

Welcome to our program!

As you wait please feel free to do the following:

- Make sure that your microphone is muted.
- Locate the chat feature.
- If you have any questions, please put them in the chat box.
- We invite everyone to turn their video on so we can have some face time together!

SUSTAINABLE LIVING SERIES

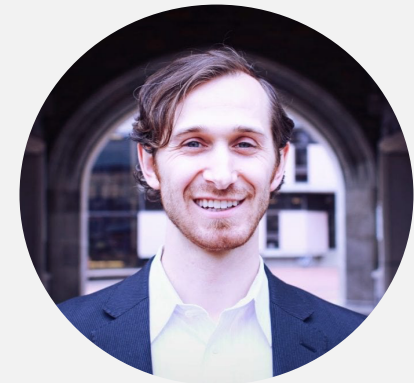
Five virtual lectures discussing sustainability programs and resources here at WashU St. Louis

THURSDAYS
4:30–5:15pm
Central Time

SEP 17 th	Waste
SEP 24 th	Food
OCT 1 st	Energy
OCT 8 th	Campus Tour
OCT 15 th	Transportation

Who we are

7 full-time sustainability staff
and many more student associates!



← **Claire Santoro:**
Energy & Climate
Data Analyst

Who we are



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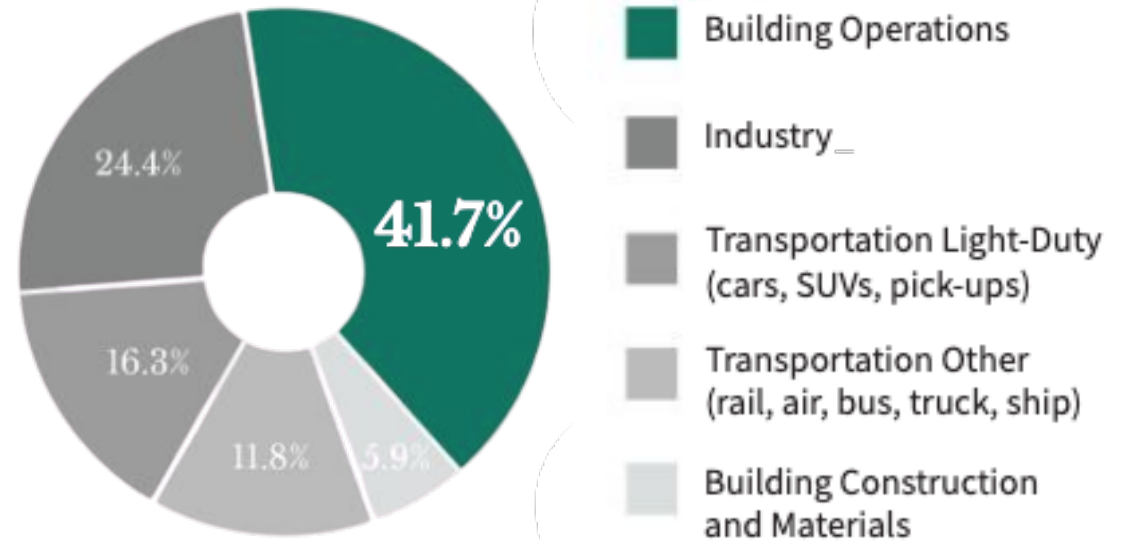


Who are you?

Please respond to the Zoom polls that show up on your screen so we can learn who is in the room!

Energy Savings Matter!

Building operations account for 41.7% of all energy use in the United States, which makes it the largest sector.



Project Drawdown

Solutions by Rank (first 10 out of 100)


Rank	Solution	Sector	TOTAL ATMOSPHERIC CO ₂ -EQ REDUCTION (GT)	NET COST (BILLIONS US \$)	SAVINGS (BILLIONS US \$)
1	Refrigerant Management	Materials	89.74	N/A	\$-902.77
2	Wind Turbines (Onshore)	Electricity Generation	84.60	\$1,225.37	\$7,425.00
3	Reduced Food Waste	Food	70.53	N/A	N/A
4	Plant-Rich Diet	Food	66.11	N/A	N/A
5	Tropical Forests	Land Use	61.23	N/A	N/A
6	Educating Girls	Women and Girls	51.48	N/A	N/A
7	Family Planning	Women and Girls	51.48	N/A	N/A
8	Solar Farms	Electricity Generation	36.90	\$-80.60	\$5,023.84
9	Silvopasture	Food	31.19	\$41.59	\$699.37
10	Rooftop Solar	Electricity Generation	24.60	\$453.14	\$3,457.63



Our Region

- In Missouri, 70% - 83% of energy comes from coal
- Our region has the third most carbon intensive grid in the nation
- St. Louis has a variety of challenges





WashU: Energy and Efficiency on Campus

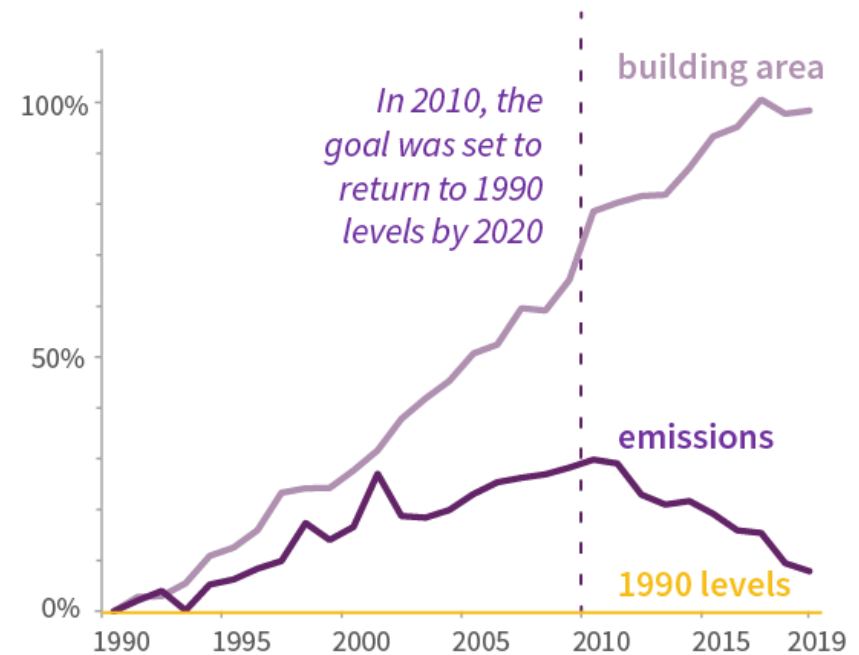


Sustainability
Washington University in St. Louis

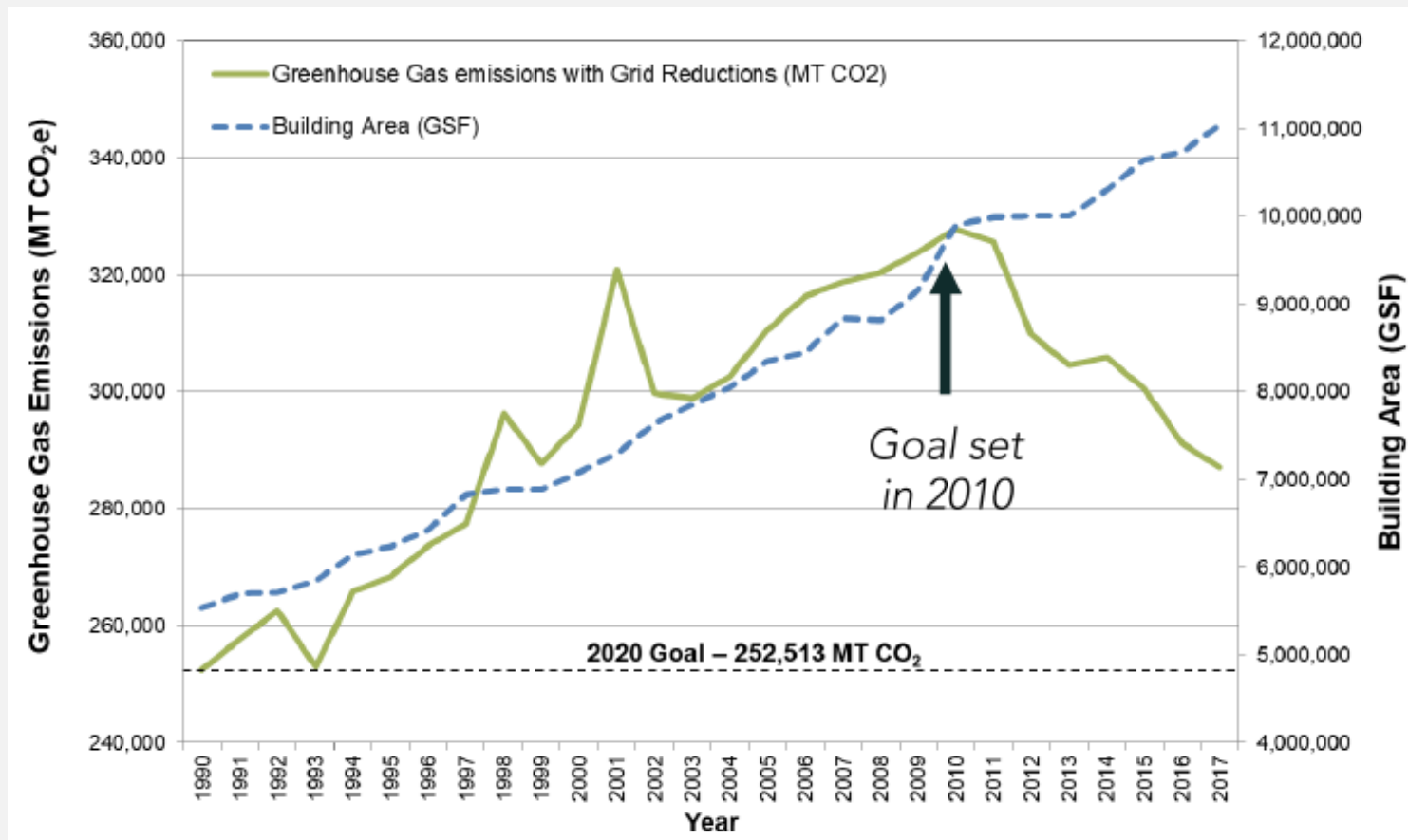
Campus Energy Savings

- Less carbon emissions despite increased square footage
- Campus buildings are metered to track monthly Natural Gas & Electricity usage

Emissions are 8% away from the 1990 levels



Campus Energy Savings



Renewable Energy

- WashU has assets of about 3 MW of on-site solar
- Last year our solar arrays produced 621,281 kWh
- This number is equivalent to burning 484,016 pounds of coal

WashU is now one of the largest producers of on-site solar in Missouri



111

.5

Megawatts
in 2015

111

111

111

111

111

2.5

Megawatts
in 2019

Commitment to Energy Efficiency

LEED Building Certifications



All new buildings must be 30% more energy efficient than standard buildings.

Green Cup



Less Is More

Email sustainability@wustl.edu to request a Less is More toolkit to further your commitment to reducing your impact



RECYCLE

IF IN DOUBT, RECYCLE

PAPER PRODUCTS, CARTONS & CARDBOARD

GLASS

METAL

RIGID PLASTICS #1-5, 7

SHAKE OR DUMP OUT FOOD/ICE/LIQUIDS

For FAQs and information on recycling or donating non-standard items such as batteries, appliances, furniture, clothing and more, visit: sustain.wustl.edu

LANDFILL (MOST ITEMS CAN BE RECYCLED)

COMPOST (WHERE AVAILABLE)

CHIP BAGS & SNACK WRAPPERS

PLASTIC #6, PLASTIC WRAP & BAGS

FOOD & LIQUIDS

BROWN, UNCOATED PAPER PRODUCTS

COMPOSTABLE SERVICEWARE

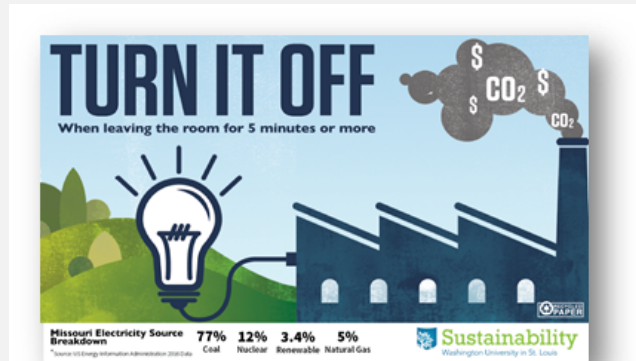
STYROFOAM



less IS more

THE GREENEST THING YOU CAN DO IS

CONSUME LESS



TURN IT OFF

When leaving the room for 5 minutes or more

Missouri Electricity Source Breakdown

77%	12%	3.4%	5%
Coal	Nuclear	Renewable	Natural Gas

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Sustainability

- TURN OFF THE TAP WHEN... SHAVING BRUSHING TEETH WASHING DISHES
- TAKE SHORTER SHOWERS: TRY LIMITING YOURS TO 5 MINUTES OR LESS
- REPORT LEAKY FIXTURES VIA A MAINTENANCE REQUEST
- WASH CLOTHES ON THE COLD/DELICATES SETTING

less IS more

reduce your use



2 EASY STEPS TO REDUCE YOUR USE

1 ADJUST YOUR COMPUTER POWER SETTINGS

Reduce your screen brightness. Set the screen to dim after 2 minutes & turn off after 5 minutes. Set the computer to go to sleep after 15 minutes.

PCs: Visit your control panel to adjust your "power options."
MACs: Go to system preferences and click on "Energy Saver."

Check here when you complete Step 1 **less IS more**



Set your thermostat to:

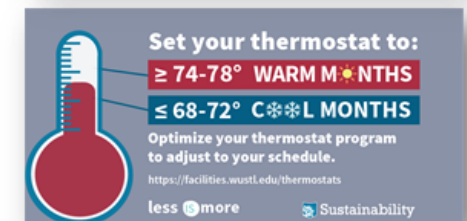
≥ 74-78° WARM MONTHS

≤ 68-72° C COLD MONTHS

Leaving for a holiday? Adjust your thermostat for energy savings.

<https://facilities.wustl.edu/thermostats>

less IS more [Sustainability](#)



Set your thermostat to:

≥ 74-78° WARM MONTHS

≤ 68-72° C COLD MONTHS

Optimize your thermostat program to adjust to your schedule.

<https://facilities.wustl.edu/thermostats>

less IS more [Sustainability](#)



Energy and Efficiency at Home



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The impact of an energy efficient building
- 6  **Thermostats**
Using your programmable thermostat
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Learning when and how to use your fans
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- 12  **Lighting**
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- 18  **Kitchen & Bathroom**
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Making informed product choices
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- 26  **Alternative Transportation**
Utilizing low-carbon transportation

3

A Guide To Energy Efficiency & Sustainable Living



WashU: Energy Efficiency Guide

Download from
sustainability.
wustl.edu



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Thermostats

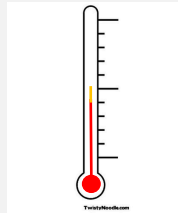
WINTER

SUMMER

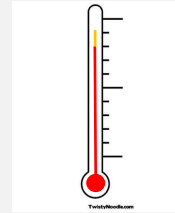
SPRING & FALL

At Home

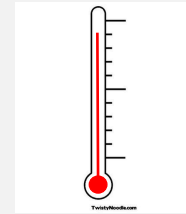
68-70°



76-78°

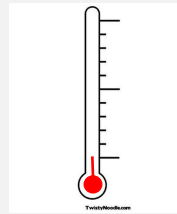


78°

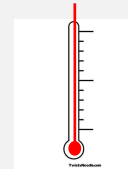


Away or Sleeping

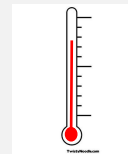
60°



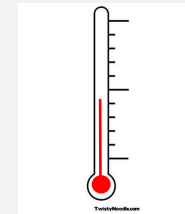
Away: 85°



Sleeping: 75°



68°



Demand Response



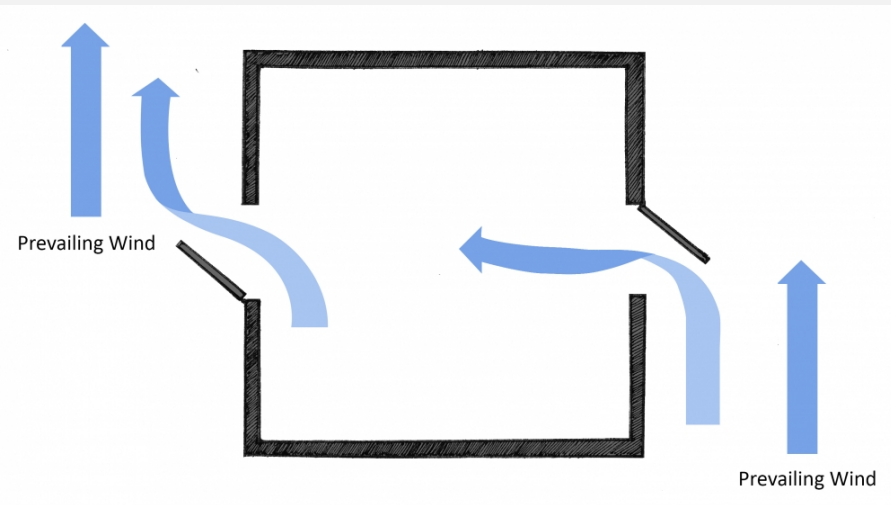
Allows energy companies to balance the needs of the energy grid at peak moments of use.



Install a smart thermostat in your home!

Windows

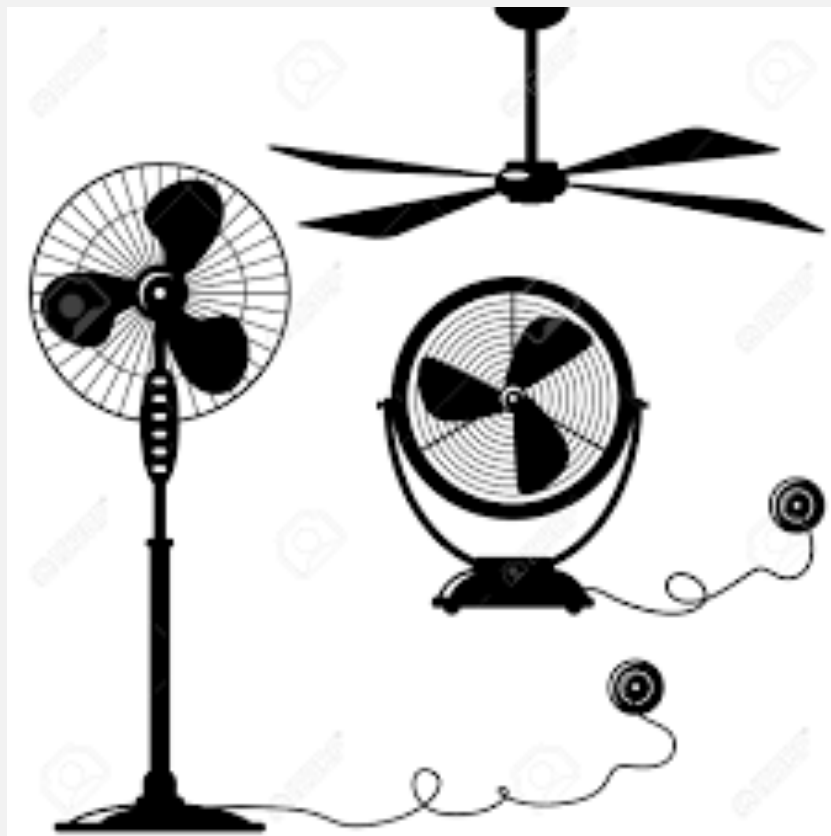
Cross Ventilation



Blinds



Fans



SUMMER

WINTER

Downdraft and Updraft

©2010 HowStuffWorks



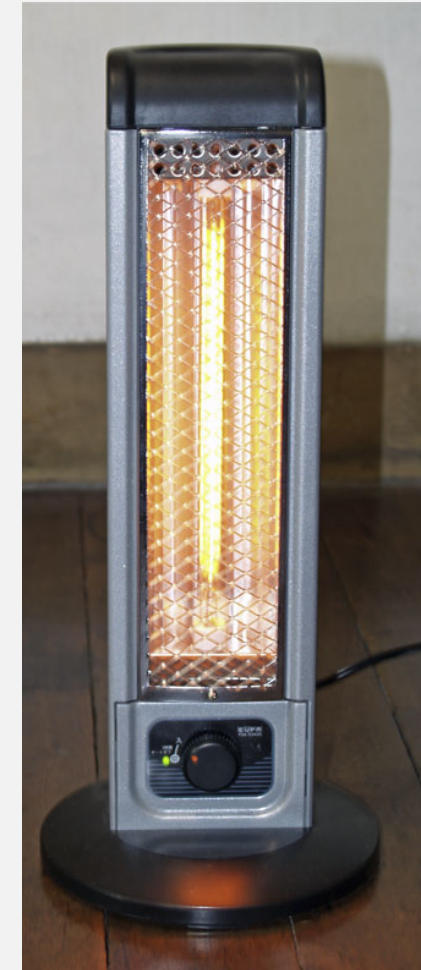
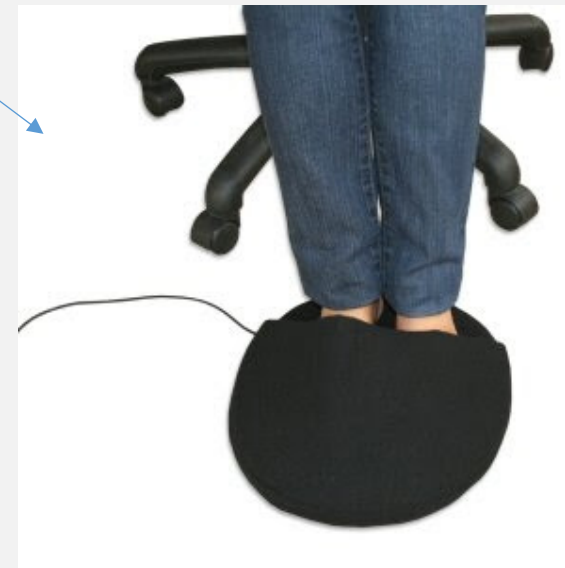
Space Heaters

Each standard space heater contributes to 2,160-3,456 pounds of carbon emissions each year and costs \$84-\$134 per year in electricity bills.

Heat your body, not the air (think: sweater, lap blanket, foot warmer)

Use a timer to turn on/off for predictable places, like a cold bathroom in the morning

Turn off when you aren't in the room!



Lighting

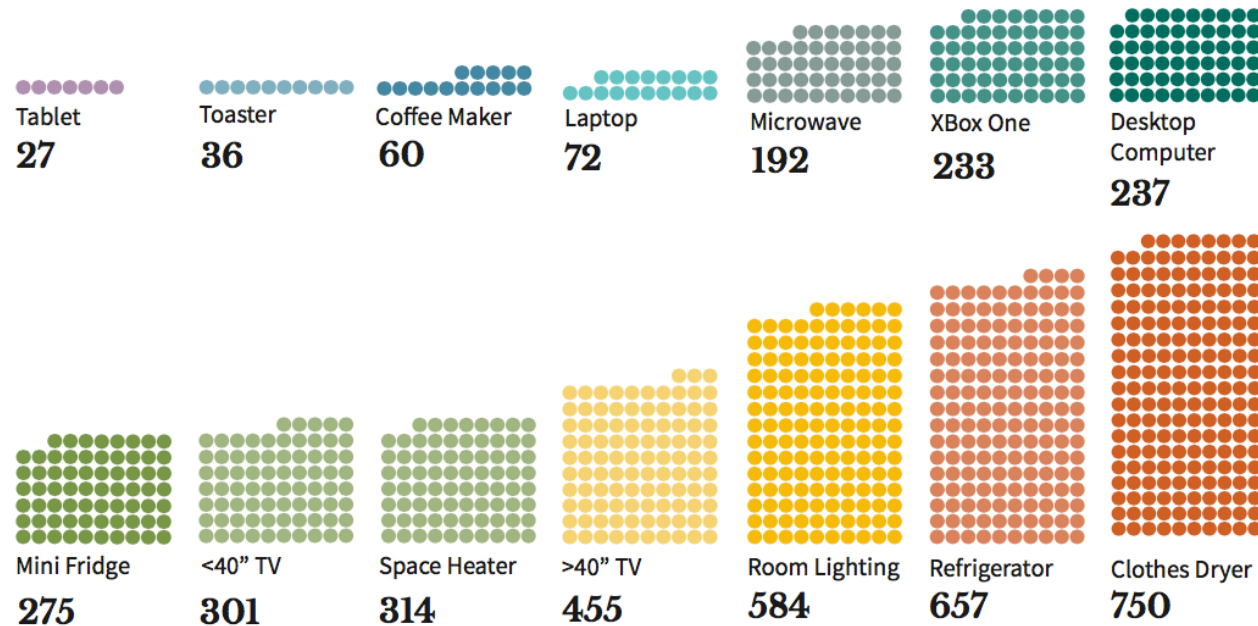


LED	CFL	Incandescent
Avg Life: 25,000 Hrs	Avg Life: 8,000 Hrs	Avg Life: 1,200 Hrs
No Mercury	Mercury	No Mercury
6-8 Watts	13-15 Watts	60 Watts
Uses 84% less energy	Uses 75% less energy	90% energy lost to heat

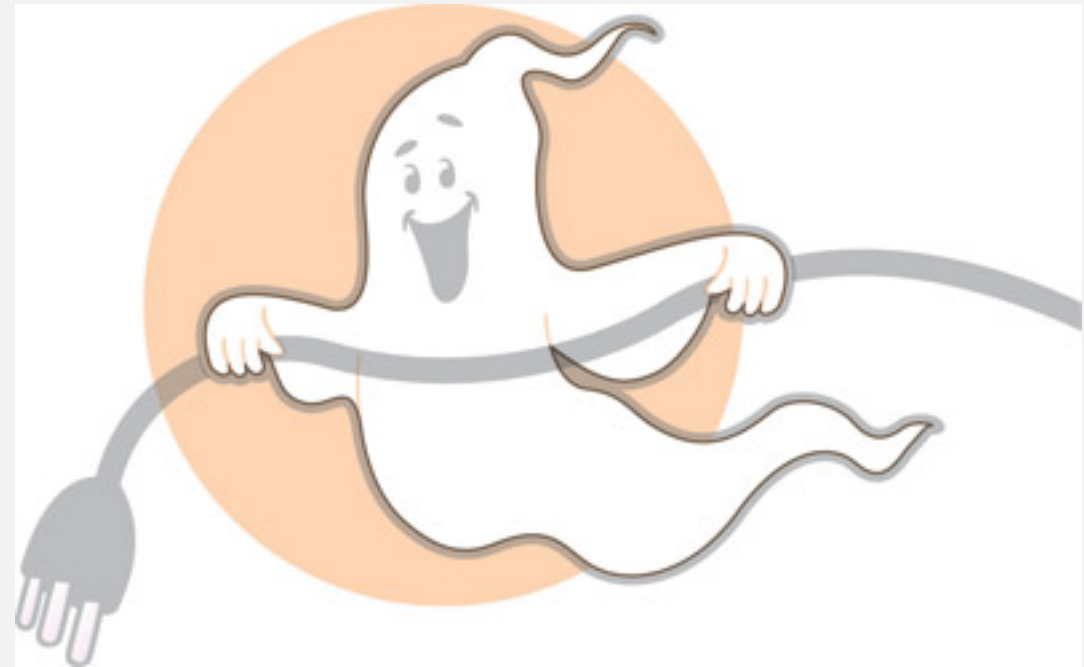
More info: <https://sustainability.wustl.edu/everything-you-need-to-know-about-led-lights/>

Outlets and Phantom Loads

The annual energy consumption of a smart phone is 4 kWh = ●



Data Sources: US DOE, NRDC, Opower



Laundry



Wash with cold water



Wash with cold water

Drying rack



Avoid over-drying clothes



Wash Full Loads



Bathroom

Decrease Flow Rate

Short Showers: 3-5 minutes



Why waste...

2,900 GALLONS of water + 13 DAYS of energy to power your home + \$70 per YEAR

ShowerBetter

The infographic features a showerhead on the left. To its right, it lists three items: '2,900 GALLONS of water' with four water bottle icons, '+ 13 DAYS of energy to power your home' with a grid of house icons, and '+ \$70 per YEAR' with stacks of money icons. At the bottom right is the 'look for WaterSense' logo.

Turn off the tap



Kitchen



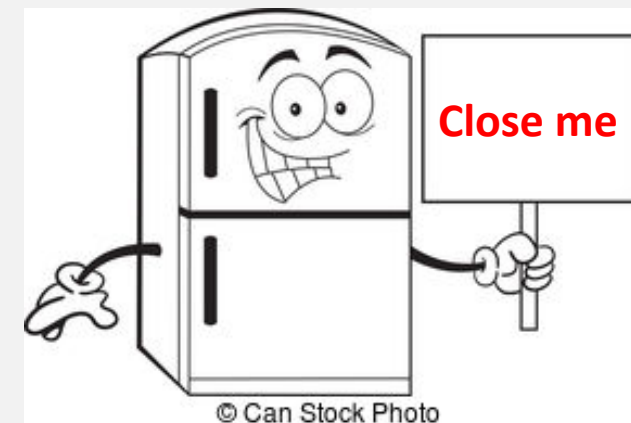
Full Dishwasher



Electric Kettle



Toaster Oven



Conserve Cold



Household Retrofits

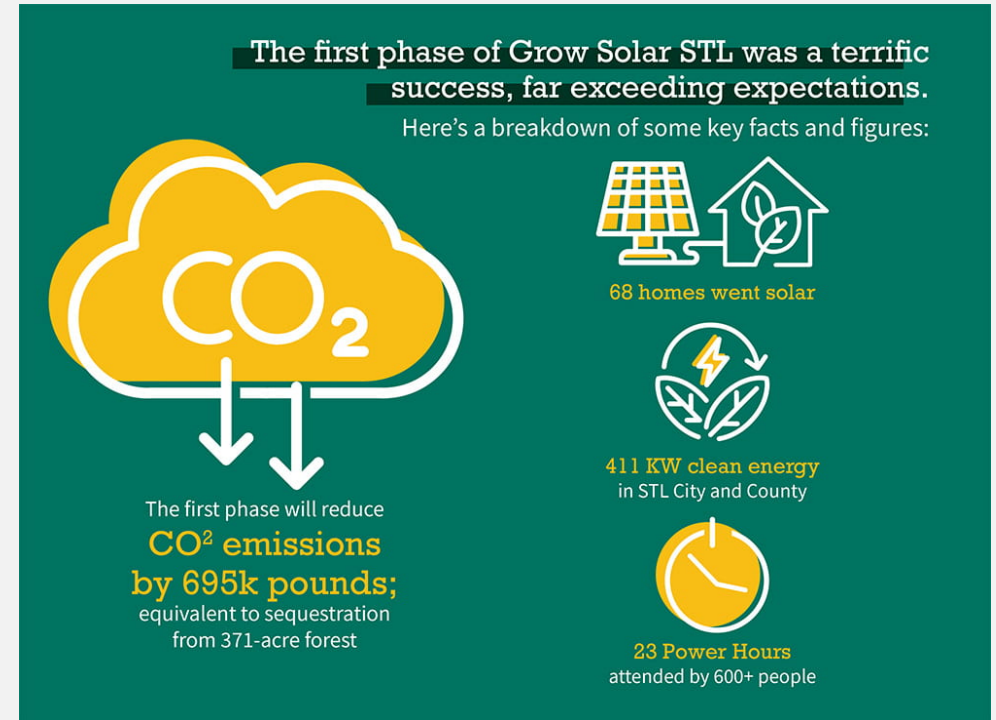
Home Energy Audit: Through a set of tests, identify the highest impact opportunities for conserving energy, primarily through sealing and insulating your home and preventing the loss of conditioned air.

Insulate: Good insulation has many benefits, including increasing the thermal comfort of your house, reducing energy bills, reducing wear and tear on your HVAC system, and substantial energy conservation. Target: walls, ducts, chimney, plumbing, and water heater.

Seal Cracks and Gaps: Low cost, easy way to seal up your home and reduce the loss of conditioned air. Target windows and doors with caulk, weatherstripping, and draft blockers.

Grow Solar

- Reduces solar installation costs
- Educates homeowners
- Pre-selects a high quality solar company through a competitive bid process to save homeowners time.



More Info: <https://sustainability.wustl.edu/70-homes-went-solar-with-grow-solar-stl-phase-1-now-to-phase-2/>

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SAVE THE DATE!

