



Behavior Based Energy Savings

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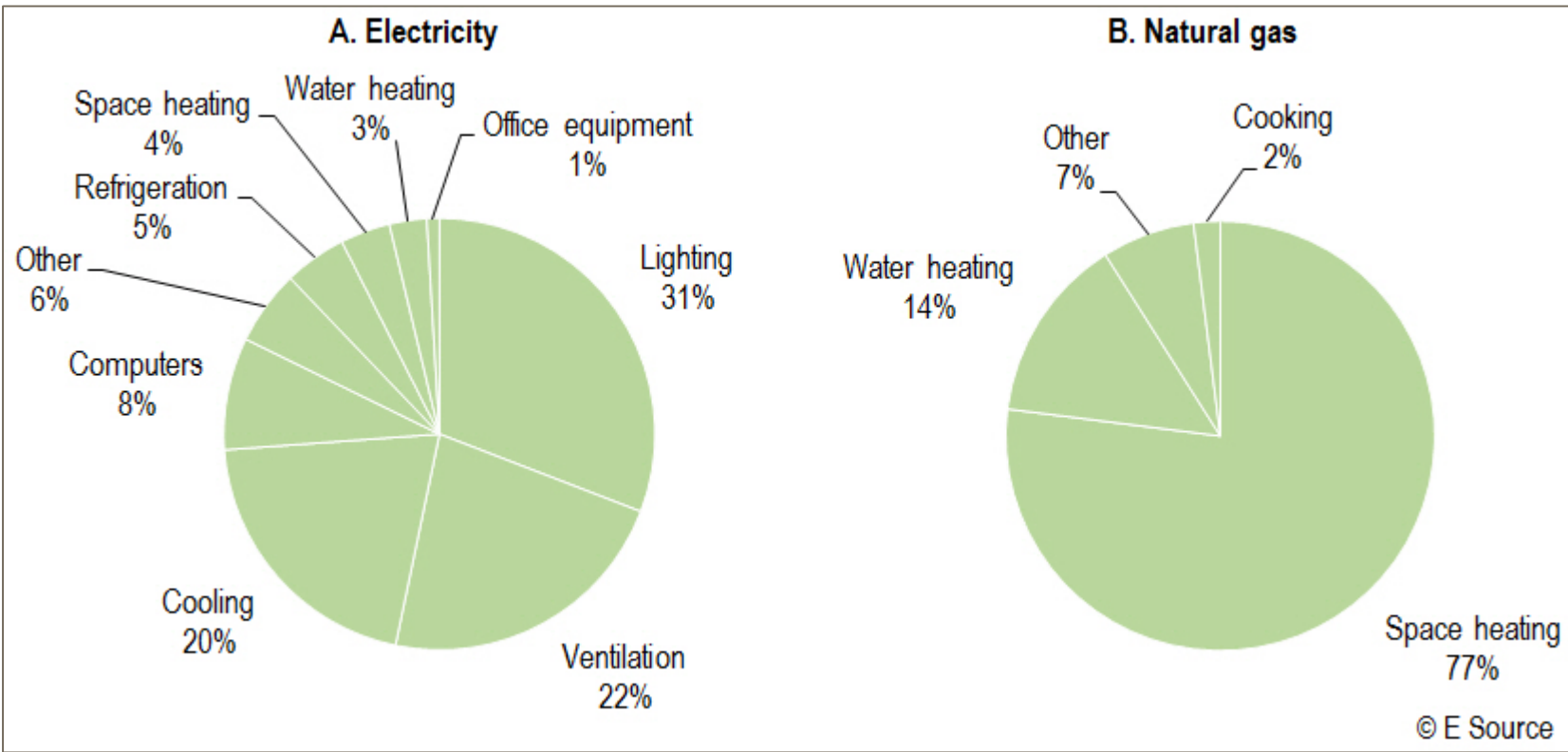


Readington Township

Public Schools

- Located in Hunterdon County, Central NJ
- Suburban location
- Includes four schools: two K-3 schools, one 4-5th grade school and one 6-8th grade middle school
- Approximately 1620 students in district

Energy Use in Schools



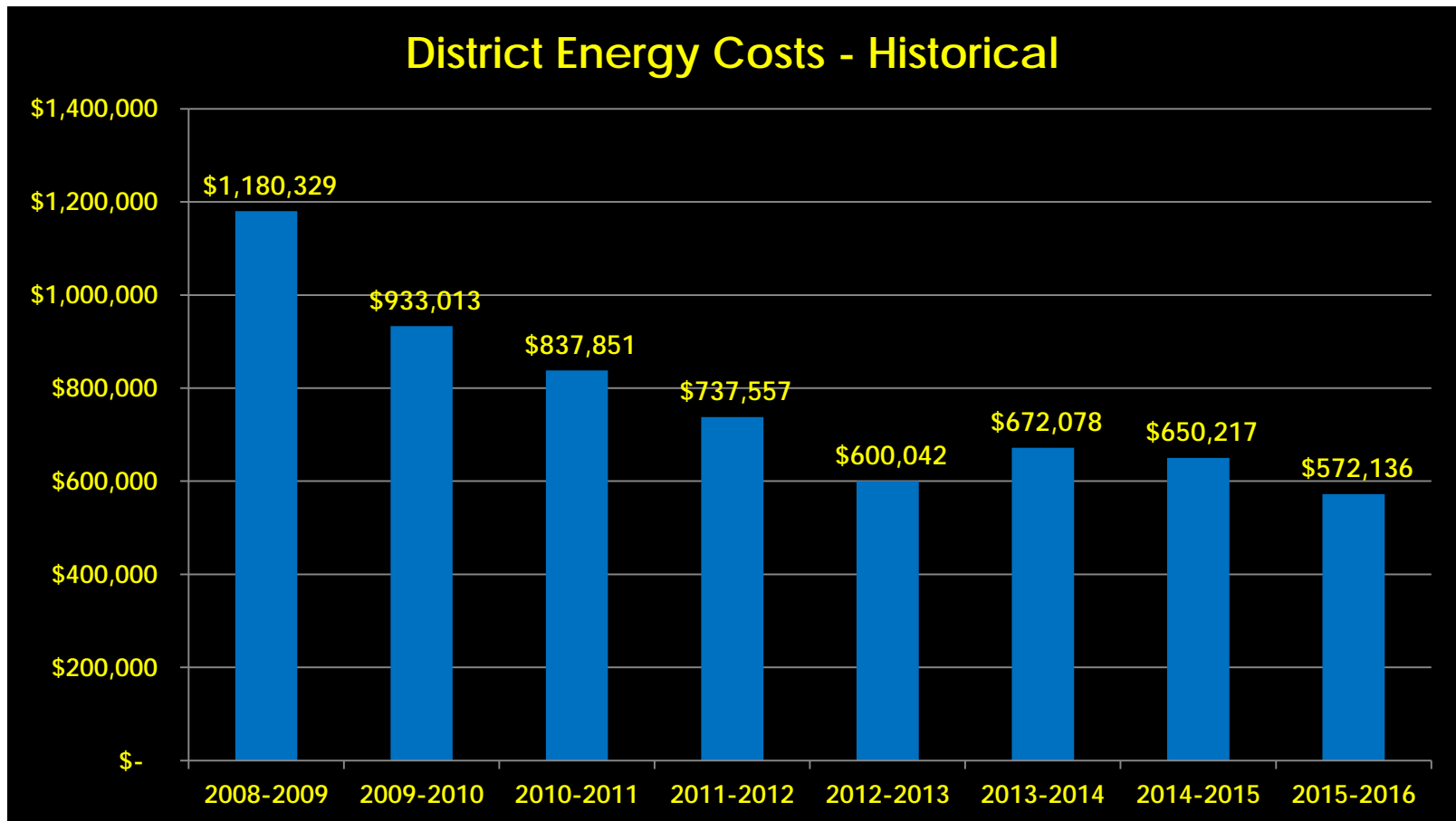
Keys to Energy Sustainability

- District Green Committee
 - Members represent different areas
- Began with waste management
 - Single stream recycling program in all 4 schools (60 tons annually)
- Moved into energy management
 - Energy Efficiency Program

Energy Program History

- June 2010 performed LGEA audit of facilities
- October 2012 joined Schools for Energy Efficiency (SEE) program
- Hired district Energy Efficiency Coordinator and formally began energy program
- September 2015 received Sustainable Jersey for Schools certification for all district schools

Our Results



Readington Program to Date Results

	Year 1 Dec 12-Nov 13	Year 2 Dec 13-Nov 14	Year 3 Dec 14-Nov 15	36 months Dec 12-Nov 15
% Change Electric	(12)%	(14)%	(20)%	(15)%
% Change Electric Demand	(6)%	(6)%	(11)%	(8)%
% Change Gas	(7)%	2%	(4)%	(3)%
% Change Total Energy	(9)%	(4)%	(10)%	(8)%
Avoided Cost	\$62,815	\$62,760	\$99,050	\$226,031

Transportation Energy Savings

- Commitment to sustainability drives financially responsible and environmentally conscious decisions
 - District No-Idling policy for buses/cars
 - Transportation fuel savings



Transportation Fuel Savings

Fuel savings due to route reductions and student enrollment decreases

Year	Cost/gal (avg)	Total Cost	Total Fuel (gal)
2008-09	\$2.04	\$123,500.84	60,440
2014-15	\$2.13	\$113,447.10	53,065
2015-16	\$1.32	\$55,443.23	41,986

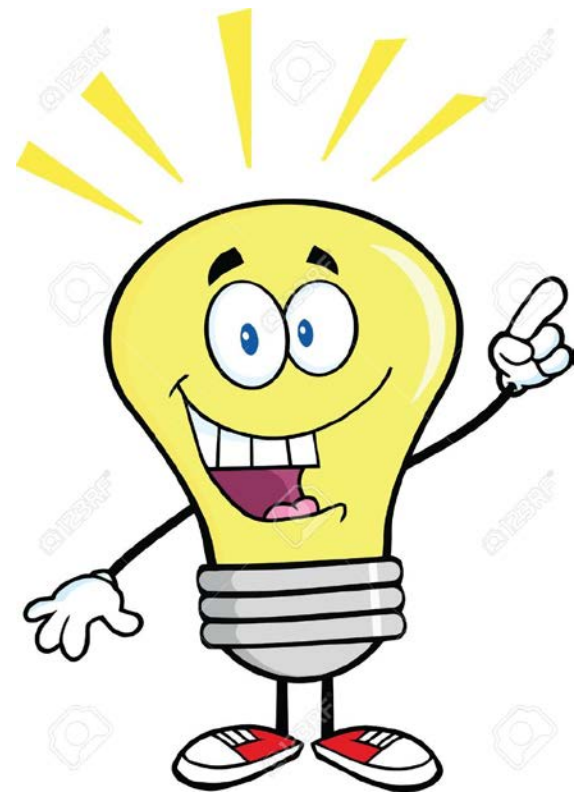
Savings Used To:

- Contribute to flat school budget for three years, 2013-2016
- Refresh technology in classrooms
- Maintain class size and academic experience



Energy Efficiency Program

- ❖ Utility tracking
- ❖ Energy awareness
- ❖ Engagement and Education
- ❖ Results and Recognition

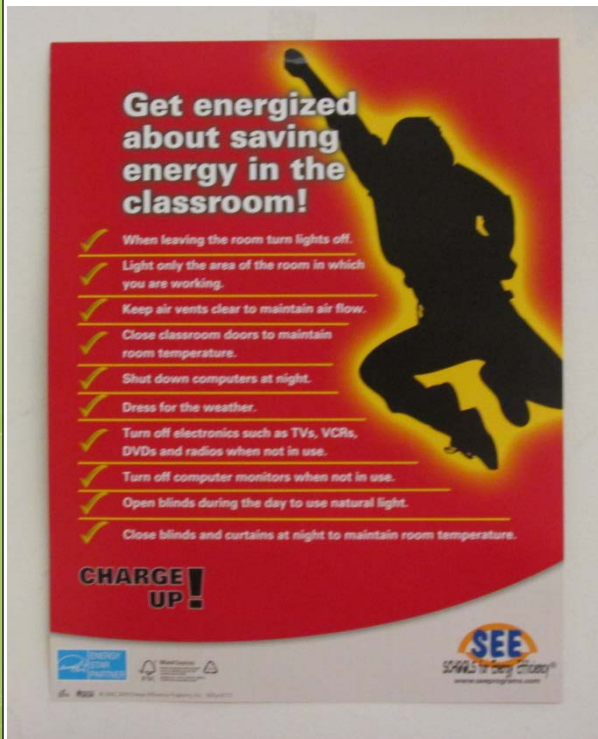


Utility Tracking Data

YEAR 3 ENERGY SAVINGS: Dec. 2014 - Nov. 2015					
BUILDING	% CHANGE ELECTRIC	% CHANGE NAT GAS	% CHANGE TOTAL ENERGY (BTU)	% CHANGE ELECTRIC DEMAND	AVOIDED COST
Holland Brook School	-21%	-2%	-10%	-6%	\$35,276
Readington Middle School	-17%	-16%	-17%	-13%	\$37,715
Three Bridges School	-20%	0%	-7%	-15%	\$13,162
Whitehouse School	-20%	10%	-2%	-15%	\$12,898
Grand Total	-20%	-4%	-10%	-11%	\$99,050

www.readington.k12.nj.us, Our District, Energy Efficiency

Energy Awareness Campaign



Get energized about saving energy in the classroom!

- ✓ When leaving the room turn lights off.
- ✓ Light only the area of the room in which you are working.
- ✓ Keep air vents clear to maintain air flow.
- ✓ Close classroom doors to maintain room temperature.
- ✓ Shut down computers at night.
- ✓ Dress for the weather.
- ✓ Turn off electronics such as TVs, VCRs, DVDs and radios when not in use.
- ✓ Turn off computer monitors when not in use.
- ✓ Open blinds during the day to use natural light.
- ✓ Close blinds and curtains at night to maintain room temperature.

CHARGE UP!

SEE
SCHOOLs for Energy Efficiency
www.seeinggreen.com

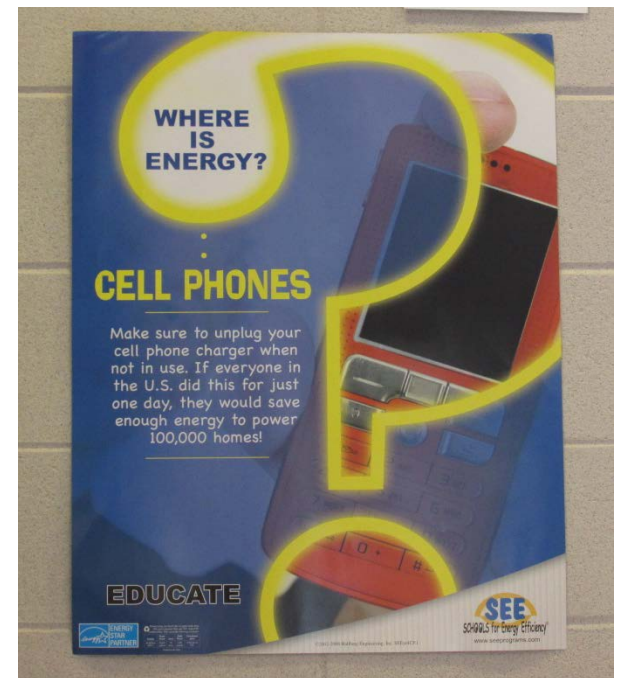
ENERGY STAR
EPA
U.S. DEPARTMENT OF ENERGY



Save Energy!
TURN ME OFF

Shut Me Off
lights

The NEED Project
www.need.org
1-800-875-5029



WHERE IS ENERGY?

CELL PHONES

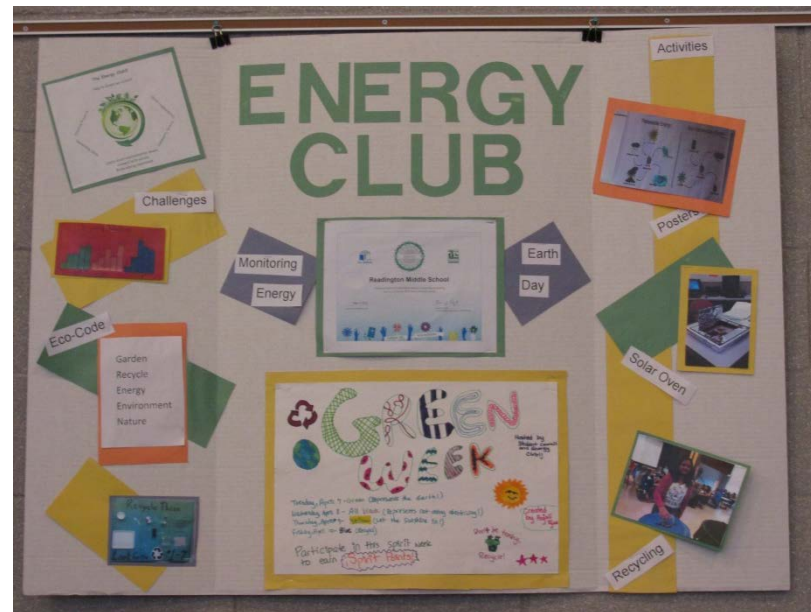
Make sure to unplug your cell phone charger when not in use. If everyone in the U.S. did this for just one day, they would save enough energy to power 100,000 homes!

EDUCATE

SEE
SCHOOLs for Energy Efficiency
www.seeinggreen.com

ENERGY STAR
EPA
U.S. DEPARTMENT OF ENERGY

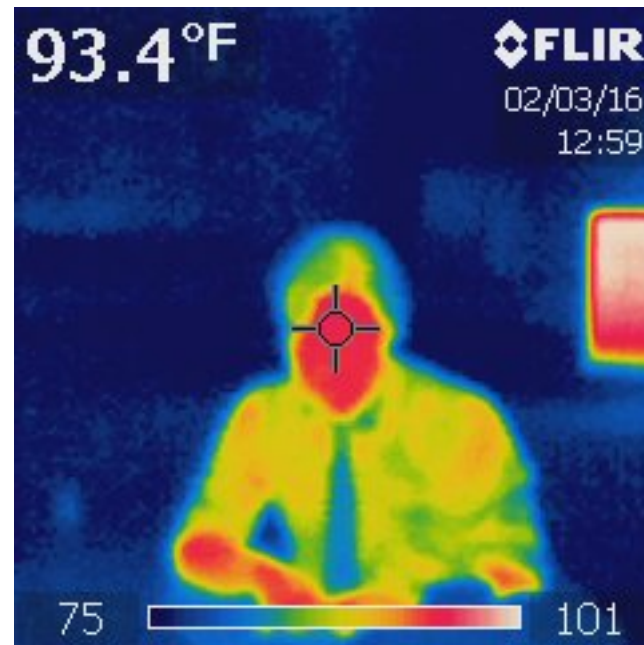
Staff and Student Involvement



Energy Education



6th Grade Science class
Infrared light investigation



Energy Efficiency Project

- November 2013 – December 2014 window and door replacement project at Readington Middle School
- Was identified in the LGEA audit
- Energy tracking and management allowed us to see the energy savings in the building

Readington Middle School Window Replacement Project

Before



After



Readington Middle School Window Replacement Project

Before



After



Results

Window replacement project and behavior modification resulted in decrease in energy usage at Readington Middle School

- ❖ Energy Use Intensity (EUI) decreased by 3%
- ❖ Energy usage reduced by 17%
- ❖ Avoided \$37,700 in energy costs in one year

Recognition

- Energy Star building certification 2015
- Eco-Schools NJ Silver Certification
- Sustainable Jersey for Schools bronze certification 2015



How to begin sustainability program

- Establish Green Team to drive progress
- Focus on low cost, high return investments that are easy to implement
- Recognition of progress
- Use opportunities to share and gather information





Thank you!

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