



Retail, Food Service, and Grocery Sector Meet-Up

Wednesday, July 10th, 2019
10:30 am - 12:30 pm



Session Agenda

10:30 am	Welcome & Introductions
10:40 am	Sector Recognition
10:55 am	Sector Priorities
11:30 am	Partner Updates
12:10 pm	Program Updates
12:25 pm	Wrap Up

Retail, Food Service & Grocery Team



Cedar Blazek
Department of Energy
BBA Lead; Retail, Food
Service & Grocery Lead



Cecilia Govrik
ICF
Retail, Food Service, &
Grocery Account Manager



JaMarcus Brewer
ICF
Retail Subject Matter Expert

Opening Question

*Why do you do
what you do?*



Sector Recognition

Sector Accomplishments

71

UNIQUE
SECTOR
PARTNERS

29

CHALLENGE
PARTNERS

42

ALLIANCE
PARTNERS

Challenge Partners with Greatest Energy Savings

Savings Toward Initial Goal Since Baseline Year

Best Buy*	32%
Havertys*	31%
Arby's*	26%
Kohl's Department Stores*	24%
Macy's*	23%
Wendium of Florida, Inc. (Wendy's franchisee)*	21%
Shari's Cafe & Pies	18%
Whole Foods Market	17%
Staples	14%
Walgreens Co.	12%
The Wendy's Company	12%

*Goal achiever

2.7 BILLION SQUARE FEET

\$1.72 BILLION SAVED SINCE 2011

Better Buildings Challenge: 2019 Goal Achievers

Energy Goal Achiever – *Second Goal*

HAVERTYS
FURNITURE®

31%

Havertys is a commercial partner located in Atlanta, GA. Having previously met its original Challenge goal, it committed 6.1 million square feet and has a 2011 energy baseline.

Better Buildings Challenge: 2019 Goal Achievers

Energy Goal Achiever

KOHL'S 24%

Kohl's Department Stores is a commercial partner based in Menomonee Falls, WI. It committed 112 million square feet and has a 2008 energy baseline.

Better Buildings Challenge: 2019 Goal Achievers

Energy Goal Achiever – *Franchise Partner*



Wendium of Florida, Inc. became the first franchisee of The Wendy's Company to meet its Challenge goal, achieving 21% energy savings across its portfolio of 18,000 square feet.

Advanced RTU Campaign (ARC): 2019 Recognition

Participant & Supporter Awards

The Walgreens logo is written in a red, cursive script font.

- Greatest # of high-efficiency RTU installations & advanced control retrofits for a large portfolio owner
 - *Installed 4,373 RTUs with high-efficiency units & controls, resulting in more than 39 million kWh annual energy savings*

The H&M logo is written in a red, stylized, blocky font.

- Greatest # of high-efficiency RTU installations & advanced control retrofits for a medium portfolio owner
 - *Installed 541 RTUs & controls, resulting in more than 4 million kWh annual energy savings*

The McDonald's logo features the golden arches above the word "McDonald's" in a red, sans-serif font.

- Highest % of high-efficiency RTU installations & control retrofits from 2013-2018
 - *Replaced more than 70% of RTUs at company owned restaurants*

Advanced RTU Campaign (ARC): 2019 Recognition

Continued Commitment to High-Efficiency RTU Best Practices



- Continues to develop innovative energy efficiency improvements in retail store design & operation
 - *Includes new ventilation strategies, optimized integrated design, and innovative fault detection and diagnostics*
- Installed & retrofitted 17,633 high-efficiency RTUs
 - *Resulting in more than 12 million kWh annual energy savings since 2013*

RFSG Steering Committee

Thank you to the 2018-2020 committee members!

- **Bob Valair**, *Staples*
- **Bruce Condit**, *Connex*
- **Erin Hiatt**, *Retail Industry Leaders Association*
- **Graziella Siciliano**, *Environmental Defense Fund*
- **James McClendon**, *Walmart (Chair)*
- **Kirk Beaudoin**, *adidas*
- **Mike Ellinger**, *Whole Foods*
- **Patrick Leonard**, *Starbucks*
- **Peter Isabell**, *Life Time Fitness*
- **Sheila Ongie**, *National Co-op Grocers*

Sector Priorities

2019 RFSG Sector Priorities

FY2019 Priorities

Workforce Training and Development

Resilience and Disaster
Preparedness Planning

EMIS Data Analytics

Sector Priorities – 2019 Activities

Priority #1: Workforce Training & Development

- Workforce page on Solution Center
 - *Links to partner Solutions & program resources:*
<https://betterbuildingsolutioncenter.energy.gov/workforce>
- New resources on RFSG Sector page
 - *HVACR Workforce Resources List*
 - *HVACR Contracting Guide*

Sector Priorities – 2019 Activities

Priority #2: Resilience & Disaster Preparedness Planning

- Efficiency-Resilience Nexus page on Solution Center
 - *Includes resources to help organizations across different sectors build resilience*

<https://betterbuildingsolutioncenter.energy.gov/resilience>

Sector Priorities – 2019 Activities

Priority #3: EMIS Data Analytics

- Connecting RFSG partners to Smart Energy Analytics (SEA) Campaign for technical assistance & resources

<https://smart-energy-analytics.org/>

- New resource on RFSG Sector page
 - *Energy Data Management Resources List*

2020 Sector Priorities Brainstorm

What should the RFSG sector focus on in the upcoming year?



Partner Updates

U.S. DEPARTMENT OF
ENERGY

Discussion Questions

What was your biggest energy success of the past year?

What was your biggest energy challenge of the past year?



Partner Updates – Site Visit



Net Zero Distribution Center



ANNUAL ENERGY USE

(Source EUI)

Baseline ASHRAE 90.1-2007

45 kBtu/sq. ft.

Expected (2019)

31.5 kBtu/sq. ft.

ENERGY SAVINGS:

30%

ANNUAL ENERGY COST

Baseline ASHRAE 90.1-2007

\$450,000

Expected (2019)

\$306,000

COST SAVINGS:

32%

Partner Updates – Newest Solutions



Closing Doors to Open Savings

BARRIER

Open exterior store doors increase energy costs but are considered a way to encourage customer foot traffic.

SOLUTION

Examine the impacts of open versus closed exterior doors on foot traffic and energy use.

OUTCOME

H&M determined that closing exterior doors results in approximately \$10,000 in energy cost savings a year on average per store with no discernible impact on foot traffic, leading to the establishment of a company closed-door policy.

Partner Updates – Newest Solutions



Breaking Down the Split Incentive Barrier with RTU Performance & Maintenance Specs

- RTU guidelines that are beneficial to themselves as tenant & to their landlords
 - *New RTUs aligned with ARC's technical spec*
 - *Equipment & labor warranties*
 - *Requirements to perform preventive maintenance*
- Customizes RTU features based on each store's geographical location
 - *Hot gas bypass for dehumidification in the South*
 - *Improved coil coatings to prevent corrosion due to salty air on the coasts*
 - *Hail guards, hurricane ties, and seismic brackets*

Partner Updates – Newest Solutions



Smart Family of Designs 2.0

- Portfolio of development options for franchisees, including buildings that fit into smaller footprints
- Features that promote energy efficiency
 - *Exterior & interior LED lighting*
 - *ENERGY STAR® certified equipment – fryers, high-efficiency HVAC systems, and options for refrigerators and ice cube compressors*
 - *Kiosk-centric ordering eliminates the need for interior menu*



Smart 2.0 restaurant in Columbus, OH

THE WENDY'S COMPANY

PROJECT: Restaurant Support Center
LOCATION: Dublin, Ohio
SIZE: 325,000 Square Feet



Annual Energy Use

(Source EUI)



Energy Savings:

28%



Annual Energy Cost



Cost Savings:

\$174,000

BACKGROUND

- Corporate headquarters for The Wendy's Company, providing support for the more than 6,600 Wendy's restaurants across the globe
- Unique facility containing an office complex, data center, and a test kitchen, along with a 75,000 sq. ft. addition of meeting space, a fitness center, and office space for employees
- The Thomas Building and Conference Center was awarded LEED® Silver certification in spring 2013

SOLUTIONS

- Since 2013, the energy efficiency improvements implemented at the Restaurant Support Center have included:
 - LED lighting upgrades for approximately 400 fixtures
 - Chiller replacements
 - Retrocommissioning
- The lobby of the Wendy's Restaurant Support Center was remodeled to allow for abundant natural light and a more open, inviting reception area

OTHER BENEFITS

- The energy efficiency measures implemented have resulted in a greenhouse gas emissions reduction of nearly 28% since 2013
- The local utility, AEP Ohio, recognized Wendy's in 2014 for its commitment to energy efficiency

HAVERTYS

PROJECT: Eastern Distribution Center
LOCATION: Braselton, Georgia
SIZE: 810,000 Square Feet



Annual Energy Use

(Source EUI)



Water Savings:

29%



Annual Energy Cost



Cost Savings:

\$50,000

BACKGROUND

- The distribution center is an 810,000 sq. ft. tilt-panel high-bay racking facility built in 2002
- The building employs 210 people and operates 153 hours each week
- The facility is the largest distribution center for Havertys, and also the company's largest single user of energy in its entire building portfolio
- Launched the HV Terra program in 2010, which helps the company implement sustainable practices in both existing and new stores and later expanded to its distribution centers to find additional energy efficiency and sustainability opportunities

SOLUTIONS

- First implemented HVAC and efficiency improvements and behavioral changes at the facility to reduce consumption with little or no cost
 - Operational efficiencies implemented in 2011–2015 helped offset increases in consumption and rate costs, and represent a 10% energy reduction
- Replaced dated battery-operated equipment with more efficient equipment with fewer batteries
- Completed three major lighting upgrade projects, replacing existing lighting systems with LED fixtures (ROI of 3.5 years)
- An additional 15% improvement in EUI is expected from the completion of the most recent LED lighting upgrade

OTHER BENEFITS

- The LEDs provide higher quality lighting, along with the benefit of increased safety and visibility
- Reduced material and labor costs from longer LED bulb life positively impacts both safety and facility operational cost

Partner Updates

- What has Whole Foods been up to since SWAP?



Partner Updates - EDF

- Refrigeration

- Sharing landscape summaries we are putting together for refrigeration (government action, codes updates, local capacity building, technology transfer, etc.)
- Interviewing companies to assess the biggest challenges and sharing results with DOE, EPA and others
- Hosting webinars to share content
- Continuing to voice EDF perspective in public outreach ([link](#))

- RE and EE

- Working with partner companies to help suppliers create and/or engage in collaborative forums like Better Buildings, REBA, etc.

Program Updates

Engage with the Technology Research Teams

Plug and Process Loads Team

- Covers best practices and innovative technologies for controlling these loads in commercial buildings. PPLs are expected to increase with respect to the other building end use energy loads, and now is a great time to get involved.
- Lead: Kim Trenbath: kim.trenbath@nrel.gov



Smart Energy Analytics Campaign

- Look for Eliot Crowe to talk about the Energy Information System (EIS) or Fault Detection and Diagnostics (FDD) tools you have implemented in your buildings, and how you can get started with a monitoring-based commissioning process.
- Lead: Eliot Crowe**: ecrowe@lbl.gov

Envelope Tech Research Team

- Air infiltration accounts for 20% of primary energy consumption in buildings. Learn more about advanced window, wall, and roof technologies to improve your building enclosure.
- Lead: Melissa Lapsa: lapsamv@ornl.gov



Contact your Account Manager for Introductions!

**These staff are at the Summit. Find them at Ask-an-Expert tables during networking breaks.

Engage with the Technology Research Teams

Interior Lighting Campaign

- Facility owners and managers can receive guidance and recognition for lighting upgrade or new installation of high efficiency interior lighting solutions.
- Lead: [Michael Myer**](#): Michael.Myer@pnnl.gov



IoT Lighting Challenge

- Facility owners and managers can help define the performance characteristics of a competitively priced new-to-market light fixture that will be easily upgradable to provide for internet connectivity. Connect to learn more or participate in the IoT Lighting Challenge.
- Lead: [Michael Myer**](#): Michael.Myer@pnnl.gov

Space Conditioning Team

- Commercial HVAC accounts for about 40% of total commercial energy use in the US. Through the Space Conditioning Technology Research Team, partners work to deploy energy-saving space-conditioning strategies by partnering with industry, coordinating real world building demonstrations, and generating tools.
- Lead: [Miles Hayes**](#): Miles.Hayes@nrel.gov



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Join us!

Better Buildings Alliance *Renewables Integration* Team

Buildings-to-Grid Working Group

FOCUS AREAS:

- Strategic integration of renewables
- Energy storage
- Building load flexibility
- Grid coordination



EFFICIENT



CONNECTED



SMART



FLEXIBLE

- Bimonthly, 1-hour conference calls
- Kick-off meeting in early August
- Also looking for participants for two studies:
 - **Portfolio analysis:** understand potential for load flexibility (optimized demand management)
 - **Field study:** implementing building load flexibility solutions

Interested? Email us!

Rois Langner: Rois.Langner@NREL.gov

Selam Haile: Selam.Haile@NREL.gov

New Opportunity – Waste Reduction Pilot

- **Why Should Partners Join?**
 - Formalize your commitment to waste reduction by setting a public goal in partnership with DOE
 - Network with peers to share waste reduction solutions
 - Receive guidance from DOE and other organizations on issues such as waste data tracking & waste management best practices
 - Earn recognition for making progress in reducing waste and associated energy consumption
- **What Do Partners Commit To?**
 - DOE will work with partners to establish waste reduction goals, track progress, identify and overcome barriers to reducing waste, and document best practices

Zero Energy Activity Assessment

- Is your organization interested in developing, acquiring, or pursuing Zero Energy Buildings? Why or why not?
 - *What are the perceived barriers or benefits?*
- Do you have active or existing Zero Energy projects?
- Do you have any Zero Energy building projects in motion over the next 2-3 years?
 - *What is the anticipated timeline or completion date of the project?*

Sessions of Interest

Recommended Sessions for RFSG - Wednesday

- Resilience Roundtable Part 1: Finding the Balance between Resiliency, Storage+ Renewables, and Energy Efficiency [1:30-3:00pm]
 - *Supports RFSG Sector Priority #2*
- Making the Business Case for Data-Driven Energy Management [1:30-3:00pm]
 - *Supports RFSG Sector Priority #3*
- How Buildings of All Shapes and Sizes are Achieving Zero Energy [1:30-3:00pm]
 - *Supports RFSG Sector Priority #2*
- Building Your Own Skilled Trades Apprenticeship Program [3:30-5:00pm]
 - *Supports RFSG Sector Priority #1*

Recommended Sessions for RFSG - Thursday

- Energy Management and Information Systems in 2019: Is Building Analytics Ready to Go Mainstream? [9:00-10:30am]
 - *Supports RFSG Sector Priority #3*
- Buildings of the Future: Commercial Partner Strategies for Building Resilience [11:00am-12:30pm]
 - *Supports RFSG Sector Priority #2*
- Developing a Staff Culture of Sustainability [11:00am-12:30pm]
 - *Supports RFSG Sector Priority #1*
- Diving Deep into Water Data [2:00pm-3:30pm]
 - *Supports RFSG Sector Priority #3*

Discussion

What sessions are you planning to attend?



RFSG Team - Contact Information

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Thank You!

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