



Better Buildings Alliance

Annual Open House Webinar

Mon, Oct 19th, 2015
2:00 PM - 3:00 PM EDT



Welcome & Introductions

Better Buildings Team Members on Today's Call:



Holly Carr, DOE
Retail Lead



Cindy Zhu DOE
CRE Lead



Andy Mitchell DOE
Hospitality Lead



Sultan Latif DOE
Food Service, Healthcare
and Higher Ed Lead



Cara Bastoni, ICF
Food Service & Grocery
Account Manager



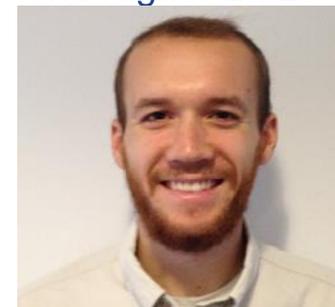
Zach Abrams, ICF
Retail
Account Manager



Jacob Dowling, JDM
Commercial Real Estate
Account Manager



Samantha Stafford, JDM
Healthcare & Hospitality
Account Manager



John Jameson, ICF
Higher Education
Account Manager

Agenda

- Better Buildings Alliance Overview
- 2016 Sector Activities
- Technology and Market Solutions Opportunities
- Program events, announcements & communications
- Q&A



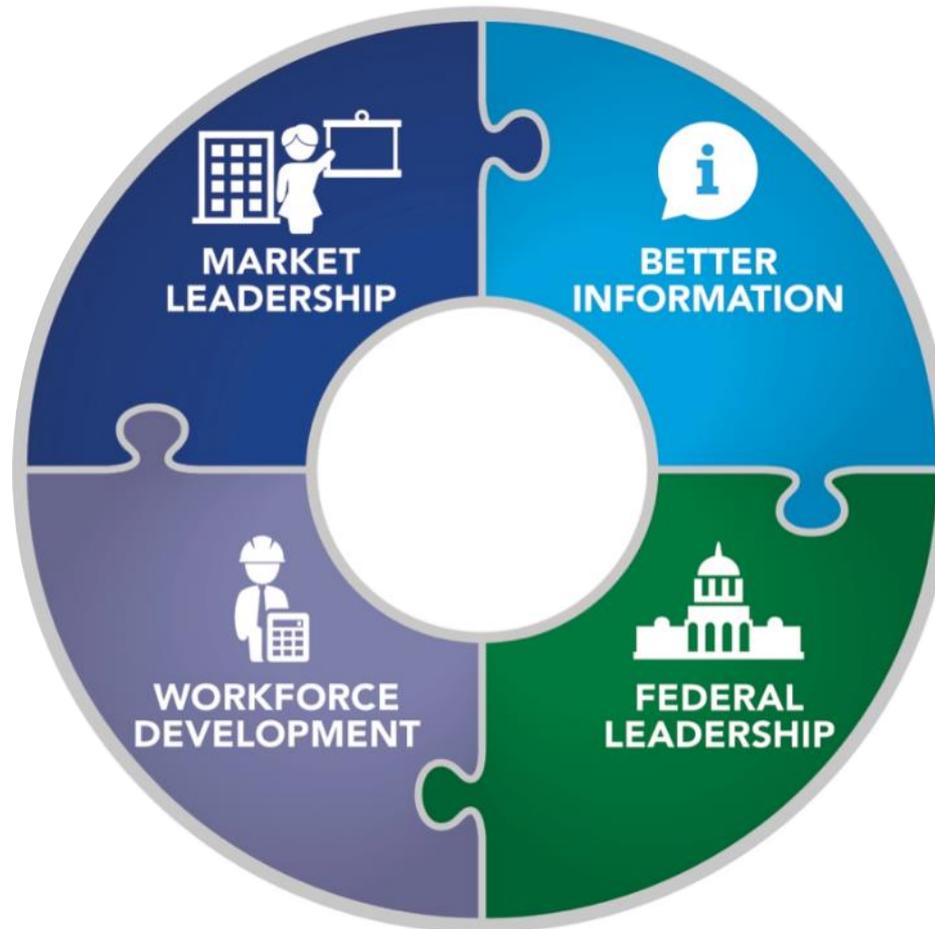
Developing Innovative, Replicable Solutions with Market Leaders

- Better Buildings Challenge
- Better Buildings Alliance
- Better Buildings, Better Plants
- Better Buildings Accelerators
- Better Buildings Residential
- Superior Energy Performance



Developing a Skilled Clean Energy Workforce

- Better Buildings Workforce Guidelines



Making Energy Efficiency Investment Easier

- Building Performance Database
- Building Energy Data Exchange Specification
- New Financing Solutions
- Building Energy Asset Scoring Tool
- Home Energy Score
- Appraisal Foundation Memorandum of Understanding



Leading by Example in the Federal Government

- New Executive Order
- President's Performance Contracting Challenge
- DOE Leadership

Better Buildings Alliance: How is it organized?



Commercial Real Estate



Food Service, Retail & Grocery



Healthcare



Hospitality



Higher Education

Technology Solutions Teams



Lighting



Space Conditioning



Plug & Process Loads



Refrigeration



Energy Information Systems



Renewables Integration

Market Solutions Team



Financing Strategies



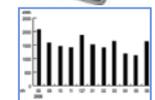
Leasing and Tenant Engagement



Training / Workforce



Appraisals and Valuation



Data Access

Better Buildings Alliance Snapshot

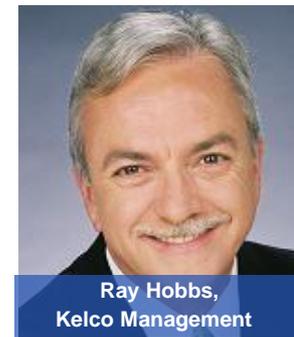
Membership	
Number of Member Organizations	199 (165 members, 34 affiliates)
Square Feet Represented	9.7 Billion
Percent of U.S. Commercial Buildings	11%
New Members in 2015	13 (7 members, 6 affiliates)
Teams	
Number of Technology and Market Solutions Teams	13
Activities	
Energy Savings Activities Available to Members	60+

Welcome to New Members!



Steering Committees: Setting Priorities

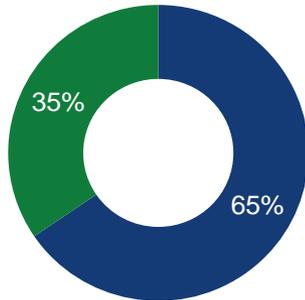
Better Buildings Alliance Steering Committee Chairs, 2014-2016



Commercial Sector Updates

Commercial Real Estate Sector

Commercial Real Estate Compared to Market Floorspace



There are currently 52 members in the Commercial Real Estate sector, accounting for nearly 6 billion sq. ft.; about 35% of the sector's floorspace in the U.S. market.

For more information contact:
Jacob Dowling, JDM
Account Manager
703-873-7143
jdowling@jdmgmt.com

Membership

- The JBG Companies
- Cox Enterprises
- Kimco Realty Corporation
- Liberty Property Trust
- Newmark Knight Frank
- Cushman and Wakefield
- Prologis
- Tishman Speyer
- CBRE
- Deutsche Asset & Wealth Management
- PNC Financial Services Group
- Jones Lang LaSalle
- Regency Centers
- Vornado
- Glenborough
- Clarion Partners
- AtSite
- CC Frost Properties, Ltd.
- Community Services Agency & Development Corporation
- Dacra Development
- Denver West
- Equity One Inc.
- First Potomac Realty Trust
- H&R Block Inc.
- Kessinger Hunter & Co
- Kilroy Realty
- Transwestern
- Cassidy Turley
- Related Companies
- Hines
- Bank of America
- Colliers
- Forest City Enterprises
- The Westfield Group
- IBM
- USAA Real Estate Company
- Columbia Association
- Living City Block
- MC Realty
- Mesa Lane Partners, LLC
- Principal Real Estate Investors
- Prudential Financial, Inc.
- Retail Properties of America
- Ryan Companies US, Inc.
- Sharpe Properties Group, LLC
- Stream Realty Partners, L.P.
- Studley
- The Malcolm Bryant Corp.
- U.S. Navy CNIC Facilities and Acquisitions
- The Tower Companies
- Parmenter Realty Partners

2015 Sector Accomplishments

- **Priority: Stakeholder Engagement**
 - ENERGY STAR Tenant Engagement Webinar in November 2014
 - 2015 BOMA Conference presentation on Engaging Asset Managers
 - Review and comments on Appraisal Foundation Competency Guidelines
- **Priority: Cogeneration & CHP**
 - Summit Session: CHP Meet Up
- Held CRE Meet-Up at 2015 Better Buildings Summit to discuss trends, challenges, and opportunities
- Split Hospitality and CRE Steering Committees to provide more focused efforts

Commercial Real Estate New Resources

- New Resources:
 - [Solar PV Decision Guide](#)
 - [EMIS Specification and Procurement Guidance](#)

Commercial Real Estate Sector Priorities

Sector Priorities

Understanding and communicating the connection between sustainability and building value to financial decision makers

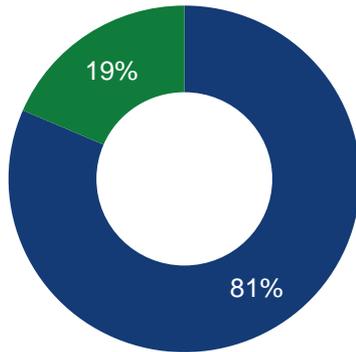
Identifying and evaluating skilled engineers

Identifying and supporting industry efforts to engage and train commercial brokers

Retail, Food Service, and Grocery Sector Updates

Retail, Food Service and Grocery Sector

Retail, Food Service & Grocery Members
Compared to Market Floorspace



There are currently 47 members in the Retail, Food Service & Grocery sector, accounting for nearly 2.7 billion sq. ft.; about 19% of the sector's floorspace in the U.S. market.

For more information contact:

Zach Abrams, ICF
Retail Account Manager
646-334-1174
zach.abrams@icfi.com

Cara Bastoni, ICF
Food Service & Grocery
Account Manager
703-225-2915
cara.bastoni@icfi.com

Membership

- CEFCO Stores
- Red Robin Gourmet Burgers
- Dunkin' Brands
- Food Lion
- Ford Motor Company
- Hannaford
- Harris Teeter
- PetSmart
- Publix
- REI
- Safeway
- Fresh & Easy
- Walmart
- Costco Wholesale Corporation
- Target
- Lowe's
- Whole Foods Market
- The Home Depot
- Staples
- Kohl's Department Stores
- SUPERVALU
- Crate & Barrel
- Einstein Noah Restaurant Group, Inc.
- CKE Restaurants Holdings, LLC
- Best Buy
- McDonald's Corp.
- JC Penney
- Petco
- Chipotle Mexican Grill
- Arby's Restaurant Group

2015 Sector Accomplishments

- **EMIS for Retail, Food Service, and Grocery:** A webinar was held providing an overview of resources from the EMIS team and examples from retailers. A recording and slides are available [here](#).
- **Business Case Considerations for Proactive RTU Replacement:** Marta Schantz provided a summary of this resource at the RFSG sector breakout at the 2015 Summit.
- **Retrofitting Refrigerated Display Cases with Doors:** Some members have realized energy savings without impacting sales, but we are still looking for someone to share their results publicly.

Retail, Food Service & Grocery New Resources

- [Hannaford Case Study, “Trans-critical Carbon Dioxide Supermarket Refrigeration Systems”](#)
- [Target Engineering and Right-Sizing RTU Replacements Case Study \(2015\)](#)
- [Walgreens RTU Replacement Case Study on Proactive RTU Replacement](#)

Retail, Food Service & Grocery Sector Priorities

Sector Priorities

Green leasing for small box retail and restaurants

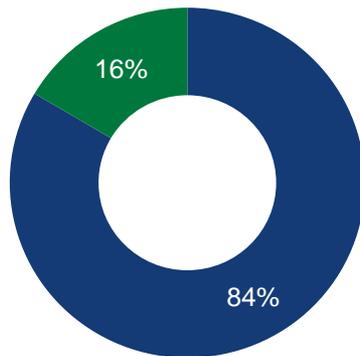
Analysis Paralysis - Making data actionable, what to do with the data retailers collect

Partnering with your utility on customized incentives/Technology Performance Exchange (TPEX)

Higher Education Sector Updates

Higher Education Sector

Higher Education Members Compared to Market Floorspace



There are currently 27 members in the Higher Education sector, accounting for over 292 million sq. ft.; about 16% of the sector's floorspace in the U.S. market.

For more information contact:
John Jameson, ICF
Account Manager
303-792-7828
John.jameson@icfi.com

Membership

- Stanford University
- University of California, Irvine
- Loyola University
- University of Hawaii at Manoa
- Grand Valley State University
- University of California, Merced
- Massachusetts Institute of Technology (MIT)
- Arizona State University
- Cornell University
- University of Colorado Boulder
- Michigan State University
- University of Utah
- San Mateo Community College District
- Emory University
- University of South Carolina
- University of Miami
- Portland State University
- Clark Atlanta University
- Tulane University
- University of California, Davis
- University of Massachusetts Medical School
- University of Miami
- Washtenaw Community College
- University of Wisconsin
- University of Maryland
- University of California, Berkeley

2015 Accomplishments

- Peer exchange call on recruiting and retaining skilled energy and facilities staff, distributed resources afterwards
- New Affiliate partnerships with APPA, NACUBO, and Sustainable Endowments Institute
- Convened higher education facilities benchmarking session at 2015 Better Buildings Summit to discuss measurement, metering and developing an industry benchmark

Higher Education Sector Priorities

Sector Priorities

Continuous commissioning, fault detection and controls optimization

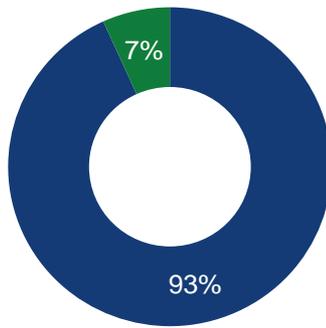
Addressing campus growth

Facilities benchmarking through Building Performance Database

Healthcare Sector Updates

Healthcare Sector

Healthcare Members Compared to Market Floor space



There are currently 29 members in the Healthcare sector, accounting for nearly 0.3 billion sq. ft.; about 7% of the sector's floor space in the U.S. market.

For more information contact:
Samantha Stafford, JDM
Account Manager
703-639-4265
sstafford@jdmgmt.com

Membership

- Ascension Health
- Beaumont Health System
- Bon Secours St. Francis Health System
- Broward Health North
- Catholic Health Initiatives (CHI)
- CentraCare Health
- Cleveland Clinic Foundation
- Defense Health Agency (DHA)
- Gundersen Health System
- Health Care REIT
- HealthSouth
- Hospital Corporation of America
- Inova Health System
- Kaiser Permanente
- Legacy Health
- Lincoln Harris
- Mayo Clinic
- New York-Presbyterian Hospital
- North Shore-Long Island Jewish Health System
- Providence Health & Services
- Southwestern Vermont Health Care
- Summa Health System
- U.S. Department of Veterans Affairs (VA)
- University of Maryland Medical Center
- UPMC: University of Pittsburgh Medical Center
- University of South Alabama Medical Center
- University of Utah Health Care
- Veteran Health Administration
- Westchester Medical Center

2015 Accomplishments

- Peer Exchange
 - Ventilation Setbacks for Healthcare Facilities
 - Lighting for Improved Environment of Care
- Financing Energy Efficiency Projects Conference Presentations with DOE Leads - HFMA and CleanMed

Healthcare Sector Priorities

Sector Priorities

Evaluating offerings for building controls/ analytics /EMIS

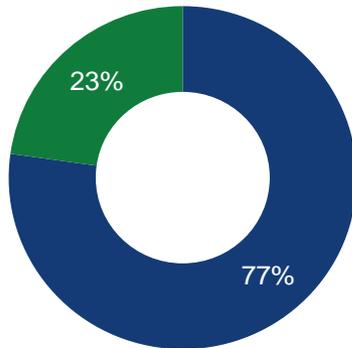
Optimizing air exchange rates in hospitals

Managing energy consumption of central plants and related equipment

Hospitality Sector Updates

Hospitality Sector

Hospitality Members Compared to
Market Floor space



There are currently 10 members in the Hospitality sector, accounting for over 965 million sq. ft.; about 23% of the sector's floor space in the U.S. market.

For more information contact:
Samantha Stafford, JDM
Account Manager
703-639-4265
sstafford@jdmgmt.com

Membership

- Hilton Worldwide
- Hyatt Hotels Corporation
- IHG (InterContinental Hotels Group)
- Kelco Management & Development
- The Kessler Collection
- Marriott International
- MGM Resorts International
- Saunders Hotel Group
- The Walt Disney Co.
- Wyndham Worldwide

Hospitality Sector Priorities

Sector Priorities

Utilizing building controls/EMIS and Evaluating offerings for EMIS

Evaluating and financing solar PV at Hospitality properties

Hospitality industry benchmarking

Tech & Market Solutions Team Updates

Join a Tech Team!

2016 Technology Solutions Teams

1. Lighting
2. Space Conditioning
3. Refrigeration
4. Plug and Process Loads
5. Renewable Integration
6. Energy Management Information Systems

What's Happening in 2016?

- The Food Service Team will wrap into the food service sector and other tech teams
- The Laboratory technical team will wrap up, but still be supported through work on market solutions and other technology solutions teams; an MOU is in place with the International Institute for Sustainable Labs (I2SL).
- Focus on getting the word out about existing resources, increasing use

High Impact Technologies

Partner input!

Ongoing input is appreciated through the Technology Solutions Teams. We are hosting discussion webinars on High Impact Technologies (HITs) at the following times:

- Thursday, October 22nd, 9-10 PT/11-12 ET
- Wednesday, October 28th, 1-2 PT/4-5 ET

Please reach out to Collin Weber from Navigant Consulting (Collin.weber@navigant.com), which is supporting this program, and let him know of your time/date preference and who from your organization would like to attend.

For more information contact:

Amy Jiron, Hit Catalyst - Tech Team Demos

amy.jiron@ee.doe.gov

720-339-7475

Lighting and Electric Team: ILC

Interior Lighting Campaign (ILC)

- Recognition for best practices and energy savings at the BOMA Conference in 2016
- Real Building Demonstrations
 - 10 advanced lighting controls demonstrations with the Design Lights Consortium
 - LED luminaires, controls strategies and retrofit kits
- Join today! As a participant or a supporter (such as utility, efficiency organizations, ESCO, lighting designers, lighting manufacturers, or others that support ILC goals)

www.interiorlightingcampaign.org

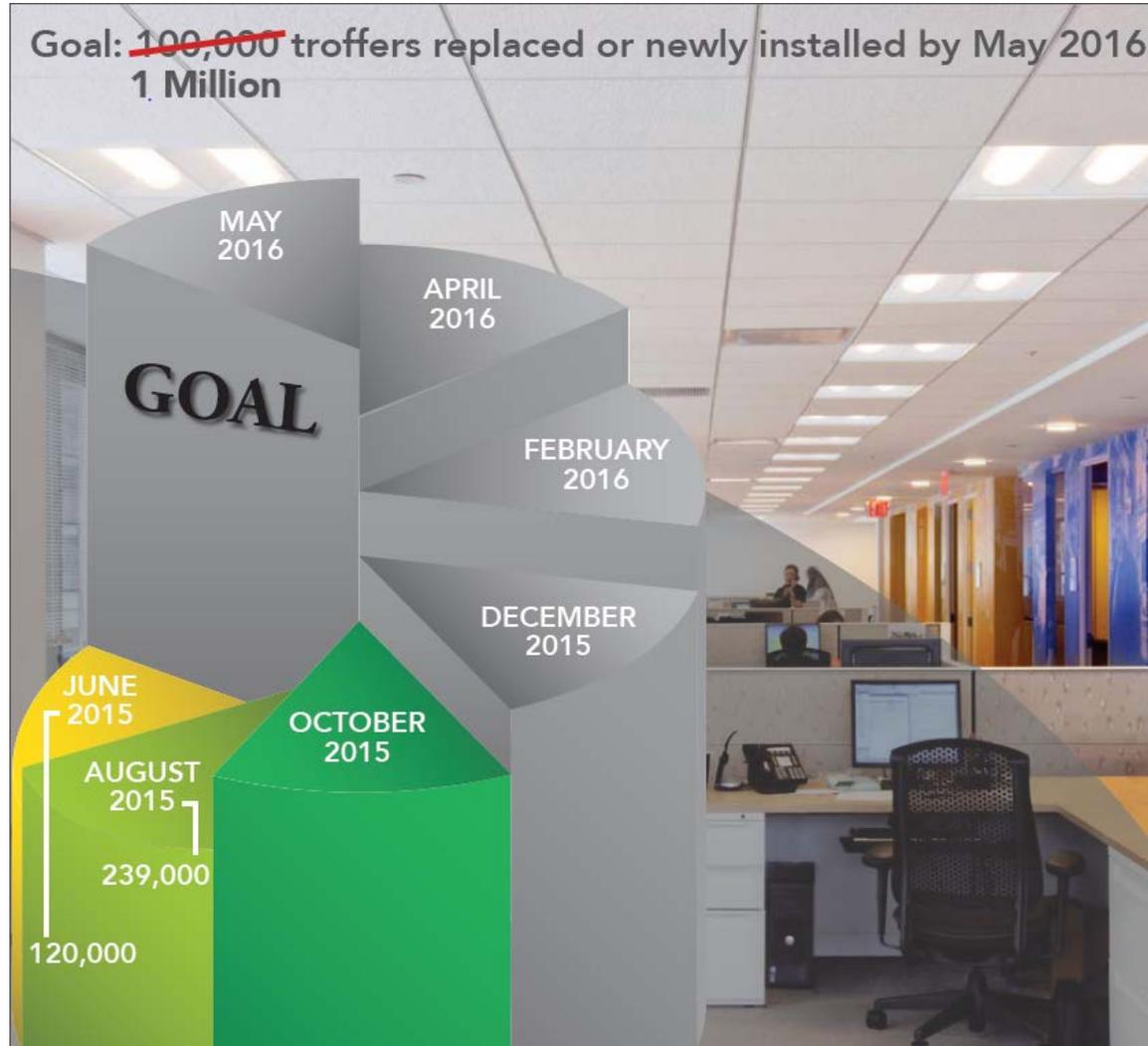
For more information contact:

Linda Sandahl, Lighting Tech Team Lead

linda.sandahl@pnnl.gov 503-417-7554



Lighting and Electric Team: ILC



Lighting and Electric Team: LEEP

Lighting Energy Efficiency Parking Campaign

HOME

ABOUT

JOIN

TECH. & FINANCIAL ASSISTANCE

CASE STUDIES

AWARDS AND RESULTS



It's easy to take the LEEP

Join the team
Save electricity and money
Get recognized for success

Join



<http://www.leepcampaign.org/tools-amp-information.html>

Space Conditioning Team: Advanced RTU Campaign (ARC)

- Promotes high-efficiency RTU solutions high-efficiency replacements, and new installations
- Advanced control retrofits
- Quality Installation and maintenance

The screenshot shows the homepage of the Advanced RTU Campaign website. At the top, there is a dark blue header with the text "Advanced RTU Campaign" and a search bar on the right. Below the header is a navigation menu with links for "HOME", "ABOUT", "JOIN", "TECHNICAL ASSISTANCE", "FINANCIAL RESOURCES", "AWARDS & RESULTS", and "CONTACT US". The main content area features a section titled "What is the Advanced RTU Campaign?" with a paragraph explaining that older, inefficient commercial rooftop units (RTUs) can waste from \$1,000 to \$3,700 per unit annually. It encourages building owners to replace or retrofit their RTUs with more efficient units. Below the text is a large image of a rooftop unit with a dark blue overlay containing the text "Replace. Retrofit. Reap Rewards." and a "Join" button. At the bottom of the overlay are logos for ASHRAE, RILA (Retail Industry Leaders Association), and Better Buildings.



www.advancedrtu.org

Space Conditioning Team: Advanced RTU Campaign (ARC)

- 2015 Activities: 386 Million kWh and \$8.65 million in savings
 - Commitments to retrofit/replace 43,000 Rooftop Units, 54 participating organization, 165 supporting partners representing.
 - Coming Soon: *The Business Case for RTU Replacement*
 - 2016 awards at the PRSM National Conference in April
 - 4K+ website hits to ARC; it is very popular
- 2016 Plans
 - ARC Goal = 75,000 Rooftop Units
 - Systems View of Central Plants and Ventilation Guide for Retail
- Real Building Demonstrations
 - Smart Air Scrubbers for HVAC Load Reduction
 - Big Ass Fans (with comfort control) kicking off this fall

For more information contact:

Michael Deru, Space Conditioning Tech Team Lead - michael.deru@nrel.gov

Plug and Process Loads team

■ 2015 Activities

- Resources
 - Advanced Power Strip (APS) Specification
 - “How to” guide for use with the technology
 - Utility Incentives Snapshot
- Coming soon: Decision Guide for Enterprise Adoption of Advanced Power Strips

■ 2016 Plans

- Case study on net zero building plug loads
- Comparison study of desktop vs. cloud computing

For more information contact:

Rois Langer, Plug & Process Load Tech Team Lead

margarete.langner@nrel.gov

303-275-4329

Renewable Integration Team

2015 Activities

- Created PV Installation Guide for:
 - [Healthcare](#)
 - Hospitality
 - [Commercial Real Estate \(Leased buildings\)](#)
- Co-hosted webinar meeting on PV for healthcare, Hospitality coming up on November 10th.
- Developed Ten Case Studies to compliment the “mini-guides”

2016 Plans

- Continue to respond to member needs and address high impact technology
- Energy storage

For more information contact:

Jay Paidipati, Renewable Integration Tech Team Lead
jpaidipati@navigant.com; 303-728-2489



*Jeff Thompson, CEO of Gundersen Health System.
Photo credit: Gundersen Health System.*

Energy Management Information Systems (EMIS) Team

■ 2015 Activities

- Published and EMIS procurement guide with draft RFP
- Finalized the EMIS Primer: holistic introduction to the use and adoption

■ 2016 Plans

- EMIS Campaign! to launch in 2017, contact me andrew.mitchell@ee.gov.doe to engage in strategic development.
- Real building demonstrations
- What EMIS issues are you seeing in CRE?

For more information contact:

Jessica Granderson, EMIS Tech Team Lead

jgranderson@lbl.gov

510-486-6792

Refrigeration Team

- 2015 Activity
 - Based on member feedback, established working groups to address the major challenges facing the industry:
 - Performance Metric
 - Integrated Solution Business Model
 - Utility Incentives
 - The “experiment” yielded a lot of information, but ultimately we decided not to pursue the groups.
- 2016 Plans
 - Focus on the HIT recognized refrigeration doors
 - Ongoing project on alternative refrigerants with Whole Foods Market

For more information contact:

Robert Zogg, Refrigeration Tech Team Lead

robert.zogg@navigant.com

Food Service Technical Team

- 2015 Activities:
 - Walk in Cooler/Freezer summary
 - Demand Control Kitchen Ventilation guide forthcoming

Laboratories Technical Team

- 2015 Activities:
 - Updated Ultralow Temperature Freezer specification and tool
 - Supported I2SL benchmarking tool and conference
 - Finalized the I2SL MOU

Market Solutions & Accelerators

- **Green Leasing**
 - Green Lease Leaders now own, manage or occupy more than 800 million square feet
 - 2016 application now under development
- **Data Access**
 - Energy Data Accelerator (EDA) will wrap up this year
 - EDA will publish resources and best practices for others to leverage
- **Valuing Energy Efficiency**
 - Energy Matters! New training for appraisal and valuation professionals.
 - Scoping study on sustainability mortgage underwriting
 - Develop a feasibility study on energy efficiency improvements through the design and construction of tenant spaces
- **Workforce Development**
 - [Support the Better Buildings Workforce Initiative](#)
 - Voluntary national guidelines to improve quality and consistency of credentials for energy-related jobs

Better Buildings Challenge

Join the Better Buildings Challenge: Leadership Circle

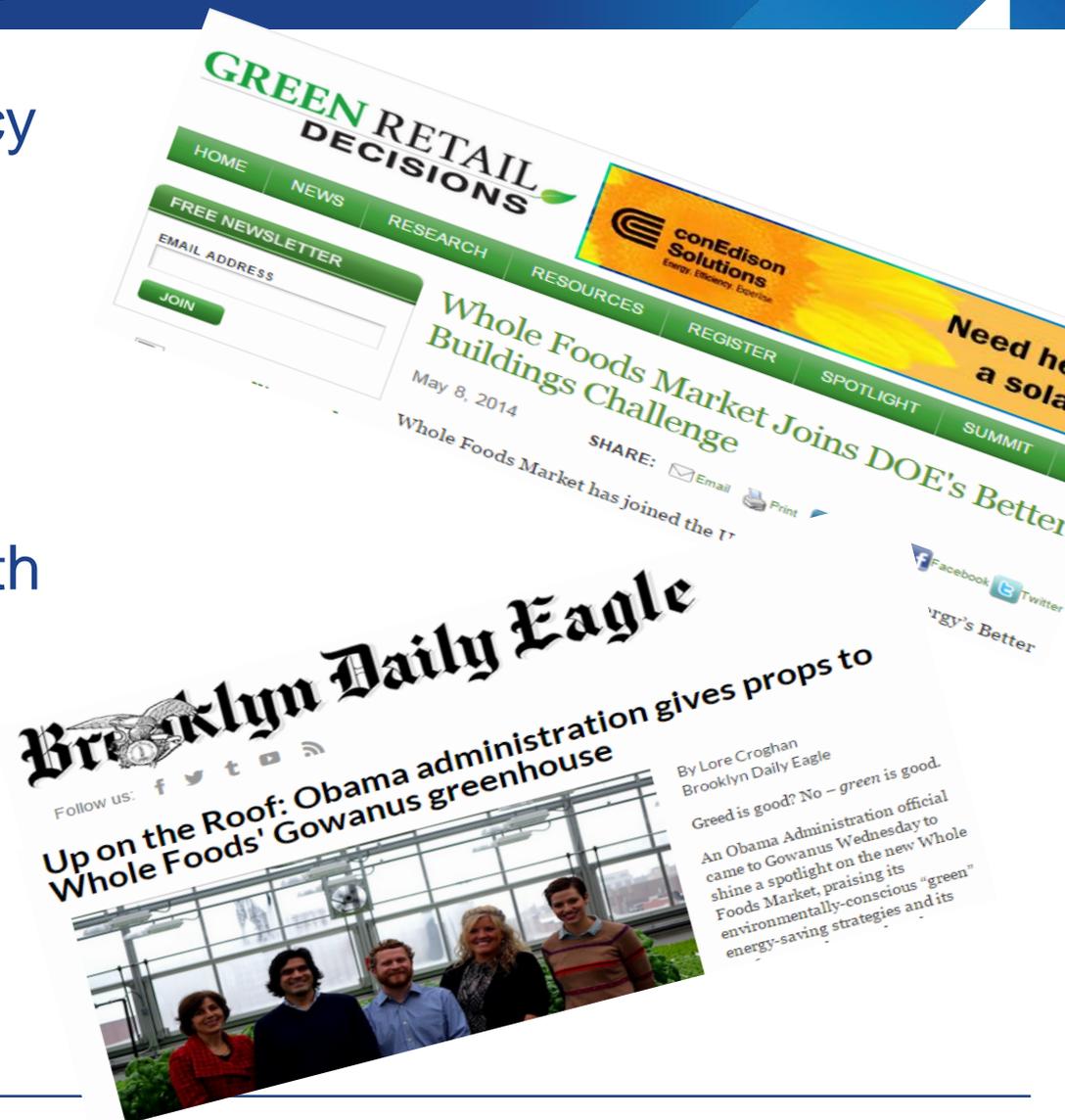


- Set a public goal of 20% or greater energy savings.
- Report annually on progress.
- Share best practices.

47

Better Buildings Challenge: What's in it for you?

- Elevates energy efficiency to company leadership
- Validation of internal energy reporting
- White House recognition events
- In-store media events with DOE
- Conferences and publications



NEW! Better Buildings Solution Center



Proven Solutions for:

- Large and small buildings
- All sectors
- Specific building types

Search by:

- Your energy efficiency barrier
- Your sector
- Your city or state

betterbuildingsolutioncenter.energy.gov/

2016

SAVE THE DATE

BETTER BUILDINGS SUMMIT

WASHINGTON, DC ■ MAY 9-11



Many ways to stay informed!

Follow us on social media!

Twitter: @BetterBldgsDOE

LinkedIn

YouTube

Sign up for newsletters!

[Beat Blog](#) (weekly posts)

- Interviews/Q+As, follow-up pieces from partner events and press releases; solution deeper dive

[Bulletin](#)

- Monthly digest of new solutions, partners, news, events

[Get Involved](#)

- Monthly call to action email listing events, webinars, ways to participate with Better Buildings

[Top-10 Solutions](#)

- Monthly top ten viewed solutions

Participate in [monthly webinar series](#)

Check out the [newsroom](#) for press on events highlighting partner accomplishments

Questions?

Thank You

SECTOR	DOE LEAD	ACCOUNT MANAGER
COMMERCIAL REAL ESTATE	Cindy Zhu DOE Better Buildings 202-586-9193 cindy.zhu@ee.doe.gov	Jacob Dowling, JDM Account Manager 703-873-7143 jdowling@jdmgmt.com
HEALTHCARE	Sultan Latif DOE Better Buildings 202-287-1829 sultan.Latif@ee.doe.gov	Samantha Stafford, JDM Account Manager 703-639-4265 sstafford@jdmgmt.com
HIGHER EDUCATION	Sultan Latif DOE Better Buildings 202-287-1829 Sultan.Latif@ee.doe.gov	John Jameson, ICF Account Manager 303-792-7828 john.jameson@icfi.com
HOSPITALITY	Andrew Mitchell DOE Technology Teams Coordinator/ Hospitality Sector Lead 202-287-1578 Andrew.Mitchell@ee.doe.gov	Samantha Stafford, JDM Account Manager 703-639-4265 sstafford@jdmgmt.com
RETAIL, FOOD SERVICE & GROCERY	Holly Carr DOE Partnerships Retail Sector Lead 202-287-1409 holly.carr@ee.doe.gov Sultan Latif DOE Better Buildings Food Service & Grocery Sector Lead 202-287-1829 sultan.Latif@ee.doe.gov	Zach Abrams, ICF Retail Account Manager 646-334-1174 zach.abrams@icfi.com Cara Bastoni, ICF Account Manager 703-225-2915 cara.bastoni@icfi.com