K-12 Meet-up: Energy Smart Schools

Better Buildings Summit 2017

May 15, 2017

Agenda - 1:30 pm – 3:00 pm

Part 1: Technologies

1:30-1:40 pm **Welcome and Overview**

1:40-2:10 pm **Panel Presentations (10 min. each)**

- High Performance Schools--Carolyn Goldthwaite, Northeast Energy Efficiency Partnerships
- What's Hot? High Impact Technologies--Jordan Hibbs, Buildings Technologies Office, US Department of Energy
- School Bus Fleet Conversion— Ira Dorfman, Greater Washington Region, Clean Cities Coalition

2:10-2:20 pm **Open floor to discussion, collect key questions/issues, possible collaboration strategy**

Group Activity--Opportunities, Impact, and Pitfalls

2:20- 2:30 pm **Highlights**

AnnaMaria Garcia, Director
Weatherization and Intergovernmental Program
Office of Energy Efficiency and Renewable Energy
U.S. Department of Energy

2:30 – 2:30 pm **Table Breakout Discussions**

Participants will join one of the three topic table discussions for 15 minutes, then rotate to the second table for 15 minutes, and conclude with the third table for the last 15 minutes.

Table Topics: Topic 1 – High Performance Schools
Topic 2 – High Impact Technologies
Topic 3 – Transportation

Agenda - 3:30 pm – 5:00 pm

Part 2: Finance

3:30 – 3:40 pm **Welcome, Introductions and Overview**

3:40-4:10 pm **Panel Presentations**

- Energy Savings Performance Contracting (ESPC) Follow-Up--D. Jensen Adams, Kansas City Public Schools, KS
- Better Buildings Financing Navigator--Joe Indvik, JDM Associates
- Innovations for Incentivizing Energy Efficiency—Craig Wright, Aurora Public Schools

4:10 – 4:20 pm **Open floor to discussion, collect key questions/issues, possible collaboration strategy**

Group Activity--Opportunities, Impact, and Pitfalls

4:20 – 4:50 pm **Table Breakout Discussions**

15 Participants will join one of the three topic table discussions for 15 minutes, then rotate to the second table for minutes, and conclude with the third table for the last 15 minutes.

Table Topics: Topic 1 – ESPCs
Topic 2 – Financial Navigator
Topic 3 – Incentivizing Energy Efficiency

4:50- 5:00 pm **Wrap up**

Welcome and Overview

Crystal McDonald, K-12 Schools Lead
Office of Energy Efficiency & Renewable Energy
U.S. Department of Energy

U.S. DEPARTMENT OF ENERGY

What is the Better Buildings Challenge?

Leaders in the public and private sectors are challenged to make the nation's homes, commercial buildings and industrial plants more energy efficient by accelerating investment and sharing successful best practices to make buildings 20% more energy efficient over a 10-year period.

Better Buildings®

U.S. DEPARTMENT OF ENERGY

Developing Innovative, Replicable Solutions with Market Leaders

- Better Buildings Challenge
- Better Buildings Alliance
- Better Buildings, Better Plants
- Better Buildings Accelerators
- Better Buildings Residential
- 50001 Ready

US Cities and the Federal Government: Leading by Example

- Better Communities Alliance
- Using Performance Contracting
- DOE Leadership

Making Energy Efficiency Investment Easier

- Better Buildings Solution Center
- Financing Navigator
- Improved Data Consistency and Access
- Tools to Assess the Efficiency of Buildings/Homes

Developing a Skilled Clean Energy Workforce

- Better Buildings Workforce Guidelines
- Energy Management System (EnMS) Certifications

Current BBC K-12 School District Partners

- Alachua County Public Schools
- Albuquerque Public Schools
- Anne Arundel County Public Schools
- Aurora Public Schools
- Bullitt County School District
- Camas School District
- Douglas County School District
- Dysart Unified School District No. 89
- Evergreen School District

Sessions for Local and State Governments, and K-12 School Districts

- Several cross-cutting sessions at the Better Buildings Summit are geared toward key public sector barriers including:
- A Common Purpose: Aligning Community Stakeholders to Address Gaps in Underserved Markets
- All In: States, Localities, Utilities, and Nonprofits Creating Solutions for Underserved Communities
- Building Energy Efficiency Policy Evolution: What's Next
- EE + RE= ZE: Zero Energy Buildings for Schools
- Pioneering Strategies to Achieve Audacious Energy Goals - Part 1: Leading-Edge City Government Innovation for Energy Independence
- Pioneering Strategies to Achieve Audacious Energy Goals - Part 2: How Commercial and Residential Building Owners Contribute to Local Success
- Reimagining Cities! Achieving Efficient, Resilient, and Sustainable Communities through Zero Energy Buildings
- Shedding Light on LED Street Lights
- Solar Power Your Community
- The Power of Partnerships to Accelerate Clean Energy Impacts
- Tips from the Trenches: State and Local Energy Planning

High Performance Schools

Carolyn Sarno Braithwaite,
Northeast Energy Efficiency Partnerships

U.S. DEPARTMENT OF ENERGY

K-12 School Districts Meet-Up
Doe Better Buildings Summit

Carolyn Sarno Goldthwaite

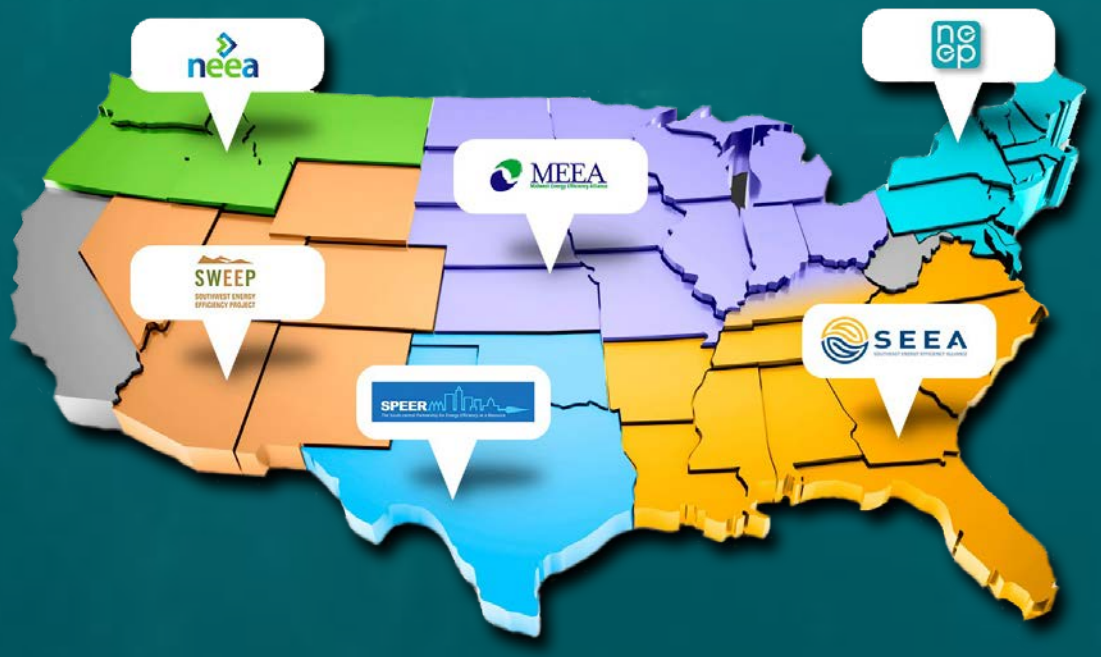
May 15, 2017

Northeast Energy Efficiency Partnerships

- Long-term shared goal
  - To assist the Northeast and Mid-Atlantic region in reducing carbon emissions 80% by 2050 (relative to 2001)
- Mission
  - Accelerate energy efficiency as an essential part of demand-side solutions that enable a sustainable regional energy system
- Vision
  - That the region embraces next generation energy efficiency as a core strategy to meet energy needs in a carbon-constrained world
- Approach
  - Overcome barriers and transform markets through *Collaboration, Education, and Enterprise*

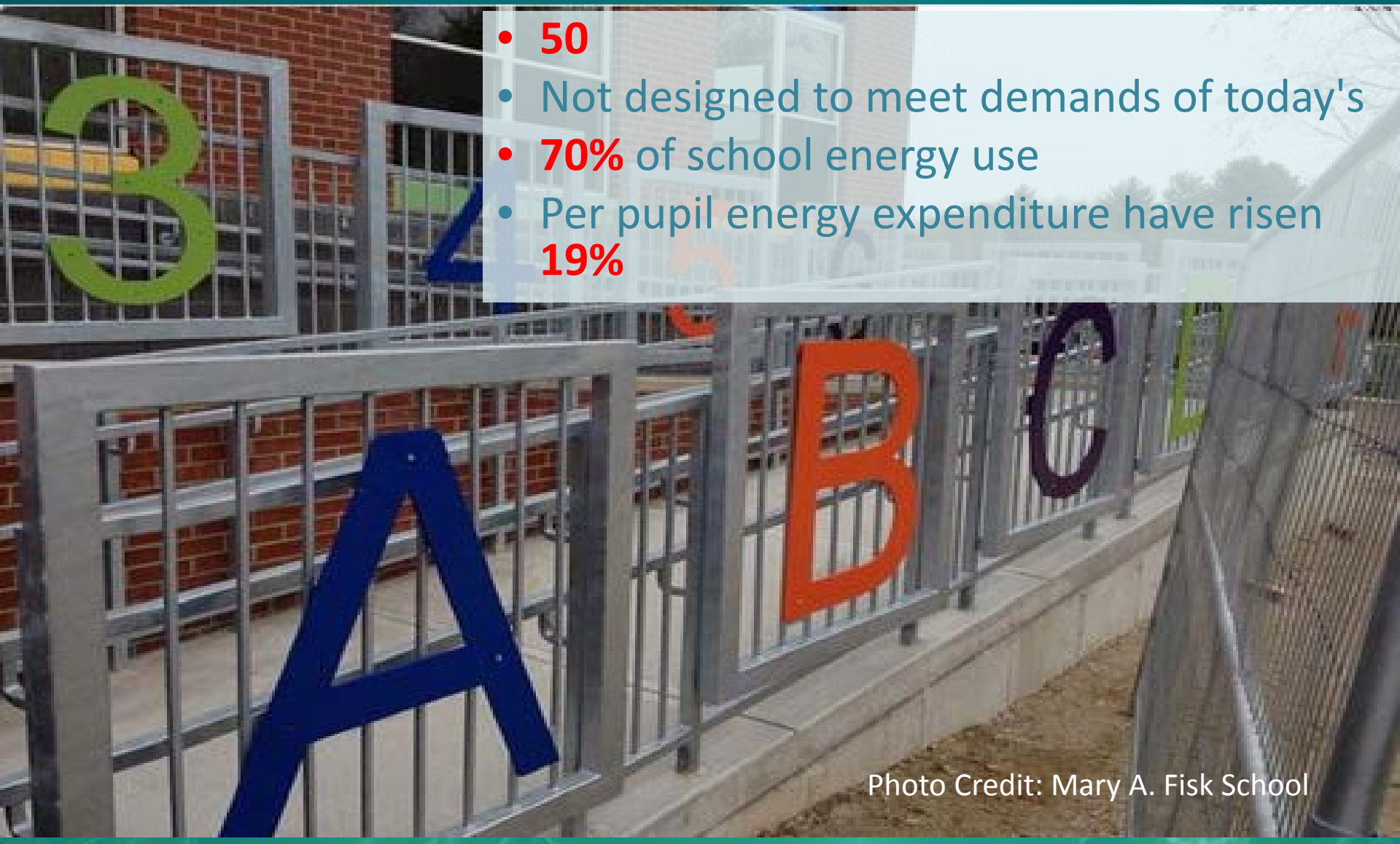
About NEEP

A Regional Energy Efficiency Organization



One of six REEOs funded in-part by U.S. DOE to support state and local efficiency policies and programs.

SCHOOLS IN NEEP'S REGION



- **50**
- Not designed to meet demands of today's
- **70%** of school energy use
- Per pupil energy expenditure have risen **19%**

Photo Credit: Mary A. Fisk School

TECHNOLOGY

Photo credit Berkshire Eagle

LIGHTING

Alma del Mar charter school, New Bedford MA

- light power density of 0.4 watt/sf
- color choices
- Internal glazing
- Controls

Photo Credit: UMEH

HVAC
Francis T. Bresnahan Elementary School

COMBINED HEAT AND POWER

Southeastern Regional Vocational H.S.

- 250 kW System
  - 280K in savings a year
  - Removal of 167 cars from the road
  - Reduction of 950 tons of CO_2

Public Private Partnership

WHAT CAN YOU DO….

- Partnerships!
  - Utilities
  - State
  - Private
- Join local associations
- Community stakeholders!

Resources:
http://neep.org/initiatives/energy-efficient-buildings/high-performance-schools

Thank you!

Carolyn Sarno Goldthwaite
cgoldthwaite@neep.org

What’s Hot? High Impact Technologies

Jordan Hibbs
Buildings Technologies Office
US Department of Energy

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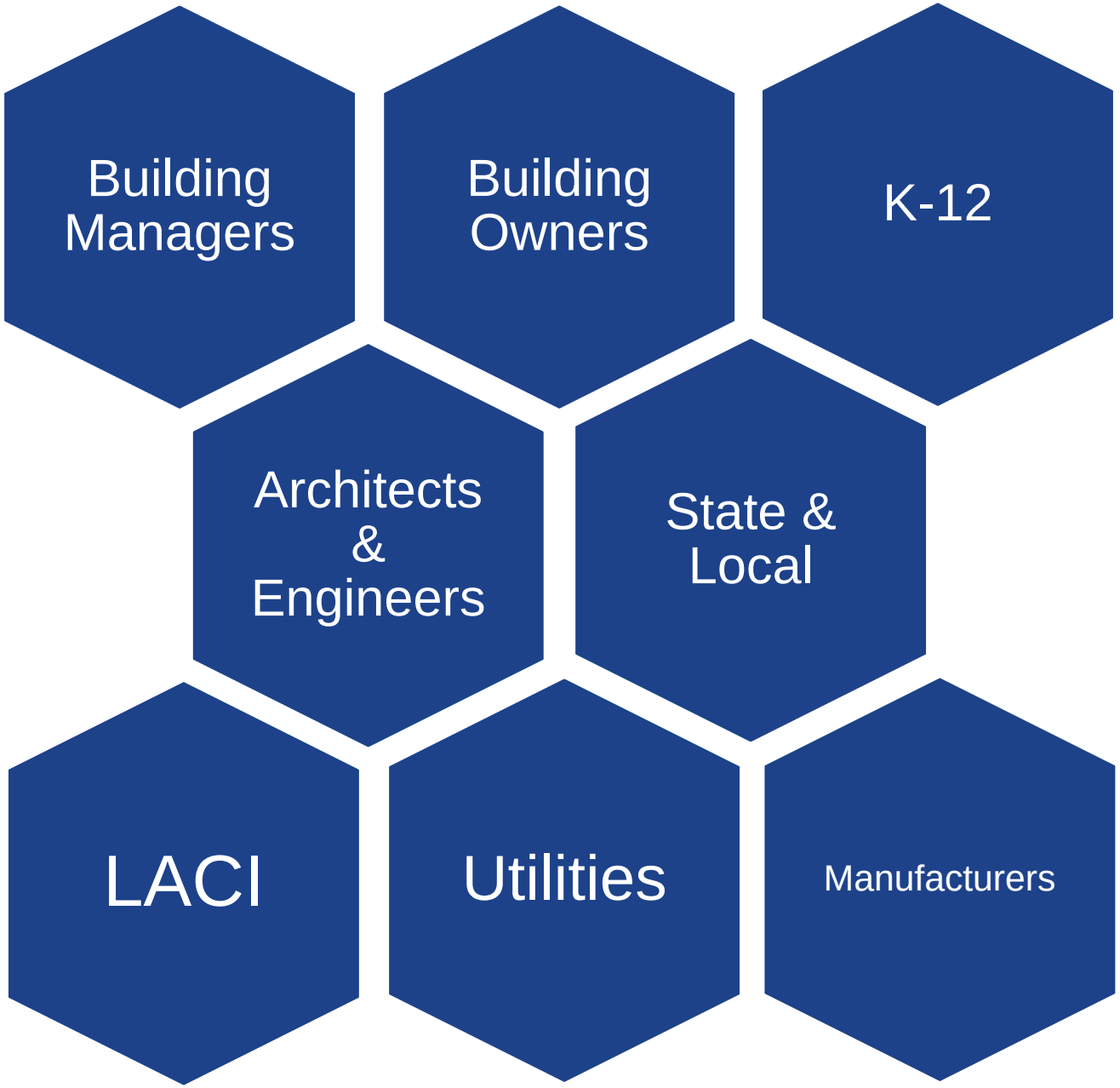
Technology Partnerships

U.S. DEPARTMENT OF ENERGY


Building Managers
Building Owners
K-12
Architects & Engineers
State & Local
LACI
Utilities
Manufacturers

Balfour Beatty Communities
KOHL'S
SEATTLE 2030 DISTRICT
Ford
Ygrene ENERGY FUND
mercy HOUSING
IHG
TOWSON
PALATKA HOUSING AUTHORITY
GCP
macy's inc
Office of Energy Resources
PARMENTER REALTY PARTNERS
NREL
AFL-CIO
America's Union Movement
Hillsboro
MICHIGAN STATE UNIVERSITY
Housing Authority of the City of Freeport
Cummins
Argonne
UPMC
NISSAN
THURSTON COUNTY
ALLEGHENY COLLEGE
City of Columbia
TRANSWESTERN
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PNC
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INDIAN RIVER
CLEAN ENERGY
RENEWABLE FUNDING
Simplot
HOUSTON
HARBEC
Huntington
facebook
Los Angeles Department of Water & Power
THE TOWER COMPANIES
Delaware State University
CITY OF CHULA VISTA
GE Capital
Sprint
citi
ACTION HOUSING INC
CommonWealth
SCenergy
PROLOGIS
VOLVO
SAMAS CAPITAL
SHORENSTEIN
STAPLES
that was easy.
EDISON
REACH
ASCENSION HEALTH
NERSC
Philadelphia Housing Authority
ABUNDANT POWER
CAMPUS CREST
FOUDRE SCHOOL DISTRICT
BRIGGS & STRATTON
EDEN HOUSING
Cleveland Clinic
Schneider Electric
SPOKANE COUNTY
LISC
SAHA
BLUE HILL
energi
legrand
USAA
ROANOKE
WHOLE FOODS
Walmart
3M
DAS
USAA Real Estate Company
EASTMAN
GREENWOOD ENERGY
SUSTAIN ARVADA
CITY OF CLEVELAND
THE UNIVERSITY OF UTAH
United Technologies
TIAA CREF
WYNDHAM WORLDWIDE
aeon
Enterprise
schochet companies
Douglas County SCHOOL DISTRICT
EAH
KCTCS
Walgreens
LA COMMERCIAL BUILDING PERFORMANCE PARTNERSHIP
METRUS ENERGY
TRINITY MANAGEMENT
SCHOOL DISTRICT OF FORT ATKINSON
Beaverton
Tampa Housing Authority
WinnCompanies
DYSART United School District
FORESTCITY
MINNESOTA DEPARTMENT OF COMMERCE
PPS
ALCOA
Pacific Gas and Electric Company
TBL FUND
sustainable.dc
LIVEKORMAN
TONTI PROPERTIES
WISHROCK
SAINT-GOBAIN
FORT WORTH
EMSL
City of Milwaukee
HEI
MGM RESORTS
School District 51
CLEAN FUND

Commercial Real Estate

Food Service, Retail, and Grocery

Healthcare

Hospitality

Higher Education

Technology Solutions Teams

Building Envelope (NEW!)

Plug and Process Loads

Refrigeration

Renewables Integration

Energy Management Information Systems

Space Conditioning

Lighting and Electrical

Melissa Voss Lapsa
Oak Ridge National Laboratory

Rois Langner
National Renewable Energy Laboratory

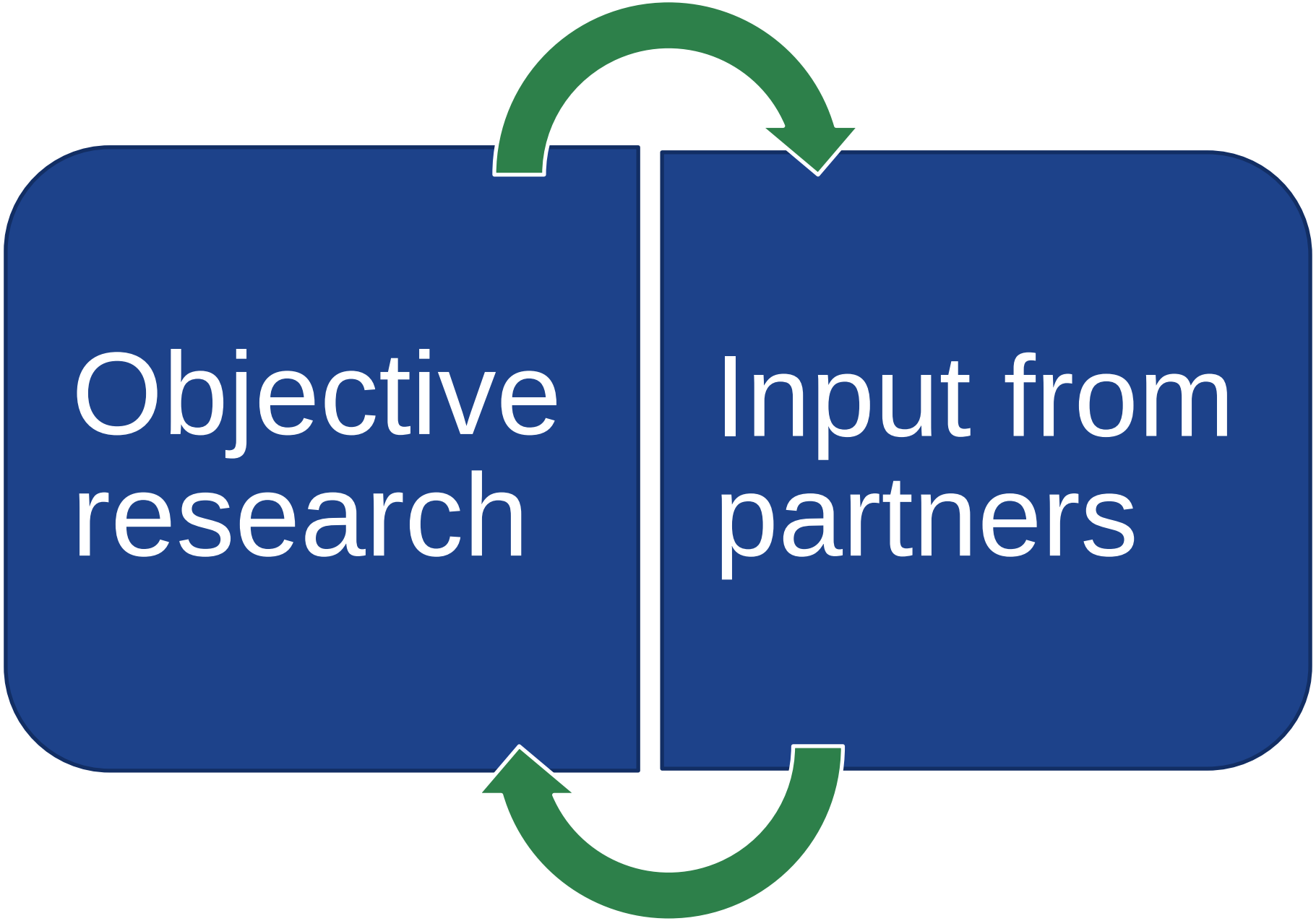
Michael Deru
National Renewable Energy Laboratory

Linda Sandahl
Pacific Northwest National Laboratory

Jessica Granderson
Lawrence Berkeley National Laboratory

Justin Elszasz
Navigant Consulting

Jay Paidipati
Navigant Consulting


Objective research
Input from partners

Access to experts, tools, & resources
Peer-to-peer learning
Public recognition

Kelco Management

Upgrading exterior lighting, didn't know how much energy they were using

Pacific Northwest National Laboratory

Provided per-room energy usage metric

Outcome

69% energy savings compared to the existing facility and more than 40,000 kWh saved

University in California

What variables should we be considering for our interval data models? How do we forecast savings into future time periods?

Lawrence Berkeley National Laboratory

Provided guidance on best practices, key considerations, and lessons learned from application of similar approaches in prior work

Outcome

University is improving their energy models with support from LBNL staff, and they will be continuing to work with the university to refine the modeling techniques

Adidas

What efficiency specification they should they use for purchasing new RTUs

National Renewable Energy Laboratory

Provided the Advanced RTU Campaign performance specification to adidas

Outcome

adidas incorporated the Advanced RTU Campaign specification in their RFP for new RTUs, which is used for competitive pricing for new RTUs

Better Buildings
U.S. DEPARTMENT OF ENERGY

Fact Sheet

BETTER BUILDINGS ALLIANCE DEMONSTRATION OPPORTUNITIES:
COMMERCIAL HEAT PUMP WATER HEATERS

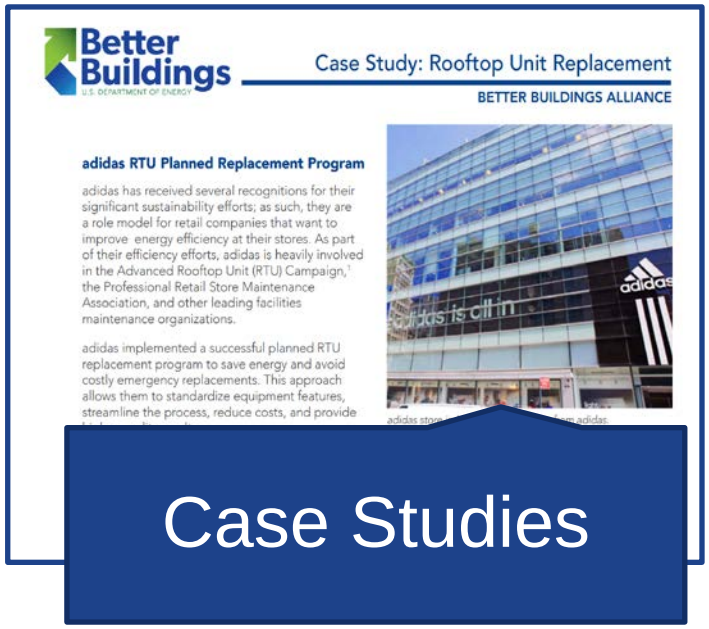
The U.S. Department of Energy (DOE) and the Better Buildings Alliance have released technology specifications that have the potential to offer significant benefit to various end-use energy consumers in commercial buildings. As part of its specification deployments efforts, DOE is offering commercial building owners the opportunity to partner in heat pump water heater (HPWH) demonstrations. Participating organizations receive a discounted high-efficiency product in exchange for their cooperation with the field study and can see firsthand the performance, energy savings, and economic benefits of commercial heat pump water heaters. The host site also receives recognition in DOE literature for their participation and commitment to efficient buildings.

Photo credit: AO Smith®

AO Smith "AWH" commercial heat pump water heater

Project Benefits

Fact Sheets



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U.S. DEPARTMENT OF ENERGY

Case Study: Rooftop Unit Replacement

BETTER BUILDINGS ALLIANCE

adidas RTU Planned Replacement Program

adidas has received several recognitions for their significant sustainability efforts; as such, they are a role model for retail companies that want to improve energy efficiency at their stores. As part of their efficiency efforts, adidas is heavily involved in the Advanced Rooftop Unit (RTU) Campaign,[1] the Professional Retail Store Maintenance Association, and other leading facilities maintenance organizations.

adidas implemented a successful planned RTU replacement program to save energy and avoid costly emergency replacements. This approach allows them to standardize equipment features, streamline the process, reduce costs, and provide

Case Studies

Better Buildings
U.S. DEPARTMENT OF ENERGY

High Efficiency Troffer Performance Specification

Version: 6.0

Technical Specifications

Better Buildings Solution Center

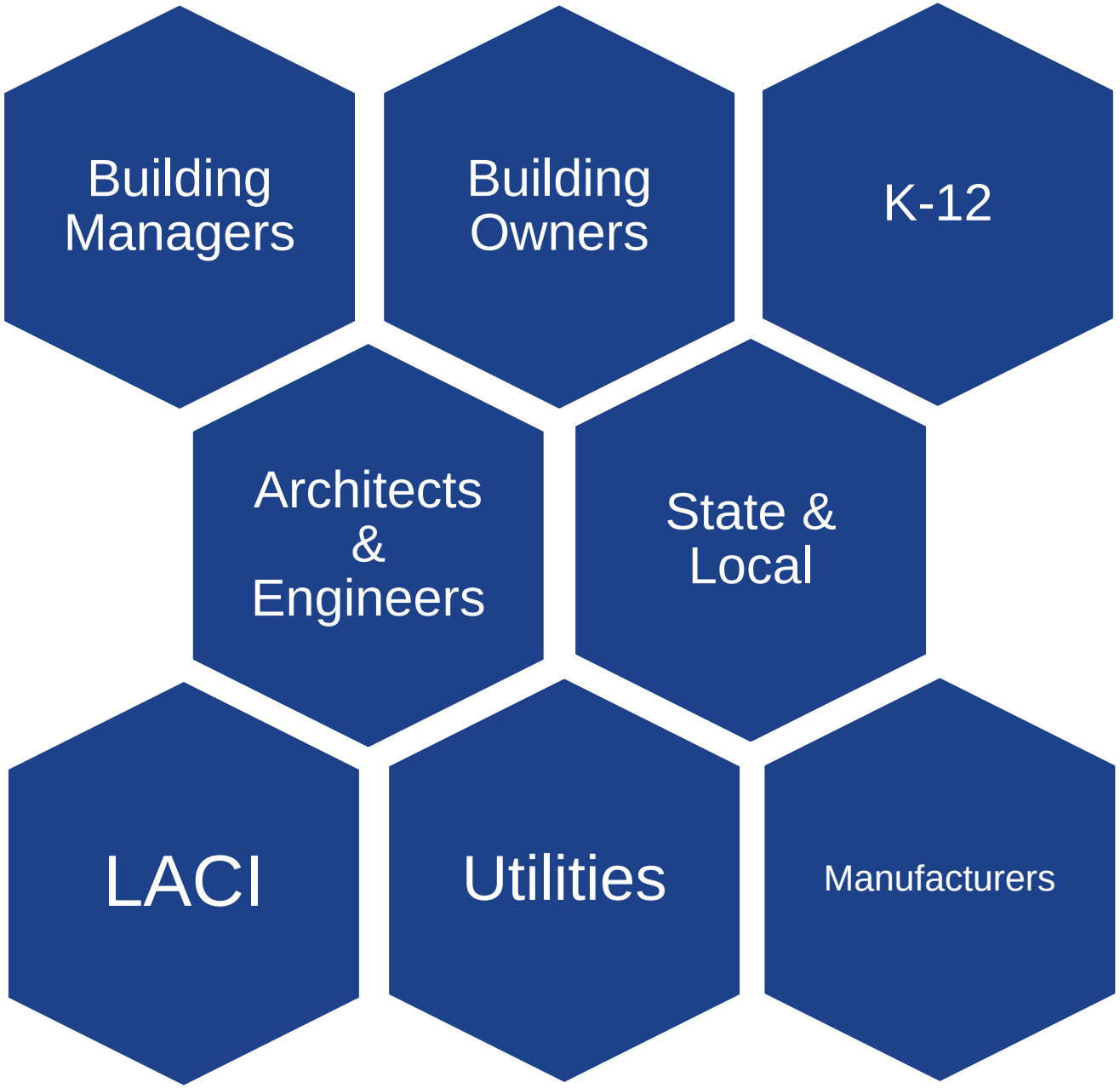
Proven Solutions for:

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

Search by:

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

betterbuildingssolutioncenter.energy.gov


Building Managers
Building Owners
K-12
Architects & Engineers
State & Local
LACI
Utilities
Manufacturers

Jordan Hibbs

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School Bus Fleet Conversion

Ira Dorfman
Greater Washington Region
Clean Cities Coalition

U.S. DEPARTMENT OF
ENERGY

K-12 Meet-up: Energy Smart Schools

Better Buildings Summit
Washington, DC

May 15, 2017

Ira H. Dorfman

Executive Director

GREATER WASHINGTON REGION
Clean Cities Coalition

One of approximately 100 Clean Cities Coalitions designated by the US Department of Energy

Jurisdiction includes Northern Virginia, the District of Columbia and Maryland

Primary objective is to promote the use of domestic, clean transportation fuels other than gasoline and diesel fuel

GREATER WASHINGTON REGION
Clean Cities Coalition

Key Stakeholders include:

- **Metropolitan Washington Council of Governments**
- **DC Department of Public Works**
- **Natural Gas Vehicles of America**
- **Propane Education and Research Council**
- **Electric Drive Transportation Association**
- **National Biodiesel Board**
- **Washington Gas**
- **PEPCO**
- **DC Water & Sewer Authority**
- **Washington Area New Automobile Dealers Association**
- **County & Local Governments**
- **Public and Private Companies**
- **Individual Activists**

Why transportation is relevant to the discussion of green buildings

- It is an ***<u>integral part</u>*** *of* the planning process – few places allow new construction without a transportation-impact component
- What was once a cumbersome, unwelcomed requirement is now used as a marketing tool to sell or lease space – proximity to mass transportation, major highways and parking; free shuttle service to mass transportation are very sellable enhancements
- Open space and outdoor living is incompatible with pollution-spewing and noisy vehicles

Why transportation is relevant to the discussion of green buildings

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Clean Cities Coalition

Transportation is becoming an essential component of green building design

- Workplace, multi-family, single-family and public spaces are being populated with electric vehicle charging stations
- Autonomous vehicles are on their way, will be here sooner than you think, and will need to be designed into the fabric of green buildings

Why transportation is relevant to the discussion of green buildings

The Common Elements of Green Buildings and Clean Transportation

- Enjoyment of open space
- Efficient use of natural resources
- Concern for the environment
- Desire for healthy surroundings
- Saving money

How pupil transportation fits into this equation

GREATER WASHINGTON REGION
Clean Cities Coalition

The Common Elements of the Green Building Revolution and the Clean Pupil Transportation Movement

- Operation of dirty, noisy school buses adversely affect the enjoyment of open spaces
- Concern for the environment
- Safe, healthy surroundings at school as well as home for our children
- Saving money

Propane, Natural Gas, Electric and Biodiesel School Buses to Reduce Both Emissions and Noise and Save in Fuel Costs

GREATER WASHINGTON REGION
Clean Cities Coalition

The Long Road to Safer School Buses

A landmark NRDC study showed that standard-issue ***diesel-spewing school buses could put kids at risk of cancer***—and drove a national effort to clean the vehicles up.

Other studies confirmed that diesel exhaust was not just a problem at the tailpipe – that the concentration of fumes was higher *inside* the bus than outside of it.

Propane School Buses

GREATER WASHINGTON REGION
Clean Cities Coalition

Propane School Buses Gaining Broader Acceptance

- Three major OEMs now offer propane school buses
- State incentives available to reduce initial cost of ownership
- Affordable infrastructure
- Cost savings in maintenance and fuel relative to diesel
- Environmental benefits including reduction in fine particulate matter and significantly quieter operation

Resources:

http://www.propane.com/on-road-fleets/case-studies-and-fact-sheets/case-studies/school-transportation/

http://www.afdc.energy.gov/uploads/publication/case-study-propane-school-bus-fleets.pdf

Natural Gas School Buses

GREATER WASHINGTON REGION
Clean Cities Coalition

Natural Gas School Buses Widely Utilized

- OEM availability including the new near-zero NOx reduction engine
- State incentives available to reduce initial cost of ownership
- Infrastructure often the biggest challenge to adoption
- Cost savings in maintenance, low fuel cost and price stability relative to diesel
- Significant environmental benefits, quieter operation

Resources:
http://www.afdc.energy.gov/case

Electric School Buses

GREATER WASHINGTON REGION
Clean Cities Coalition

Electric School Buses Now Part of the Conversation

- Lion Bus has officially unveiled the eLion electric school bus, developed in partnership with the government of Québec and the California Governor's Office of Business and Economic Development
- Blue Bird has been awarded $4.4 million by the US Department of Energy to develop an electric school bus featuring vehicle-to-grid (V2G) technology.
- Challenge is cost – currently $225,000 each

Resources:

http://stnonline.com/news/latest-news/item/8613-largest-us-electric-school-bus-pilot-comes-to-california

Biodiesel School Buses

Biodiesel School Buses Easiest to Implement

- Easiest strategy to implement – requires no vehicle modifications or special fueling equipment
- Provides significant reduced emissions of carbon monoxide, particulate matter and unburned hydrocarbons
- In many regions, less costly than petroleum diesel fuel

Resources:

http://biodiesel.org/using-biodiesel/market-segments/school-buses

Potential Funding Sources/Incentives

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Clean Cities Coalition

VW Powers Up Electrify America Initiative

300+ community-based charging station sites will be installed outside of California in workplaces, retail, multifamily residential locations and municipal lots and garages in **11 target metropolitan areas**.

Metropolitan areas include: Boston, Chicago, Denver, Houston, Miami, New York City, Philadelphia, Portland, Raleigh, Seattle and **Washington, D.C.**

Impact
Charging stations will offer the most advanced charging technology ever deployed, allowing rapid charging for some next generation vehicles.

State Incentives
http://www.afdc.energy.gov/laws

Aggregate Purchasing Initiatives to Reduce Vehicle Procurement Costs

Federal Highway Administration's Alternative Fuels Corridor Project to increase the number of EV, natural gas and propane stations along the region's major interstate highways

GREATER WASHINGTON REGION
Clean Cities Coalition

F4F

Fleetsforthefuture.org

National Electric Vehicle Charging and Hydrogen, Propane, and Natural Gas Fueling Corridors

ALTERNATIVE FUELS CORRIDOR

Thank You!

Ira H. Dorfman

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GREATER WASHINGTON REGION
Clean Cities Coalition

Questions & Answers

U.S. DEPARTMENT OF
ENERGY

Highlights

AnnaMaria Garcia, Director
Weatherization and Intergovernmental Program
Office of Energy Efficiency and Renewable Energy
U.S. Department of Energy

U.S. DEPARTMENT OF
ENERGY

BBC Goal Achievers

- Camas School District (WA), 2015; Poudre School District (CO), 2016 (energy and water); and River Trails School District (IL), 2016.

- Xenia Community Schools, OH, exceeded 23% improvement, but set a stretch goal of 25%. They are on track to be a Goal Achiever next year.

Measured Progress

- Alachua County Public Schools, FL
- Anne Arundel County Public Schools, MD
- Aurora Public Schools
- Bullitt County Public Schools, KY
- Camas School District, WA
- Douglas County School District, NV
- Dysart Unified School District 89, AZ
- Evergreen Public Schools, WA
- Fairfax County Public Schools, VA
- Houston Independent School District, TX
- Huntsville City Schools, AL
- Indian River Central School District, NY
- Indianapolis Public Schools, IN
- Los Angeles Unified School District, CA
- Manchester School District, NH
- Parkway School District, MO
- Portland Public School District, OR
- Poudre School District, CO
- River Trails School District 26, IL
- Xenia Community Schools, OH

New Solutions Over the Past Year

- Alachua County Public Schools, FL
- Albuquerque Public Schools, NM
- Anne Arundel County Public Schools, MD
- Aurora Public Schools
- Bullitt County Public Schools, KY
- Camas School District, WA
- Douglas County School District, NV
- Dysart Unified School District 89, AZ
- Evergreen Public Schools, WA
- Fort Atkinson School District, WI
- Houston Independent School District, TX
- Los Angeles Unified School District, CA
- Mesa County Valley School District, CO
- Parkway School District, MO
- Portland Public School District, OR
- Poudre School District, CO
- River Trails School District 26, IL
- Xenia Community Schools, OH

New Partners Since BB Summit 2016

- Aurora Public Schools, CO
- Bullitt County Public Schools, KY
- Fairfax County Public Schools, VA
- Hillsboro School District, OR
- Los Angeles Unified School District, CA
- Parkway School District, MO
- Tulsa Public Schools, OK

Thanks to all BBC K-12 Education Partners

U.S. DEPARTMENT OF ENERGY

Table Breakout Discussions

- High Performance Schools
- What's Hot? High Impact Technologies
- School Bus Fleet Conversion

3:00 pm -3:30 pm

Energy Savings Performance Contracting (ESPC) Follow-up

D. Jensen Adams
Kansas City Public Schools, KS

U.S. DEPARTMENT OF ENERGY

Energy Savings Performance Contracting (ESPC): Follow-up

D. Jensen Adams

Kansas City Public Schools (Missouri)

Better Buildings Challenge K-12 Partner

- Kansas City Public Schools
- 20% Energy Goal
- Implementation Model: Hybrid Funding including Energy Performance Services Contract
  - Barrier: Overcome the perception of risk associated with capital funding for energy efficiency
  - Solution: Hybrid funding and management strategy that coupled energy performance contracting with utility incentives to achieve and recognize energy efficiency

KANSAS CITY PUBLIC SCHOOLS

Kansas City Public Schools Profile

- Founded in 1867. Building stock spans 1904 to 1994.
- 16,700 students; 2,300 teachers and administrators
- 40 active facilities, at 4 million square feet
- Elected board, Superintendent, Chief of Operations, Facilities
- Office of Energy and Sustainability

KANSAS CITY PUBLIC SCHOOLS

Project Scope

Lesson Groups

- Comprehensive
- Competitive
- Targeted
- Responsive

Highlights

- $30 million over all facilities
- Measure mix includes:
  - Lighting
  - Water
  - HVAC
  - Building Automation System
  - Energy Management / Meters
  - Re-commissioning
  - Evaluation
  - Preventative maintenance
  - Staff skills assessment
  - Supply side savings
  - Behavior program
  - Promotion

KANSAS CITY PUBLIC SCHOOLS

Lessons Learned

Lesson Groups

- Investment Grade Audit
- Contract Negotiation
- Measure mix
- Pricing vs. cost
- Scheduling
- Incentives
- Measurement & Verification

Highlights

- IGAs should include supporting audit documentation.
- Engineering design fees should reflect measure.
- Strive for a 15 year payback and leverage measure mix. Re-commissioning with a flexible major and minor repair allowance. Consider measure persistence strategy.
- Competitive bidding within an ESPC promotes supplier diversity, and proves costs.
- Start with fast payback measures, start with small packages.
- Build in meter project, and implement early. Involve utilities.
- Combine skills assessment with training.

KANSAS CITY PUBLIC SCHOOLS

Contracting & Contract Management

Traditional Contracting vs. Collaborative Contracting

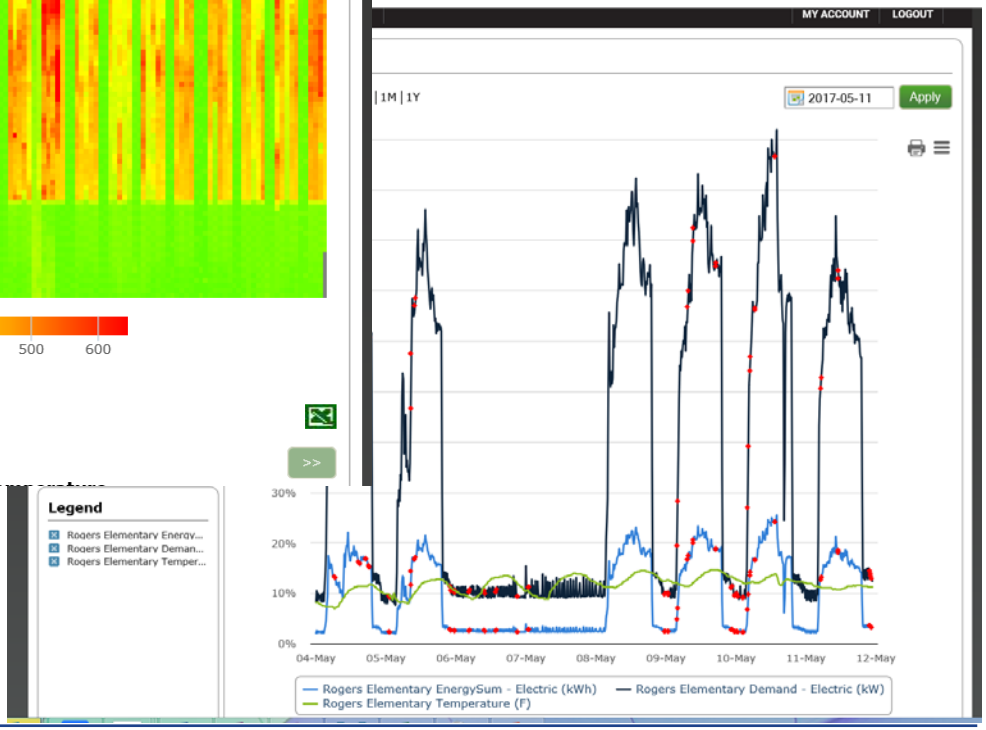
- Detailed spec of good or service
- Arms-length, RFP, bidding process
- Bidding based on best price
- Administrator as monitor
- Risk is divided, contractor focus on time and budget

- Description of outcome, flexible with process
- Negotiated process with many partners
- Decision based on best value
- Administrator as partner, M&V, and communicator
- Risk is shared

Forer, et al., (2014). Governing Cross-sector collaboration.

KANSAS CITY PUBLIC SCHOOLS

Energy Management Software



Better Buildings Financing Navigator

Joe Indvik
JDM
BBC Finance Lead

U.S. DEPARTMENT OF
ENERGY

Innovations for Incentivizing Energy Efficiency

Craig Wright
Aurora Public Schools, CO

U.S. DEPARTMENT OF ENERGY

Questions & Answers

U.S. DEPARTMENT OF
ENERGY

Table Breakout Discussions

- ESPC Follow-up
- Better Buildings Finance Navigator
- Innovations for Incentivizing Energy Efficiency

Wrap-up and Closing Remarks

U.S. DEPARTMENT OF
ENERGY

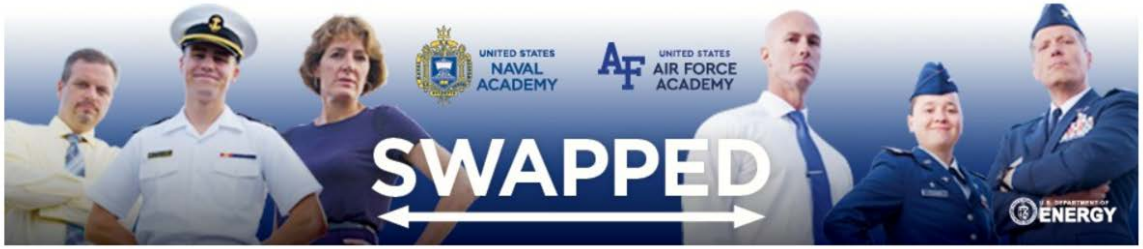
Partner Recognition

Home > Blog > Back to School with Better Buildings – The Energy Department Visits Arizona's Dysart Unified School District

Back to School with Better Buildings – The Energy Department Visits Arizona's Dysart Unified School District

by Crystal McDonald on Aug 13, 2015

Better Buildings Challenge SWAP Season 2: U.S. Naval Academy vs. U.S. Air Force Academy



SWAP Episodes

Twitter News

Tweets by @BetterBldgsDOE

Better Buildings Retweeted

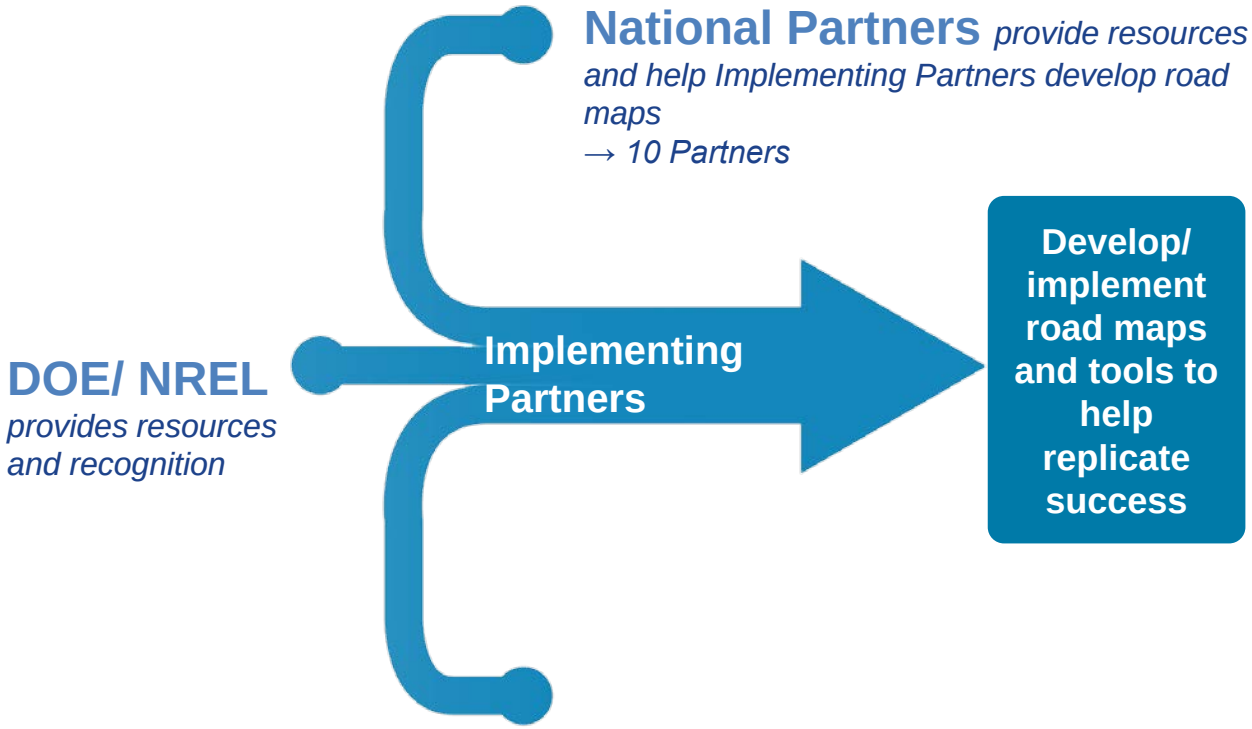
Atlanta Watershed

Photo Gallery

Zero Energy Schools Accelerator

Vision

K-12 school buildings provide healthy, dynamic learning environments and resilient community assets that have zero to minimal energy costs.



Sessions for Local and State Governments, and K-12 School Districts

- Several cross-cutting sessions at the Better Buildings Summit are geared toward key public sector barriers including:
- A Common Purpose: Aligning Community Stakeholders to Address Gaps in Underserved Markets
- All In: States, Localities, Utilities, and Nonprofits Creating Solutions for Underserved Communities
- Building Energy Efficiency Policy Evolution: What's Next
- EE + RE= ZE: Zero Energy Buildings for Schools
- Pioneering Strategies to Achieve Audacious Energy Goals - Part 1: Leading-Edge City Government Innovation for Energy Independence
- Pioneering Strategies to Achieve Audacious Energy Goals - Part 2: How Commercial and Residential Building Owners Contribute to Local Success
- Reimagining Cities! Achieving Efficient, Resilient, and Sustainable Communities through Zero Energy Buildings
- Shedding Light on LED Street Lights
- Solar Power Your Community
- The Power of Partnerships to Accelerate Clean Energy Impacts
- Tips from the Trenches: State and Local Energy Planning

K-12 Sector Social

Please join us for additional networking opportunities with the K-12 Community of Practice

Darlington House
1610, 20th St NW (10min walk)

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Thank You

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