory's Joint Global Change Research Institute and worked on international development in a variety of program areas at CHF International (now Global Communities). Rebecca holds a Bachelor of Arts in Economics from New College of Florida and a Master of Community Planning degree from the University of Maryland, College Park.

Crystal Bergemann - Energy Program Analyst, Office of Sustainable Housing and Communities at HUD

Crystal Bergemann is an energy policy specialist in HUD's Office of Sustainable Housing and Communities where she works to embed sustainable and green building policies and practices into HUD's portfolio. Additionally, she is HUD's program lead on the Federal Renewable Energy Target, a goal of tripling onsite renewable energy capacity in federally assisted housing by 2020. Crystal has a background in energy and water policy, and received a master's in public administration from NYU in 2009.



Laura Manville - Development Manager, A&R Companies

Laura Manville is a Development Manager with A&R Companies, a real estate firm with over 35 years of residential, commercial, and mixed-use experience in the mid-Atlantic region. She is currently overseeing urban infill and revitalization projects for A&R, including the Barry Farm redevelopment in Anacostia, which will include over 1,300 new units of housing, retail, and community amenities.



Prior to joining A&R, Laura worked for Telesis Corporation on affordable housing development projects in the Washington metro region, as well as with Preservation of Affordable Housing, a national non-profit housing developer based in Boston, MA. She received a Master in City Planning from the Massachusetts Institute of Technology, where her thesis research focused on public housing redevelopment in New Orleans.



Elena Alschuler - Specialist In Building Energy Performance Data Tools At The US Department Of Energy

As a Project Manager in the Building Technologies Program, Ms. Alschuler is responsible for developing tools and standards that make it easier to manage, analyze and share empirical information about building energy performance, including the Buildings Performance Database, the SEED Platform and the Building Energy Data Exchange Specification. Elena is also leading DOE's efforts to strengthen the evidence linking building energy performance with financial

performance, and encourage commercial real estate appraisers, brokers, and lenders to fully incorporate these benefits in real estate transactions.

Ms. Alschuler received a Masters in City Planning from the Massachusetts Institute of Technology. As a Research Assistant for the MIT Energy Efficiency Strategy Project, Elena worked closely with Duke Energy to design the Smart Energy Now commercial building advanced metering pilot in downtown Charlotte, North Carolina. Previously, she worked as a Senior Analyst at HR&A Advisors, where she served as the project manager for the New York State Energy Research and Development Authority's (NYSERDA's) Focus on Commercial Real Estate program.

Jonathan Herz, AIA - Architect at the U.S. Department of Health & Human Services

Jonathan Herz, AIA, LEED® AP, is Chief Architect for Sustainable Facilities for the U.S. Department of Health and Human Services, which includes NIH, CDC, FDA, and the Indian Health Service. He has over 30 years of experience in design, construction, and policy in the public and private sectors. He develops tools and strategies to operationalize sustainability in the Government and has been researching and writing about sustainability and the workplace since 1998.



Prior to joining HHS, he headed the U.S. General Services Administration (GSA) Office of Governmentwide Policy's award-winning [Sustainable Development Education Initiative](#). While at GSA, Mr. Herz also served as a Project Executive, Project Manager and Project Architect, with the GSA Public Buildings Service, managing major design and construction projects and programs, including the Presidential Libraries Center of Expertise and the Presidential Design Award-winning Census Bureau Central Computer Facility in Bowie, MD. He was also a Project Architect with the U.S. Department of State.

Mr. Herz holds a BS in Architecture from the University of Virginia, and a Master of Architecture from the University of California at Berkeley.



Jean Feldman – National Science Foundation (NSF), Head, Policy Office, Division of Institution and Award Support, within the Foundation's Office of Budget, Finance, and Award Management

Since assuming her position in 1997, Jean has been responsible for establishing proposal and award policies and procedures for the assistance programs of the NSF. This includes specific responsibility for the:

Proposal & Award Manual;

Proposal & Award Policies & Procedures Guide, which includes the Grant Proposal Guide and the Award & Administration Guide; and Standard Grant and Cooperative Agreement Terms and Conditions.

In addition to these responsibilities, Ms. Feldman serves as the Foundation's clearance officer, clearing all NSF announcements, solicitations, and other related documents prior to posting on the NSF website. She also has been actively involved in numerous interagency streamlining activities which have included chairing the committees that developed the SF 424 (R&R – the Research Application), the Research Terms and Conditions, and the Research Performance Progress Report. Finally, she served on the Council of Federal Financial Assistance Reform Drafting Group that was responsible for development of the new OMB Uniform Requirements.

Prior to beginning her NSF career in 1992, Ms. Feldman worked in policy positions with the US Air Force Office of Scientific Research and the US Army Medical Research and Materiel Command.

Kathryn Ramirez-Aguilar -- Ph.D, University of Colorado , Boulder, CU Green Labs Program

Kathryn Ramirez-Aguilar, Ph.D., manages the CU Green Labs Program at the University of Colorado-Boulder, a program she has been building & creating since 2009. She has a doctorate in Analytical Chemistry from the University of Colorado-Boulder, a BS in Chemistry from the College of William and Mary, and 15 years of laboratory research experience within the fields of Biochemistry, Analytical Chemistry, & Organic Chemistry. Working as a research scientist, she saw a real need for a program to engage scientists in conservation. With the birth of her twin daughters & her hope for their future, grew her passion to promote change & create a program focused on resource conservation in labs which could serve as a model for other campuses to adopt.

**Drew Chidester - Senior Director, Energy and Environmental Engineering/Affairs, UPMC**

Drew Chidester brings more than 30 years of design and operating experience to his position with UPMC.

UPMC is a \$10 billion integrated global health enterprise headquartered in Pittsburgh, Pennsylvania. Under Mr. Chidester's leadership, the Energy and Environmental Engineering Department at UPMC was established to reduce the energy spend and carbon footprint in all of the System's over 450 clinical facilities.

In its first two years, the Department implemented over 10 million dollars' worth of improvements and continues to develop and apply strategies to reduce consumption. Mr. Chidester and his team coordinate and oversee energy and environmental engineering operations for over 15 million square feet of clinical and support floor space.

Its support of environmental initiatives has earned UPMC the Hospital Association of Pennsylvania's Achievement Award and the State's "Governors Award".

Drew's experience and accomplishments extend beyond his work at UPMC. He has worked with the University of Pittsburgh as well as Robert Morris and Duquesne Universities, developing and teaching classes in the engineering and environmental fields. He and his team have worked closely with the DOE as a member of the Better Building Alliance.

Mr. Chidester received a BS in Civil Engineering from Penn State University

Katie Miller -- Program Analyst, General Services Administration (GSA)

Katie Miller is a Program Analyst with the General Services Administration Federal Acquisition Service's (FAS) Office of Acquisition Management where she leads climate change adaptation planning for FAS and manages GSA's Green Procurement Compilation green purchasing tool. Her prior experience includes investigating the environmental benefits of intelligent transportation systems for the U.S. Department of Transportation, leading sustainable supply chain initiatives for GSA, serving as a Senior Program Manager at the White House Council on Environmental Quality's Office of the Federal Environmental Executive, and managing GSA Fleet's Alternative Fuel Vehicle Program. Katie holds a Master of Arts in Environmental and Natural Resource Policy from George Washington University and a Bachelor of Arts in Geography from Millersville University.



Kristen Taddonio - Team Lead, Commercial Building Technology Deployment at U.S. Department of Energy

As deployment team lead for the Commercial Building Integration Program at the US Department of Energy's Building Technologies Office, Kristen Taddonio is in charge of public-private partnerships with the nation's leading building owners, managers and tenants. The deployment team oversees the DOE's Better Buildings Alliance, an affiliation of over 200 companies and organizations working to improve the energy efficiency of their combined 10 billion+ square feet of commercial floor space, and supports commercial and higher education partners in the Better Buildings Challenge, a Presidential initiative that recognizes leading businesses, cities, and universities that commit to portfolio-wide energy efficiency improvements of 20% or more over 10 years. Prior to joining DOE, Taddonio worked for the Energy Star program at the U.S. Environmental Protection Agency.



Shalon L. Brown – Energy Project Manager, Energy Efficiency Workforce and Training for Commercial Buildings Integration, Building Technologies Office, U.S. Department of Energy

She has managed training programs for energy performance-based acquisition and building re-tuning.

Prior to joining DOE, Ms. Brown was energy manager for a public school system in the third largest county in North Carolina. With over 100 buildings and over 300 utility accounts, she implemented the area's first publicly-funded energy conservation program.

Ms. Brown's academic background includes a Bachelor of Landscape Architecture from North Carolina Agricultural and Technical State University. Her main work experience is in civil engineering, land development, and education



Anand Natarajan – Energy Manager, City of Cleveland

Anand Natarajan is the Energy Manager for the City of Cleveland Ohio, and focuses on Energy Efficiency, Energy Management and Renewable Energy related policy, programs and implementation for City operations as well as the City proper.

Anand also program managed the \$4.5M U.S. Department of Energy's (DOE) Energy Efficiency and Conservation Block Grant (EECBG) implementation for the City in his role as the Principal Investigator (PI) for the award. This grant portfolio included several energy efficiency, energy conservation and material conservation projects, in addition to the development of sustainability and climate action plans for City operations and City proper.

Anand also has extensive project and program management experience in various industries in the for-profit, non-profit and the government sectors, including a fellowship w/ the Environmental Defense Fund's Climate Corps Program and graduate assistant research work at the Department of Energy's (DOE's) National Renewable Energy Laboratories (NREL).



Jake Tisinger -- City of Knoxville, Project Manager

Jake Tisinger has over five years of professional and extracurricular experience working with energy and environment-related initiatives. As the Sustainability Project Manager for the City of Knoxville, Jake works to promote a healthy and energy-efficient city through government and community-oriented policy. In this role, he works with city departments, community groups, and businesses to identify and create opportunities to improve how Knoxville uses energy and interacts with nature and society. Over the past few years, he has successfully managed a number of programs including the city's role in the Solar America Cities Initiative, the SunShot Rooftop Initiative, and the Electric Vehicle Project. Most recently, Jake's work has been focused on energy management, urban food systems, commuter incentives, and connecting residential weatherization services to emergency utility bill payments through Knoxville's IBM Smarter Cities Challenge.



Rachel Yocum, LEED AP O+M -- State of Delaware Energy Resource Manager

Rachel is the co-chair of the Leading by Example Executive Order 18 Workgroup and the coordinator for the State's participation in the Better Buildings Challenge. I am also a LEED Accredited Professional in the Operations and Maintenance rating system (LEED AP O+M), and I am currently managing the certification of the Carvel State Office Building, which is Delaware's Showcase Project in the Better Buildings Challenge. In addition to these roles, I oversee energy conservation and efficiency in State owned facilities, and I manage retail energy purchases for the State. My educational background is in Environmental Studies and Political Science.



David Basich – Energy Manager, City and County of Denver

David Basich joined the City and County of Denver in early 2012. His current responsibilities include managing over 7 million square feet of facilities, focusing on utility spend, energy efficient improvements, overall condition assessments, and pursuing opportunities for renewable energy resources. He brings over 25 years of professional and management skills with experience working in energy and facility related fields at universities and colleges (University of North Carolina and Owens State Community College) as well as other municipalities (City of Toledo). David holds a MBA in Finance and a Bachelor's in Engineering Technology from the University of Toledo. He is a certified Professional Energy Manager and is currently seeking certification in LEED AP.



Steven Hochman – Energy Division, General Services Administration (GSA)

Steve Hochman graduated from the University of Massachusetts in 1983 with a degree in Mechanical Engineering. He began his career at Norfolk Naval Shipyard in the field of U.S. Navy ship modernization followed by 7 years in ship design at Naval Sea Systems Command. Steve then joined the General Services Administration in 1993 where he has worked in Fire and Life Safety, Repairs and Alterations, Human Capital/Workforce Planning, and Energy Conservation, where he currently serves as an Energy specialist.



Stuart Brodsky – Deputy Director of the Center for the Sustainable Built Environment, NYU

Stuart Brodsky is the Deputy Director of the Center for the Sustainable Built Environment at NYU's Schack Institute of Real Estate and a Clinical Associate Professor leading in the design and delivery of the curriculum in sustainable real estate development.

Stuart's prior work includes:

Senior member of GE Capital Real Estate's global sustainability team where he oversaw the design and implementation strategies for the GE unit's \$80 billion investment portfolio.

National program manager for the Environmental Protection Agency Energy Star Program's commercial property markets initiative. In that role Stuart established partnerships with owners and managers representing nearly 7 billion square feet of commercial property, which led to the industry saving more than 24 million metric tons of greenhouses gases.

Honored by BOMA, the Urban Land Institute, and the Institute of Green Professionals, Brodsky is a member of the National Real Estate Investor's Sustainability Advisory Board an advisor to the Journal of Sustainable Real Estate, and co-chair of the NYC ULI Sustainable Buildings Council.

Brodsky holds degrees from Hobart College and Yale University School of Architecture.



Better Buildings Case Competition

Mona Khalil, Ph.D. - Policy Advisor, U.S. Department of Energy

At the U.S. Department of Energy, Mona has been working to accelerate the deployment of energy efficiency and renewable energy technologies and practices across the public and private sectors. In her current role as Policy Advisor, Mona is collaborating with state and local governments to identify and characterize replicable solutions and best practices that enable policy adoption and program implementation by state and local governments across the U.S. Her focus areas include policies, programs, and financing strategies in energy efficiency in the buildings sector. Mona holds a Ph.D. in Biochemistry from Columbia University, and an undergraduate degree in Chemistry from the University of Nevada, Las Vegas.



Richard Proctor, MBA, CEM, LEED AP - Energy Management, City of Phoenix

Richard has managed the Energy Management Group at the City of Phoenix since 2012. The group is tasked with identifying and implementing energy efficiency measures throughout the City in an effort to facilitate achieving the Citywide goal to reduce energy consumption 20% by 2020, reduce greenhouse gas emissions 15% by 2015, and utilize 15% renewable energy by 2025. Phoenix is the 6th largest city in the United States covering 520 square miles with approximately 3,500 utility accounts and an annual energy budget of approximately \$65 million dollars. It currently has 15MW of installed solar

and has plans to add an additional 10MW in the near future through a partnership with a local utility.

Richard has twenty years of operations management and energy/sustainability consulting in the commercial, industrial and government sectors. He is a Certified Energy Manager, LEED Accredited Professional, Building Performance Institute certified Building Analyst Instructor and also holds an undergraduate degree in AgEconomics from Texas A&M University and an MBA from the University of Wisconsin. He currently is working toward a Master's degree in Sustainability from Harvard University

Marc Costa – Program Manager, The Energy Coalition

Marc has more than eight years of experience in the building industry focusing on areas ranging from economic and workforce development to higher education engagement and whole-portfolio energy management strategies. He holds a B.S. in Management Science from UCSD and a B.S. in Construction Engineering from CSULB. In addition, he is on the Pacific Regional Committee of the U.S. Green Building Council (USGBC) and also is a National Chair for USGBC's Center for Green Schools.



David A. McDonald – Lend Lease, Executive Vice President

David has the overall responsibility for leading and developing business with new and existing corporate clients. He brings over 26 years of national retail development experience in project management, site selection, real estate acquisition, zoning and permitting, construction, architecture, civil engineering, and LEED certification. David is one of the founders of the Lend Lease Multi-Site Group which serves a diverse clientele across several market sectors including restaurant, convenience stores, automotive, hospitality, banking, and retail.



In transitioning the Multi-Site Group from a program management service provider to a turnkey solutions provider for all clients, David and the Multi-Site Group provide all technical and administrative management services, effectively planning and managing projects from the initial bid stage through to the certificate of occupancy and final closeout. The team works to incorporate design and construction into one cohesive process with a single point of accountability.

A graduate of Purdue University, David is professionally affiliated with the International Council of Shopping Centers and is an active member of Vistage.



Una Song – Program Manager, ENERGY STAR, U.S. Environmental Protection Agency

Una Song is a program manager for the voluntary, market-based ENERGY STAR program at the U.S. Environmental Protection Agency (EPA). She creates and implements strategies for promoting, stocking, and selling ENERGY STAR certified commercial food service products.

Prior to her position at EPA, Ms. Song worked as the director of membership and communications for the National Association of Energy Service Companies. Ms. Song has also run her own consulting business, developing strategies for small companies looking to expand into new markets. She started her career in high tech, working at Fortune 500 companies including Dell, AT&T and IBM in sales, marketing, and management positions.

A cum laude graduate of Duke University with a degree in computer science, Ms. Song also earned a Masters of Business Administration in finance from the Stern School of Business at New York University. She is a LEED Accredited Professional

**Adam P. Jarboe – Associate Manager, Global Engineering & Sustainability,
YUM! Brands**

Adam earned a BS in Mechanical Engineering degree and a MS in Engineering Management degree from Rose-Hulman Institute of Technology in Terre Haute, Indiana. Following completion of the degrees, Adam has primarily spent his career with Yum! Brands, the parent company of KFC, Taco Bell and Pizza Hut, on the Global Engineering and Sustainability team. Presently, Adam is an Associate Manager leading strategic company-wide initiatives for sustainable store development, standards and reporting. Adam is an ASHRAE member, Certified Energy Manager and a Professional Engineer-in-Training.



Rich Shandross, PhD – Associate Director, Energy, Navigant Consulting

Rich Shandross is the technical lead of the Better Buildings Alliance's Food Service Technology Team. He brings 25 years of engineering, project management, and research experience in industry, consulting, government, and academia. Rich supports clients in the areas of energy efficiency, technology and market evaluation, and emerging technologies.



**Holly Jamesen Carr - Fellow, Building Technologies Office
U.S. Department of Energy**

Holly Jamesen Carr is a fellow in the Building Technologies Office of the U.S. Department of Energy, where she works with corporate and higher education partners in the DOE's Better Buildings Challenge, showcasing their efforts to reduce energy use across their building portfolios by 20% over 10 years. Previous to her work at DOE, Ms. Carr managed dozens of public, private and federal sustainability projects, assisting clients to implement environmentally preferable strategies for building design, construction, and occupancy. Ms. Carr has a Master of Science degree in Communication from the University of Washington, as well as degrees in French and Education from Miami University. She is a LEED accredited professional.



Roy Buchert, PE, MBA - Worldwide Energy Director for McDonald's Corp

As McDonald's Global Energy Director, Roy works with the different Areas of the World and suppliers to improve restaurant energy efficiency by focusing on operations, kitchen equipment, building/site and technology solutions. He is responsible for the global energy strategy and chairs the global energy leadership board. He has been with McDonald's for more than 19 years and has worked in various roles from Corporate Electrical Engineer leading a design studio in US Restaurant Design, to managing US Construction Supply Chain, to currently leading Global Energy. Prior to McDonald's, Roy worked for consulting firms Sargent & Lundy and ABB Impell supporting the electric utility industry.



In 2007, he was nominated and completed McDonald's Development Leadership Program. He has a BSEE from the University of Wisconsin Platteville, an MBA from Northern Illinois University and is a Professional Licensed Electrical Engineer.

John Herth - Senior Director of Global Design and Construction Services at Dunkin' Brands

As Sr. Director of Global Design and Construction Services, John manages a team that supports the development of Dunkin' Donuts and Baskin Robbins Ice Cream. He is responsible for Design Innovation, Store Planning, Equipment Services, Sustainability and Image Compliance all new and remodeled locations.

John has 20 years experience in the food service area and has worked in numerous architectural and engineering firms. He has worked with other national restaurant brands including Panera Bread and Au Bon Pain. John holds a Master of Architecture degree from Oklahoma State University and is a registered architect in Massachusetts. John is a member of the American Institute of Architects, National Council of Architectural Board is a LEED AP.



Jeff Clark - Conserve Program Director at National Restaurant Association

Jeff Clark manages the National Restaurant Association's Conserve initiative and environmental education efforts. Together with Laura Abshire, he acts as an environmental liaison to the restaurant industry and oversees the Conserve Sustainability Education Program.

Jeff also works with Atlanta-based environmental groups to implement the Zero Waste Zones (ZWZ) program, helping businesses minimize their waste footprint and save money.

Before joining the NRA team, Jeff consulted to the Energy Star Commercial Food Service program. In that position, he promoted energy efficiency in restaurant kitchens, co-authored the Energy Star Guide to Restaurants, and appeared on the PBS show Food Sense with Phil Lempert in 2010.

Jeff received his Bachelor of Science from the University of California, Santa Cruz and holds a Master of Public Policy from Duke University.

Outside of work, Jeff lives in California, is a part-time surfer, a full-time foodie, and an amateur photographer

