Tools, Incentives & Programs to $ave & Go Green at Home

Lisa Orr
Unity with Nature Committee
Goose Creek Friends Meeting


POP
QUIZ


Hold on!
This is not
what I signed
up for!

Which spilled more fuel in 1989?

A. The Exxon Valdez

B. Gardeners refilling lawn equipment

C. Drivers pumping gas

Which spilled more fuel in 1989?

A. Exxon Valdez (~11 million gallons)

B. Gardeners refilling lawn equipment
(~17 million gallons; 26 Olympic pools)

C. Drivers pumping gas
(~5 million gallons)

Which household appliance requires the most electricity to generate heat?

A. Electric cooking range

B. Water heater

C. Clothes dryer

Which household appliance requires the most electricity to generate heat?

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B. Water heater

C. Clothes dryer

Which way should I chill out while using the least amount of energy?

A. Relax in my outdoor hot tub

B. Soak in my whirlpool bath

C. Hang out in my massage chair

D. Curl up in my electric blanket

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What is the USA's biggest source of CO_2 emissions?

A. Cars

B. Coal-burning power plants

C. Exhalation of 319 million people

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A. Cars

B. Coal-burning power plants

C. Exhalation of 319 million people

What percentage of seabirds have plastic in their stomachs?

A. 90%

B. 50%

C. 25%

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B. 50%

C. 25%

…and projected to rise to 99% by 2050

Do more air pollutants come from burning 1 gallon of gasoline in a…

A. Lawnmower
B. Conventional car, or
C. Fire truck

Do more air pollutants come from burning 1 gallon of gasoline in a…

A. Lawnmower

B. Conventional car

C. Fire truck

For every gallon of gasoline a conventional car burns, how many party balloons of carbon emissions are emitted into the atmosphere?

A. 1,172

B. 172

C. 72

D. 7

For every gallon of gasoline a conventional car burns, how many party balloons of carbon emissions are emitted into the atmosphere?

A. 1,172

B. 172

C. 72

D. 7

Which uses less water? Washing dishes…

A. By hand, or

B. In the dishwasher

Which uses less water? Washing dishes…

A. By hand, or

B. In the dishwasher

Not this…

So many issues!

How do I know what's most important?

So many way's our products and lifestyles pollute!

What do we have control over, what don't we?

So many ways energy is used and wasted!

How do I know what can have the most impact?

How do I choose what to do????

& Does My Home Really Matter?

- Direct energy use by U.S. households (home & transport) accounted for approximately **38%** of overall US CO_2 emissions, or
- **626** million metric tons of carbon (MtC) in 2005, or
- approximately **8% of global emissions** and **larger than the emissions of any entire country except China**!

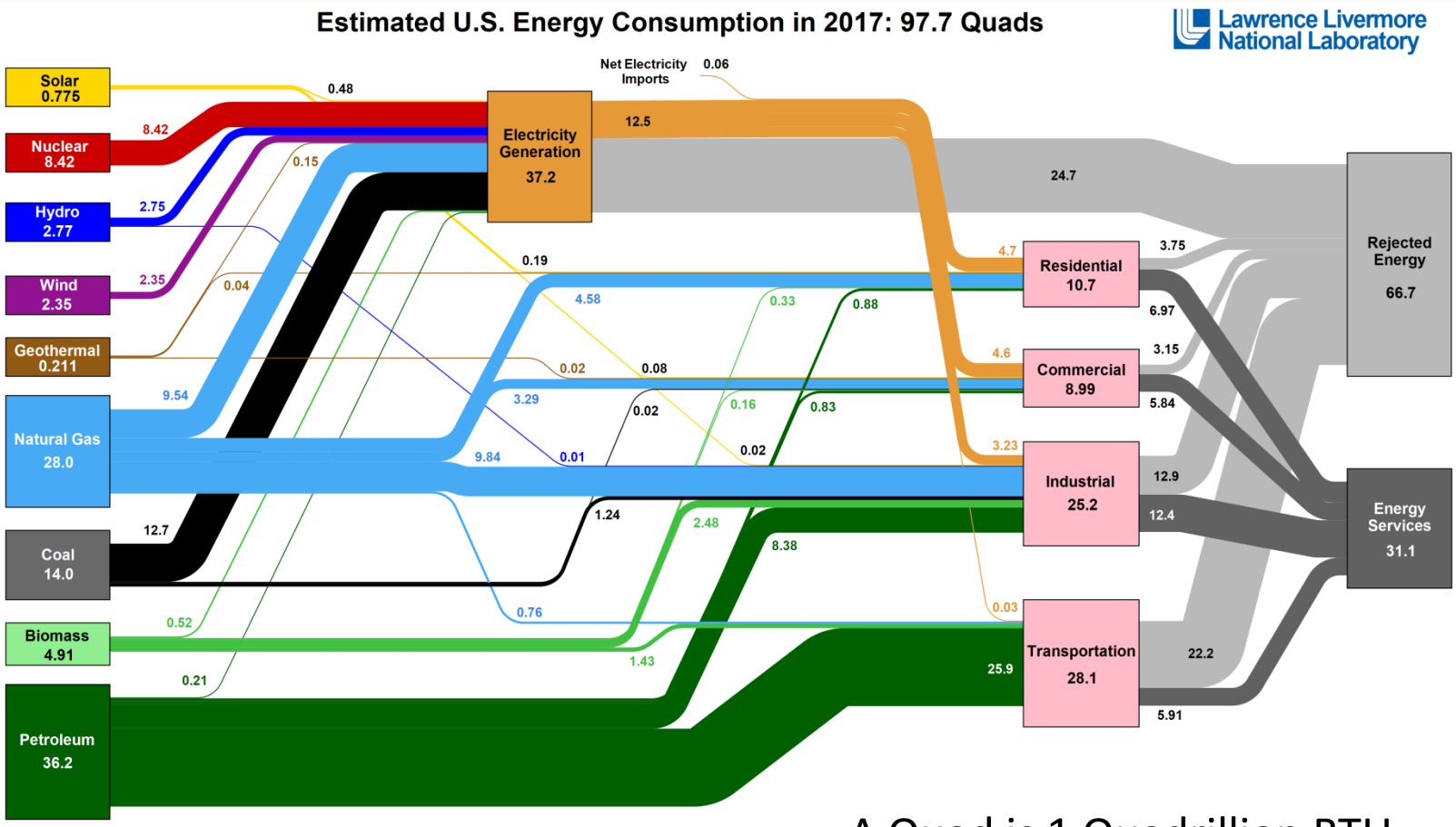
Source: Household actions can provide a behavioral wedge to rapidly reduce US carbon emissions

U.S. Energy Generation, Use, & Wastage

The U.S., with 5% OF THE PLANET'S POPULATION, CONSUMES 24% OF WORLD'S ENERGY

AND WASTES UP TO 68% of Energy Generated

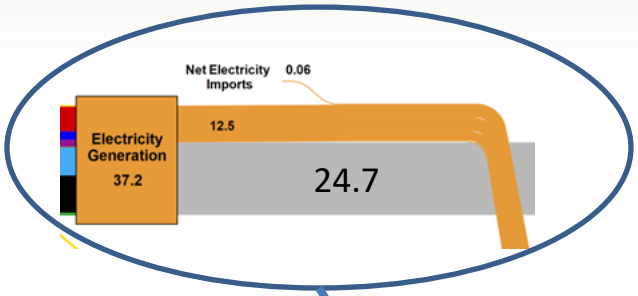
35% of Residential Energy is Wasted



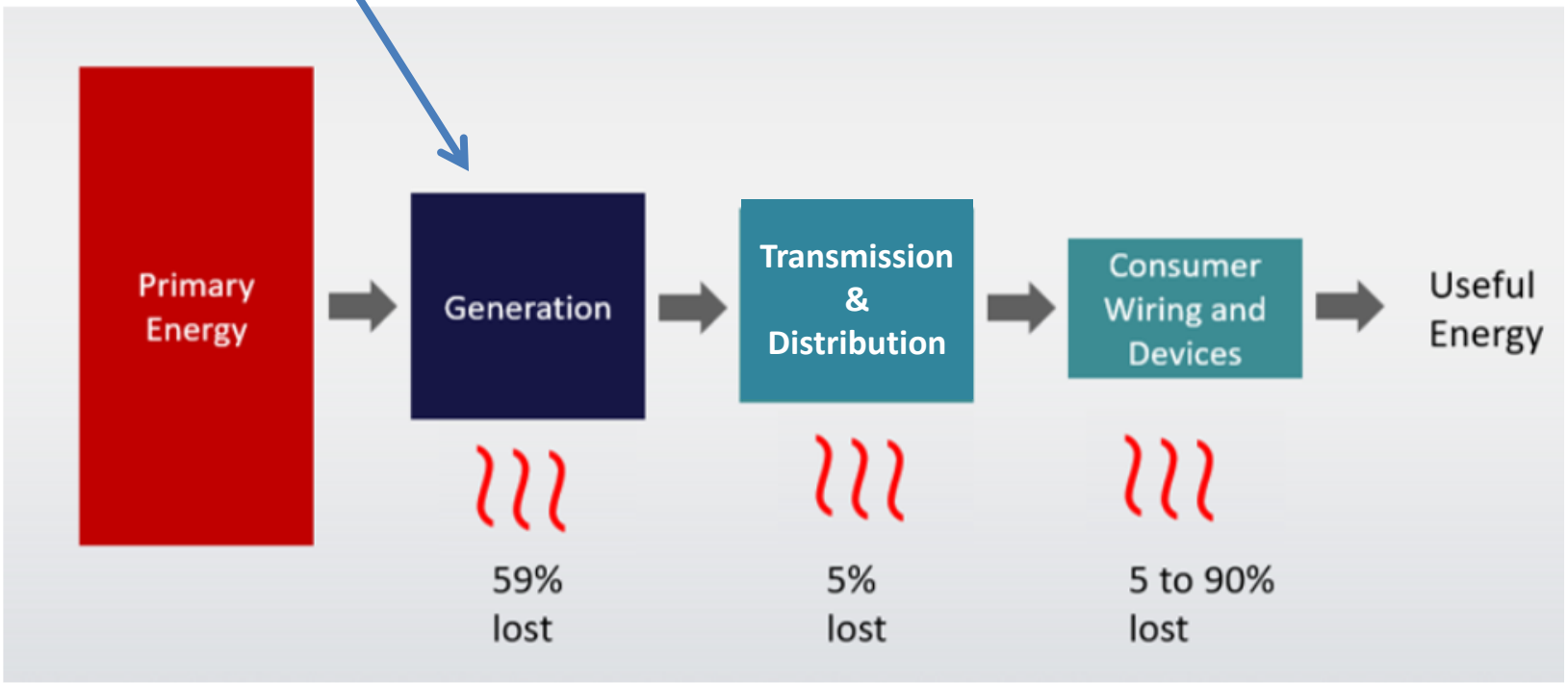
A Quad is 1 Quadrillion BTU

Sources: [World Economic Forum (2018); Assoc Press (2008)]

Why So Much Wasted through Generation?



- Waste heat from inefficiencies converting primary energy to electricity (54% of losses.)
- Electricity used internally by the power plant (5%)
- Waste heat in transmission/distribution (5-7%)
- Waste from end-use equipment (light bulbs to boilers) (5-90%)



The energy we do use is precious!

Source: [EnergyDynamics]

Where does our Electricity come from?

Renewable: Wind, Hydroelectric, Solid Waste, Captured Methane Gas, Wood and Other Biomass, Solar (3%)

Oil (0.4%)

Natural Gas (14%)

Coal (48%)

Nuclear (35%)

Utility Generated Electricity ~2008

Where does our Electricity come from?

Renewables:
Wind, Hydroelectric, Solar, Biomass, Other (20%)

Coal (22%)

Oil (0.5%)

Nuclear (18.9%)

Natural Gas (38.4%)

Utility Generated Electricity 2021

Source: USEIA

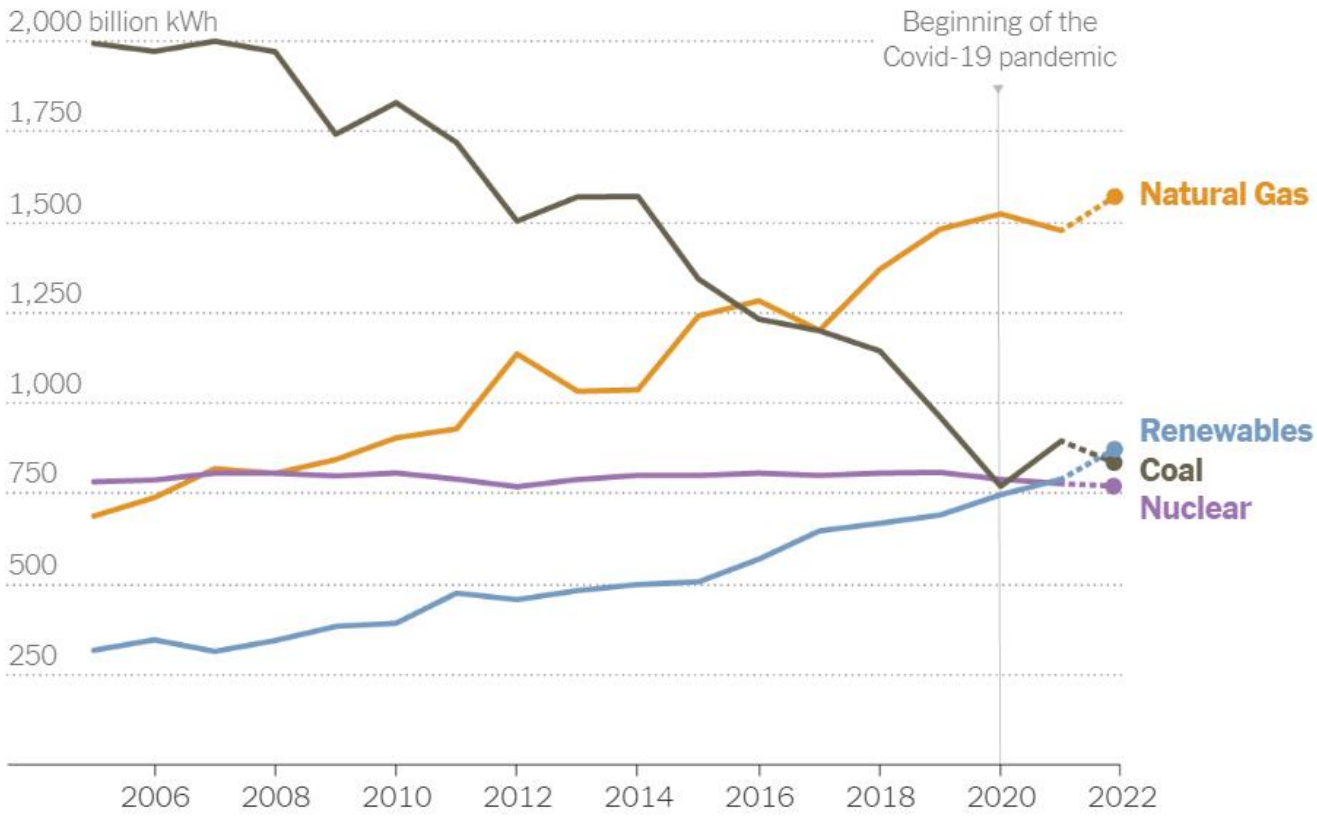
The New York Times Jan. 10, 2023

U.S. Carbon Emissions Grew in 2022, Even as Renewables Surpassed Coal

Emissions ticked up 1.3 percent last year as they continued to rebound from early pandemic lows.

"**The most significant increase in emissions last year came from homes and buildings**, which burn fossil fuels like natural gas in furnaces, hot water heaters and other appliances. **Those emissions rose 6 percent**, and reached prepandemic levels."

Renewable energy generation surpassed coal



Source: Rhodium Group: Preliminary Greenhouse Gas Emissions Estimate for 2022

How do American households use energy?

d. Air & Mass Transportation (5%)

a. Laundry (3%)

g. Water Heating (6%)

e. Lighting (6%)

h. Kitchen (6%)

f. Private Motor Vehicles (39%)

c. Plug In Electronics & Gas Appliances (10%)

b. Heating & Cooling (25%)

Two SHORT LISTS can Guide Us!

The Short List: The Most Effective Actions U.S. Households Can Take to Curb Climate Change
(Gardner & Stern, Source)

--Rankings based on percentage of potential household energy savings

Household actions can provide a behavioral wedge to rapidly reduce US carbon emissions
(Deitz, Gardner, et al, Source)

--Rankings based on achievable emissions reductions

Total Possible Energy Savings from Effective Energy Conservation and Efficiency Actions: 69%

Potential Energy Saved by FREE or very Low-Cost Household Actions	Up to...
Heat: turn down thermostat from 72 to 68 degrees during day; and to 65 degrees during night	2.8%
Change washer temperature settings from hot wash, warm rinse; to warm wash, cold rinse	1.2%
Line dry clothing 7 months out of year	1.1%
Turn down water heater from 140 degrees to 120 degrees F.	0.7%
Cooling: Turn up thermostat from 73 degrees to 78 degrees F in summer	0.6%
Watch 25% fewer hours of TV each day	0.6%
Don't leave 1 60 Watt incandescent bulb on all night	0.5%
Turn up refrigerator from 33 to 38 degrees; Turn up freezer thermostat from -5 to 0 degrees F.	0.5%
Replace 2 100 Watt bulbs with 75 Watt Bulbs	0.3%
Total possible No Cost Home Energy Savings	**8.3%**

Potential Energy Saved by FREE Transportation Actions	Up to...
Carpool with 1 person	4.2%
Alter Driving: Avoid sudden acceleration & stops	3.2%
Combine errand trips to 1/2 of current mileage	2.7%
Cut highway speed from 70 to 60 mph	2.4%
Maintain correct tire pressure	1.2%
Total Possible No Cost Transportation Energy Savings	**13.7%**
Total Possible No/Low Cost Energy Savings	24.8%

Potential Energy Savings by Investing in Greater Efficiency	Up to...
Upgrade Attic Insulation and ventilation	**7.0%**
Install more efficient heating and A/C units	**5.1%**
Replace 85% of all incandescent light bulbs with equally bright CFLs	**4.0%**
Replace poor windows with high efficiency windows	**3.7%**
Caulk & weatherstrip home	**2.5%**
Replace pre-2001 refrigerators with new Energy Star unit	**1.9%**
Install more efficient water heater (EFS .7 unit)	**1.5%**
Replace 48" Plasma HD TV with a 52" Projection HD TV (LDC)	**1.3%**
Replace pre-2001 clothes washer with new Energy Star unit	**1.1%**
Total Potential Home Savings with Financial Investment	**28.1%**

Potential Transportation Savings by Investing in Greater Efficiency	Up to...
Buy Fuel Efficient Vehicle getting 30+ mpg	13.5%
Get Frequent Tune-Ups and air filter changes	3.9%
Buy low-rolling resistance tires	1.5%
Total Potential Transportation Savings with Financial Investment	**18.9%**
Total Possible Household Energy Savings with Investment in Energy Efficiency	47.0%

Note: 2008 Research

(Modified from Gardner & Stern, 2008 Source)

"Short List" Ranked by Climate Impact

The same things that are best for your wallet are best for the climate.

Action or Behavior Change	Reasonable Achievable US Emissions Reductions within 10 years (RAER)(MtC)	RAER as percentage of total US individual/household sector emissions (%I/H)
Totals	**123 MtC**	**20%**
Fuel-efficient vehicle	31.4	5.02
Weatherization	21.2	3.39
Appliances	11.7	1.87
HVAC equipment	10.7	1.72
Driving behavior	7.7	1.23
Low rolling resistance tires	6.5	1.05
Carpooling and trip-chaining	6.4	1.02
Efficient water heater	5.4	0.86
Thermostat setbacks	4.5	0.71
Routine auto maintenance	4.1	0.66
Change HVAC air filters	3.7	0.59
Standby electricity	3.2	0.52
Line drying clothes	2.2	0.35
Tune up AC	1.4	0.22
Low-flow showerheads	1.1	0.18
Water heater temperature	1	0.17
Laundry temperature	0.2	0.04

(Simplified from Deitz, Gardner, et al, Source)

What We'll Cover

- Weatherization & Home Energy Audits
- Incentives & Tax Credits
- Heating and Cooling Equipment
- Appliances
- Electronics
- Example of Impacts
- Going Green with the Frederick County Green Homes Challenge

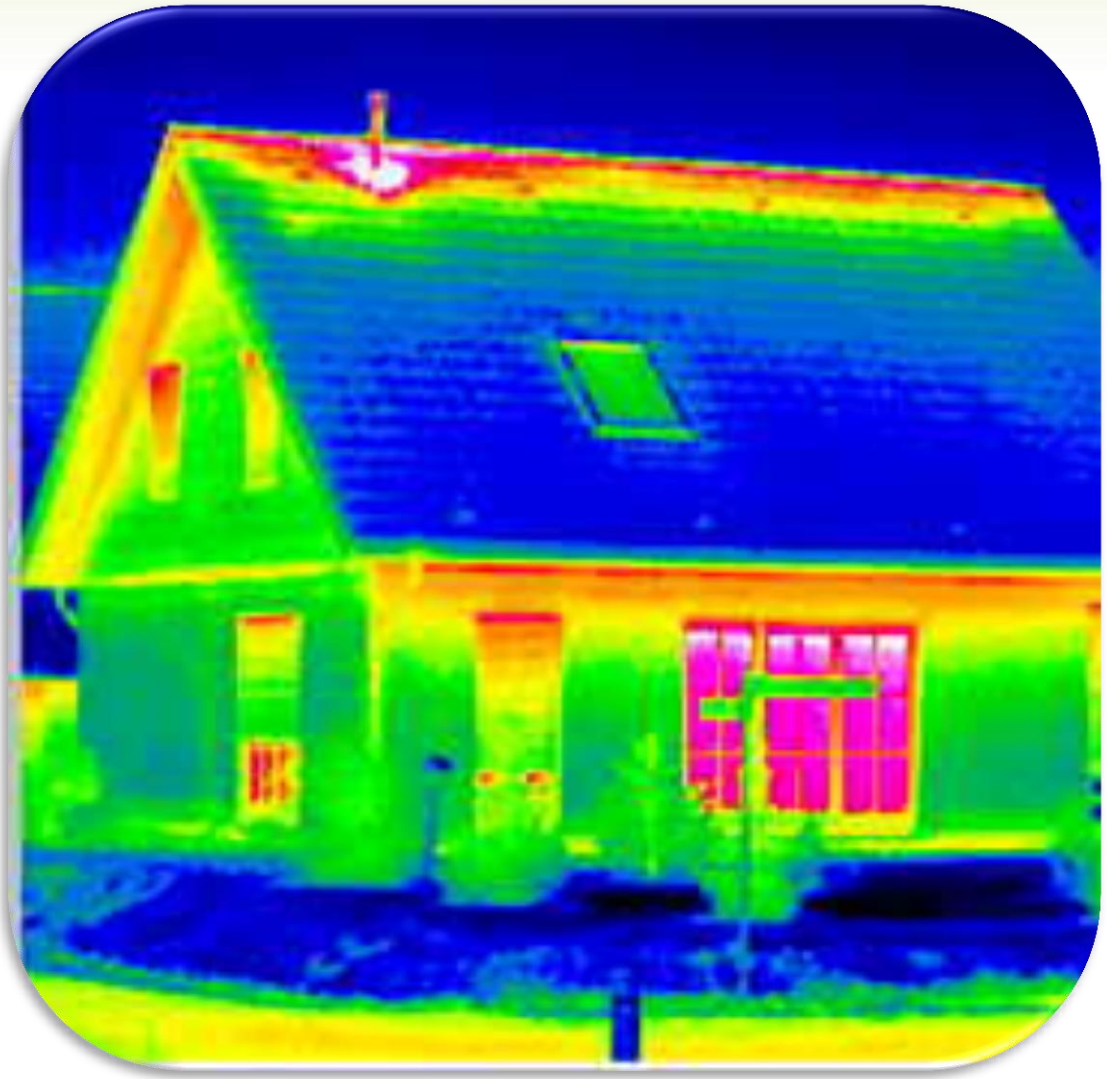
Issues description

How to Address; What to do

Special Programs, Incentives & Rebates

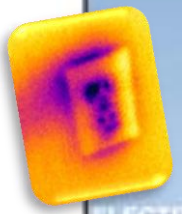
GREEN HOMES CHALLENGE
FREDERICK COUNTY, MD

Our Homes Leak Money Every Day!



Where?


PLUMBING STACK VENT
BATHROOM FAN VENT
RECESSED LIGHTS
ATTIC HATCH
RECESSED LIGHTS
CHASE
ELECTRICAL OUTLET
KITCHEN FAN VENT
DRYER VENT
CRAWL SPACE
OUTDOOR FAUCET
Air leaking into the house
Air leaking out of the house




PLUMBING STACK VENT
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DRYER VENT
CRAWL SPACE
OUTDOOR FAUCET
Air leaking into the house
Air leaking out of the house

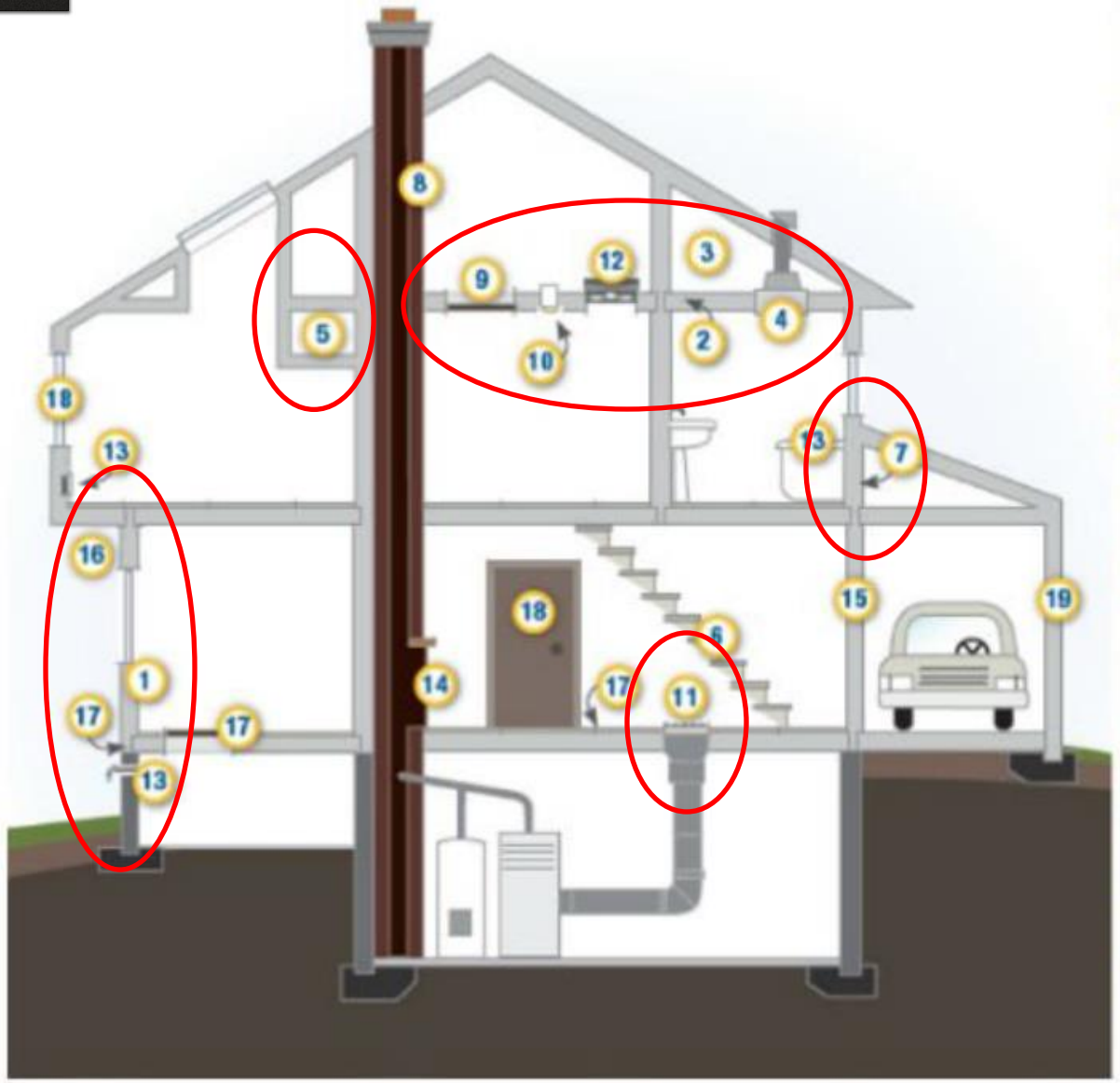
Major Sources of Air Leaks

Want to DYI?

Check out

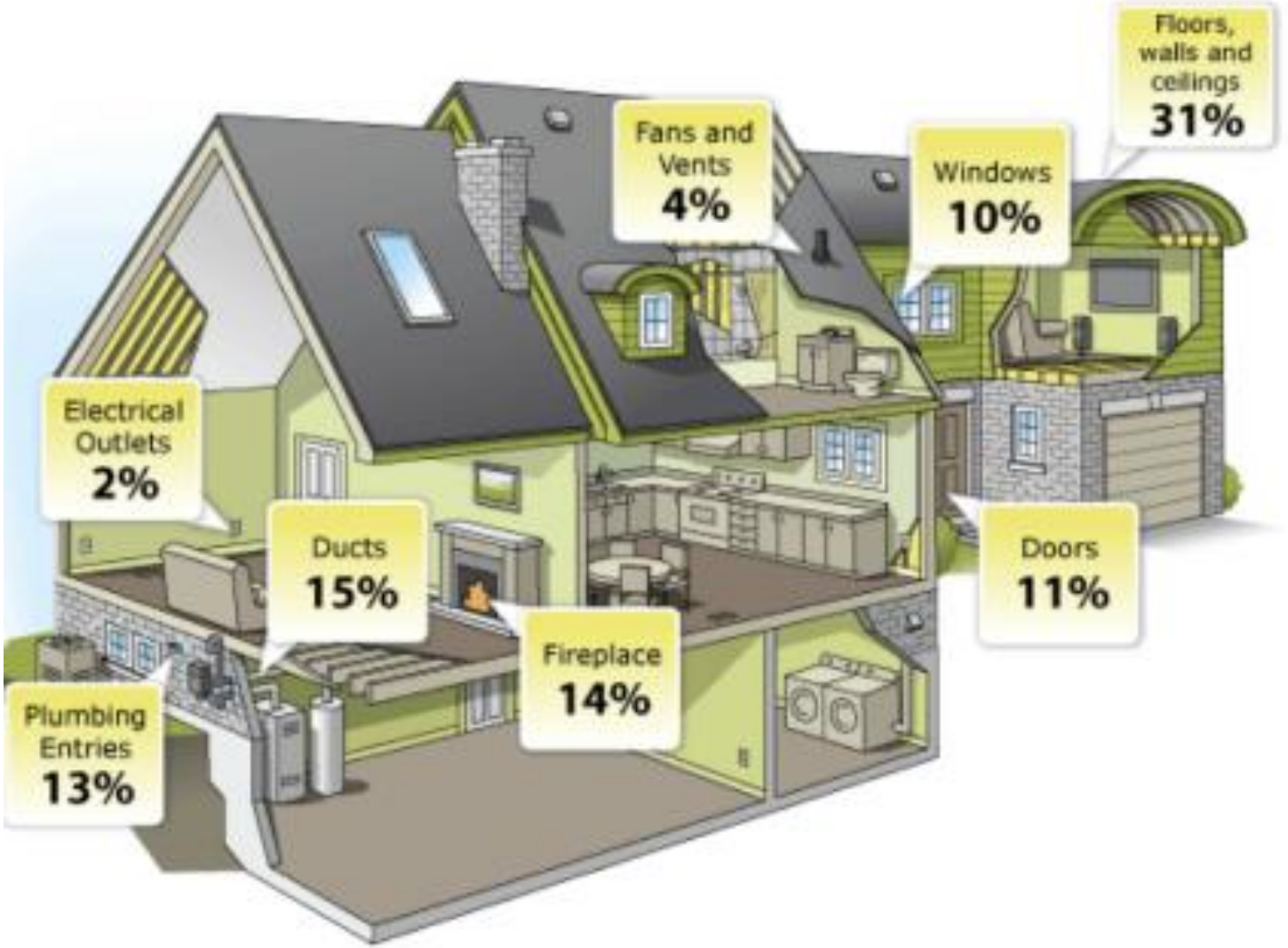
Energy Savers: Air Sealing Your Home

(Don't just add insulation!)



Source

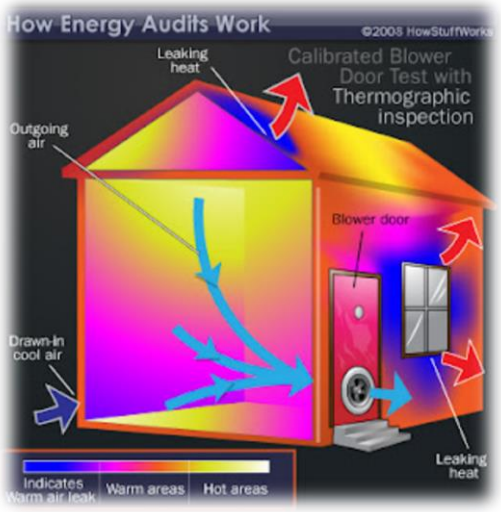
Major Sources of Air Leaks



Dominion Audits (with rebates)

- **Virtual Energy Audit, Quick Energy Check-Up**
  - Skip these
  - Not comprehensive; do if you want a few devices; Opportunity for Cost Estimate without you getting a clear picture of what is really needed

- **Full Energy Audit**
  - **Must use Dominion approved auditing contractor (LISTING)**
  - **2-4 Hour deep assessment with diagnostic tools**
  - **Blower Door Test; Thermal Imaging**
  - **Installation of simple measures (pipe insulation, shower heads, etc.)**
  - **Eligibility for REBATES on energy saving retrofits ($1.50 - $273)**
    - **Rebate to Customer or Contractor**
  - **Comprehensive Report with Recommendations (SAMPLE)**



Audit Precautions

- **Getting Started:**
  - Call a few contractors from the approved list (or call Dominion at 888-366-8280 & let them refer you to an approved contractor)
  - Check out their reviews online (Yelp, Google, Facebook, etc.)
- **Find out what contractors charge for the audit itself; don't let them be vague**
  - It should be in the range of $400 for a 3,000 sq. ft. home
- **Ask if you will receive the Full Audit Report. You should!**
  - Some may say that is proprietary and give you an estimate of what work should be done instead.
- **Ask if they also provide retrofit services**, and if that will be estimated separately from the audit. You may or may not want to use the same company for the audit & retrofits.

Potential Energy Saving Recommendations

- Air sealing (doors, windows, plumbing/vent pipes, ceiling light fixtures)
- Attic, wall, basement, and crawl space insulation
- Duct Sealing (Aeroseal)
- Duct insulation on heat pump system or central AC
- Heat pump water heater
- HVAC ductless unit upgrades
- Tune-up on heat pump or central AC
- Heat pump or mini split upgrade
- Smart thermostat installation
- High-efficiency fan motors
- Smart Home Energy Management System

- **WANT Dominion Rebates (LIST)?**
- **Use their APPROVED CONTRACTORS**

Rebates & Incentives

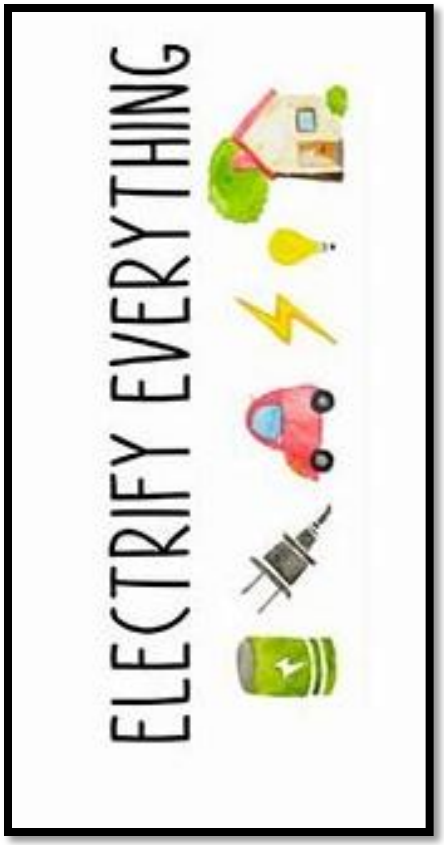
- **Energy Star Appliance/HVAC Rebate Finder**
  - Includes Dominion rebates (most are $50)
- **Dominion Energy Incentives**
  - Lighting, Air Sealing, Water Heaters, HVAC, Tune-Ups & More ($2 - $400)
- **No Potomac Energy Incentives in WV**
- **Inflation Reduction Act Federal Tax Credits:**
  - More than Dominion Rebates/Incentives
  - How will “double-dipping” be handled? Don’t know!
- **DSIRE: Database of US & State Policies & Incentives for Renewables & Efficiency**
  - 32 US Policies and Incentives; 8 in WV; 44 in VA;

Inflation Reduction Act

New Federal Tax Credits!

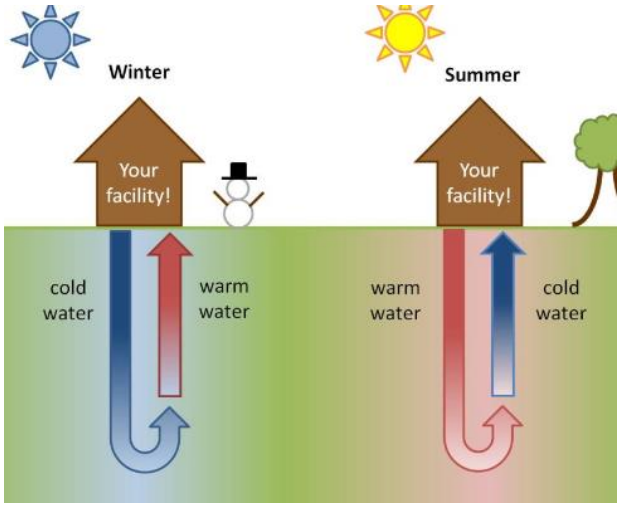
- Up to a total of $3,200/year! A few examples…
- Audits: $150
- Insulation: 30% of project cost up to $1,200
- Central A/C & Gas Furnaces: 30% of project cost up to $600
- Geothermal Heat Pumps: ~ 30% of cost
- Gas Tank & Tankless Water Heaters: 30% of project cost up to $600
- Air-Source Heat Pump & Heat Pump Water Heater: 30% of project cost up to $2,000
- Windows & Skylights: 30% of project cost up to $600
- Doors: 30% of project cost up to $500

Heating & Cooling



- **Electrify everything – We are on path to zero-carbon electricity**
  - Fossil fuels' emissions are fixed; electric generation is getting cleaner and cleaner
  - Electric Heat Pumps are more efficient and much less expensive to operate than furnaces or boilers using gas or oil
- **Use a Professional**
  - Upgrades to heating and cooling equipment should consider the effect on all areas of the house to maximize energy savings and ensure health and safety.
  - Systems need to be properly sized for your house and installed to deliver its full capacity.
- **Replace if…**
  - Heat pump more than 10 years old
  - Furnace or Boiler more than 15 years old

Heating & Cooling Options



- **Smart Thermostats; Programmable Thermostats**
  - **Smart Run ~$275; Programmable are less**
- **Ductless (and ducted) Mini-Splits**
  - **Good for homes without ducts**
  - **Good for households using window AC units**
- **Geothermal Heating & Cooling –** (a whole other workshop!)
- **EPA-Certified Wood and pellet-fuel stoves:**
  - Visit epa.gov/burnwise for options.
- **Good Overviews Here!**

DOE ENERGY SAVERS GUIDE

Heating & Cooling Behaviors

- **Clean or replace filters on furnaces once a month or as recommended.**
- **Save as much as 10% per year by turning your thermostat down 7°–10°F for 8 hours a day in fall/winter; turn it up in spring/summer.**
    - (If you have a heat pump, don't do this without a smart or programmable thermostat designed for use with heat pumps.)
- **Clean around registers and baseboard heaters**
- **Place heat-resistant radiator reflectors between exterior walls and the radiators.**
- **Open draperies and shades on your south-facing windows during the day to allow the sunlight to enter your home. Close them at night to reduce the chill from cold windows.**
- **See Actions in Green Homes Challenge (more later)**

Water Heaters

Heat Pump Water Heater

Tankless Water Heater

- **Research & choose the best solution for you now! Be ready when you urgently need a new one!**

Heat Pump Water Heaters – right for you?

- Heat pump water heaters use **70%** less electricity to make the same hot water as a standard electric model.
- Heat pump on top draws heat from surrounding air to "pre-heat" tank water
- In your basement, they can also dehumidify
- **They do make noise, so consider location**

- **Tankless Water Heaters – right for you?**
  - Hot water on-demand
  - Use less space, but more complicated plumbing
  - Higher install cost
  - May need more than 1 for more simultaneous uses

Water Heaters – Pros/Cons

PROS		
Heat Pump WH	**Tankless WH**	**Standard Tank (Gas or Elec)**
10-15 year lifespan	>20 year lifespan	Lower cost (~$500)
Rebates & Fast ROI (4 yr)	Uses less space	Simpler plumbing; More simultaneous uses
Uses ambient air; operating cost ~27% less	Lower operating costs – up to 14-34% less (occupant #)	Higher operating costs
Tax Credits & Rebates	Tax Credits	Tax Credtos
CONS		
More costly (~$1000-3,000)	Higher cost ($500-2000 + Install ($500-1500)	Shortest lifespan (10-12 yr.)
More space (100 sq ft)	More complicated plumbing -	Standby heat loss
Makes noise	May need more than 1; 2 simultaneous uses	More expensive to operate

Multiple Sources (here's one)

Appliances

- **Are older ones better than new ones?**
  - **Older:** Built to last and do last longer; repairable; purchase of used/refurbished appliances conserves resources and is less expensive
  - **Newer:** More energy and water efficient; smarter features; rebates available; more expensive to buy, less expensive to operate; Don't last as long
- **If replacing with new, choose Energy Star**
  - Save on utility bills, save energy, conserve natural resources
- **Appliance Use Calculators**
  - Electric Appliances
  - Gas Appliances

Appliance Cost/Savings Comparisons

Some New Appliances Save More than others

Appliance	Expense per Year (20 Yrs Old)	Expense per Year (New)	Cost of New	Savings over 10 Years
Fridge	$368	$158	$800-2,000+	$2,100
Oven	$182	$79	$500+	$1,030
Freezer	$398	$157	$400+	$410
Dishwasher	$92	$68	$400-550+	$56
Clothes Washer	$82	$46	$600+	$560
Clothes Dryer	$132	$79	$700-900+	$560

Source (modified)

Appliance Incentives

- **Energy Star Appliance Rebate Finder:** (most $50) https://www.energystar.gov/rebate-finder
  - **Fridges/Freezers: $50**
  - **Dishwasher: $50**
  - **Clothes Dryer: $100**
  - **Clothes Washer: $50**
- **Fridge & Freezer Recycling:**
  - Dominion Pick-up with $20 Rebate (10+ yr. old and working)
  - Energy Star replacements can save you ~$150/yr.

Tax-Free Weekends to Buy Energy Star Appliances & WaterSense Products

Maryland: Presidents Day Weekend

- 5.3 sales tax waived on Energy Star Appliances less than $2,500
  - AC units, Heat Pumps, Boilers, Washers, Dryers, Fridges, Light Bulbs, Programmable Thermostats, and more!

Virginia: First Friday –> Sunday in August

- 6% sales tax waived for Energy Star & WaterSense
  - AC units, Washers, Dryers, Fridges, Dishwashers, Dehumidifiers, Ceiling Fans
  - Toilets, Faucets, Shower Heads, Irrigation Controllers, Light Bulbs, Ceiling Fans, Dehumidfiers
  - ***Reduced water use saves electricity too!***

VA Details

Appliances – Basic Tips

- **Electrify everything – We are on path to zero-carbon electricity**
  - Gas ranges are responsible for more than 10 percent of childhood asthma cases in the United States.
- **Don't keep that old fridge in the garage for beer!**
- **Replace Gas Ranges with Electric or Induction Cooktops**
  - Induction cooktops need magnetic pots; Pros & Cons
- **Wash 90% of laundry in cold water**
- **Turn water heater down from 140 degrees to 120**
- **Look for WaterSense label when purchasing toilets, faucets, showerheads, irrigation systems**

Electronics

GREEN HOMES CHALLENGE
FREDERICK COUNTY, MD

FrederickGreenChallenge.org

The average desktop PC wastes half of the energy it consumes and 75% of energy consumption occurs when no one is in front of it!

FREE

Set up Power Management on desktop computers and laptops

Read more Comments

$

Use a smart power strip

Read more Comments

FREE

Turn Off the TV When No One is Watching

Read more Comments

FREE

Unplug power adapters and small electronics/appliances when not in use

Read more Comments

FREE

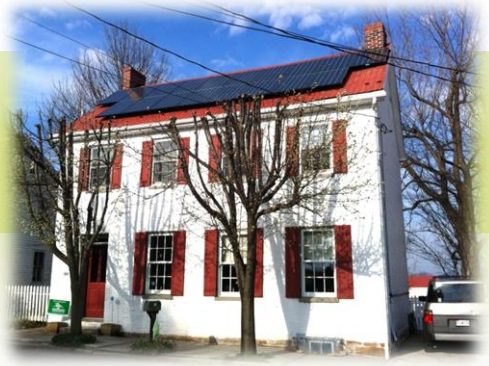
Turn off computer peripherals when not in use

Read more Comments

$

Use programmable timers

Read more Comments



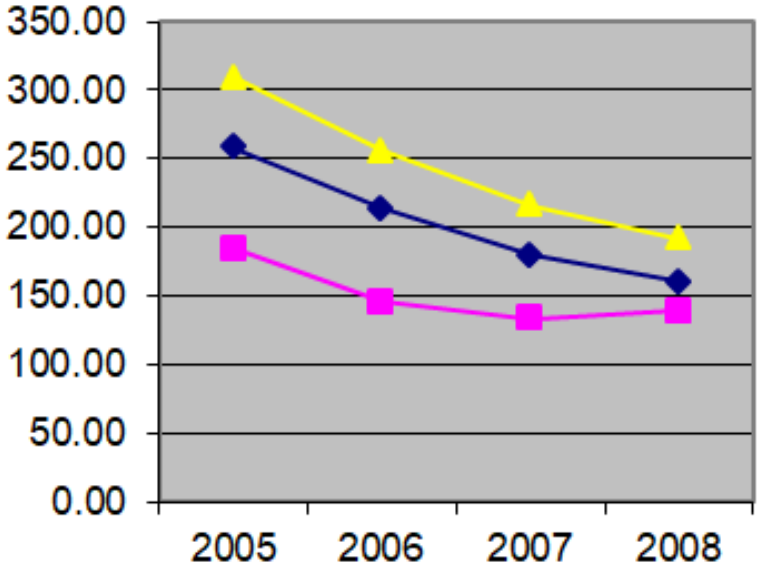
Does It Work?

Our 1850's Home 2005-2008 Example (pre-solar)

- Conducted Energy Audit – with blower door test
- $$ Sealed and insulated attic, basement, light and outlet fixtures
- $$ Sealed rim joist in basement (where walls meet foundation)
- Sealed around doors and old chimneys
- Insulated water heater in unheated basement
- Insulated all the hot water pipes in unheated basement
- $$ Replaced refrigerator & dishwasher with Energy Star models
- Set thermostat on hot water heater to 120 degrees
- Installed low-flow showerheads and dual flush adaptor
- Replaced all lightbulbs to CFLs/LEDs
- Used electric mower (some of the time)
- Wash everything in cold water; Line dry most laundry
- Shut off computer, printer and all electronics each night

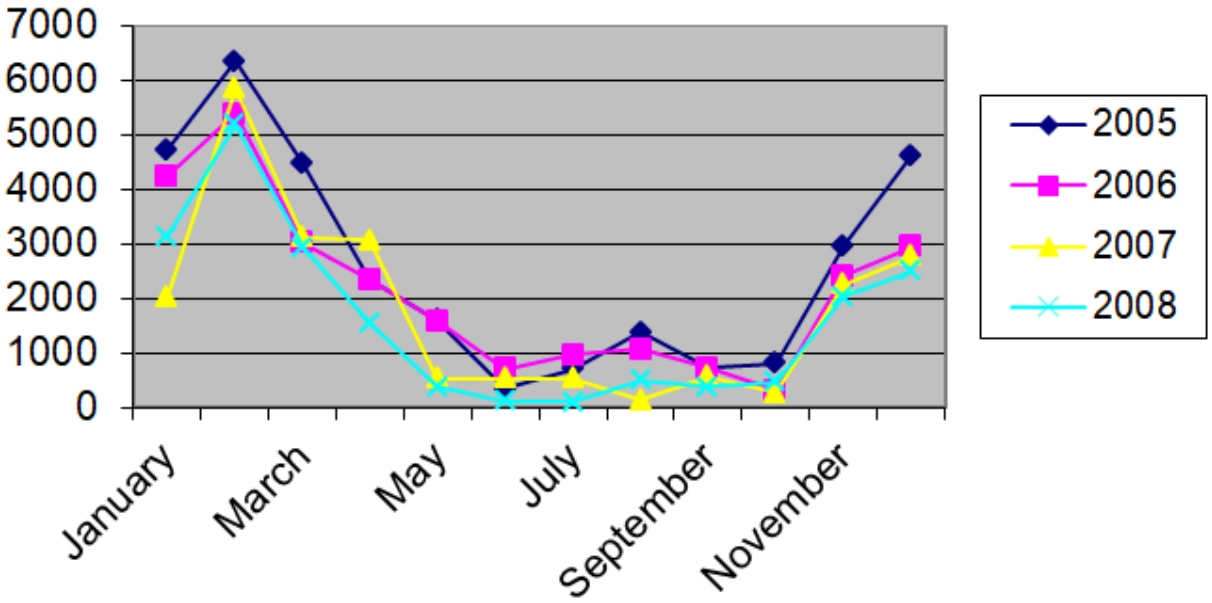
Does It Work?

Our 1850's Home 2005-2008 Example (pre-solar)



Maybe spent
~$2500 - $3000?

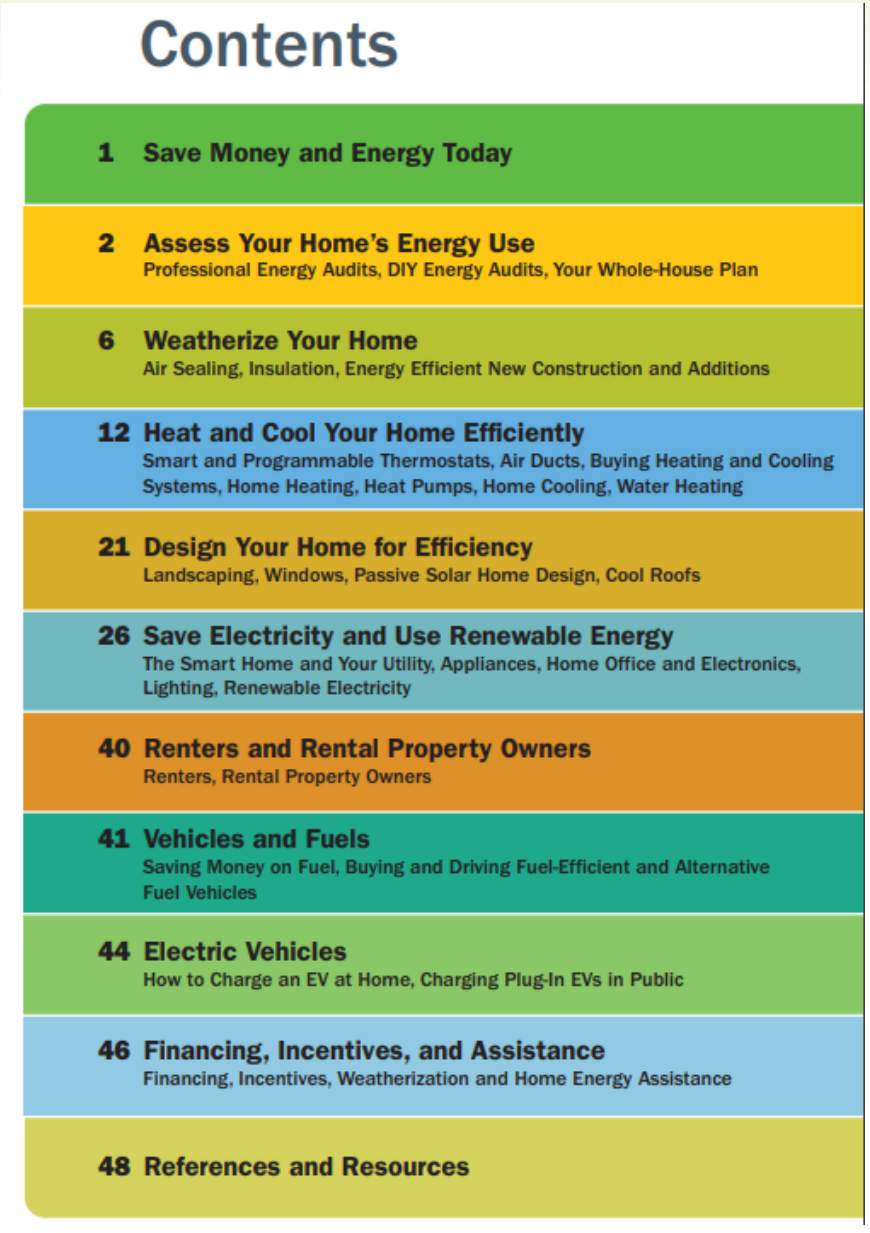
Saved ~$1,630 & 26,409
kWh in 3 years



~38% reduction in energy use in 2008 (compared to 2005)

More Resources

- **DOE ENERGY SAVERS GUIDE: Tips on Saving Money and Energy in Your Home (July 2022)**
  - Department of Energy Efficiency & Renewable Energy
  - 56 pages
  - Great coverage on all topics
  - Easy to Read



Contents

FrederickGreenChallenge.org

GREEN HOMES CHALLENGE
FREDERICK COUNTY, MARYLAND

A Tool for a Greener Lifestyle

The Green Homes Challenge

Challenge 1: Be a Power Saver

Save Our Energy, Bank Your Money!

Helps residents reduce energy consumption and utility bills

Challenge 2: Be a Green Leader

Green Your Lifestyle, Protect Our Resources!

Helps residents adopt environmentally-friendly practices

Challenge 3: Be a Renewable Star

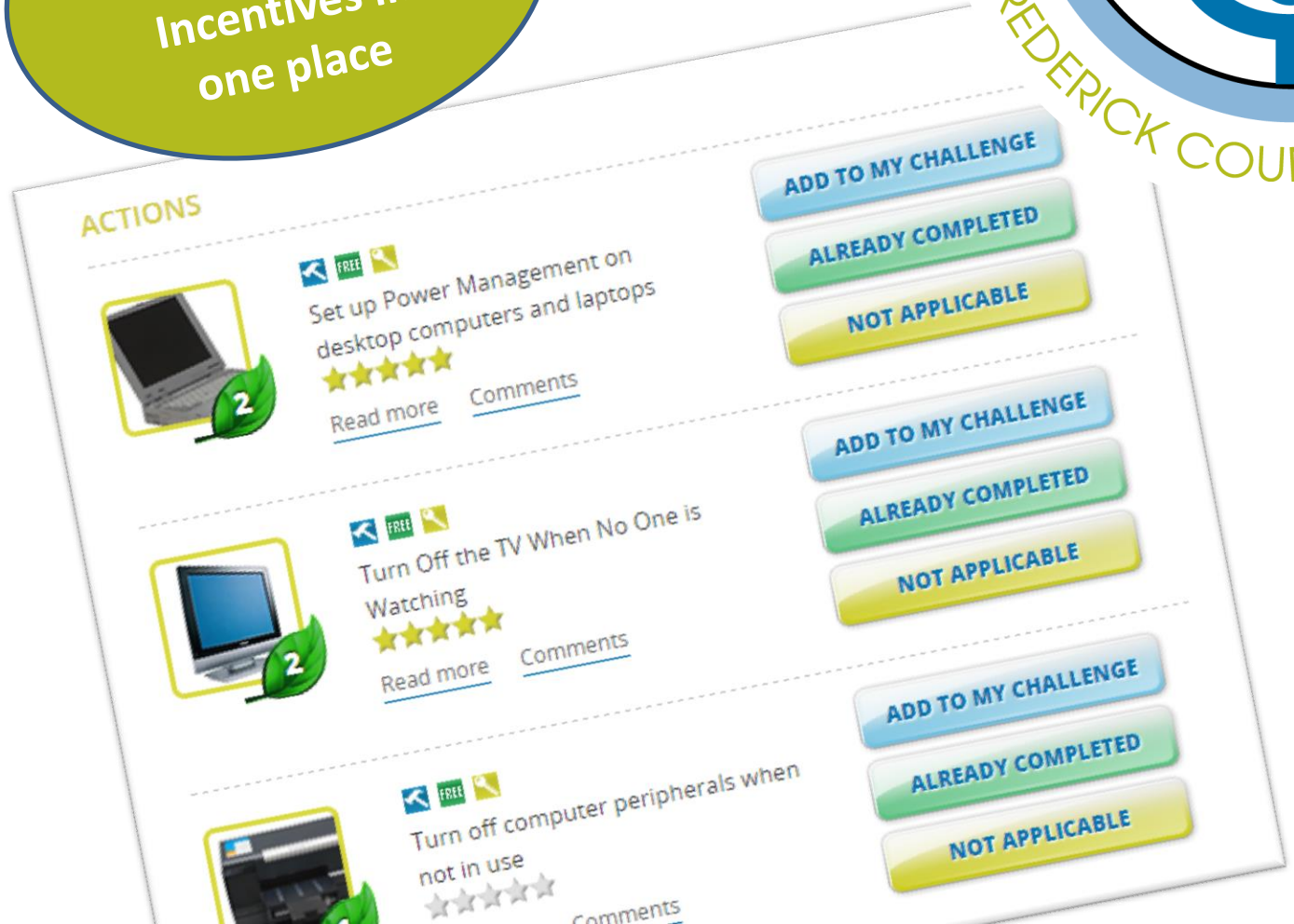
Renew Your Energy, Clear Our Air!

Helps residents use renewable energy

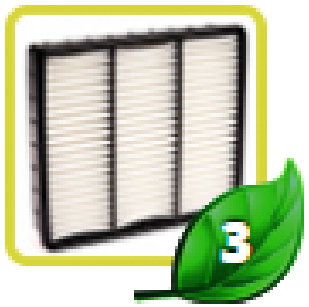
GREEN HOMES CHALLENGE

FREDERICK COUNTY, MARYLAND

160 Actions, Resources, Incentives in one place



FREDERICK COUNTY OFFICE OF SUSTAINABILITY & ENVIRONMENTAL RESOURCES



Change HVAC filters on a regular basis

Comments

ADD TO MY CHALLENGE

ALREADY COMPLETED

NOT APPLICABLE

Air conditioning and heating can account for half of a household's energy consumption. Changing your heating, ventilating, and air conditioning (HVAC) system filters regularly will allow the systems to operate efficiently, and will keep the indoor air clean. Use HEPA (High Efficiency Particulate Air) filters on your HVAC system so that you have maximum filtration in your home.

The frequency recommended for filter changes can vary depending on your household environment. Most homes should have a filter change every 90 days, but more frequent changes may be needed for homes with pets or during peak seasonal usage. A monthly visual check is enough to see if the filter is dirty and needs replacement. Learn more about changing your filter from the Service Experts guide or Energy Star® guide.

Collapse

Workshops & Green Ambassadors

Online Interactive Site

160 Actions, Resources, Incentives in one place

Earn Points, Medals, & Certify

ow are the medals you can ear
Renewable Star actions.

Biggest Saver

Super Sealer

Fredrick County, Maryland
Green Homes Challenge

CERTIFICATE

This is to certify that

THE COTTINGHAM-ORR HOUSEHOLD

has been certified in the Frederick County Maryland

POWER SAVER

challenge.

Total certification points earned:

117

January 23, 2014

Frederick County Green Homes Challenge
www.frederickgreenchallenge.org

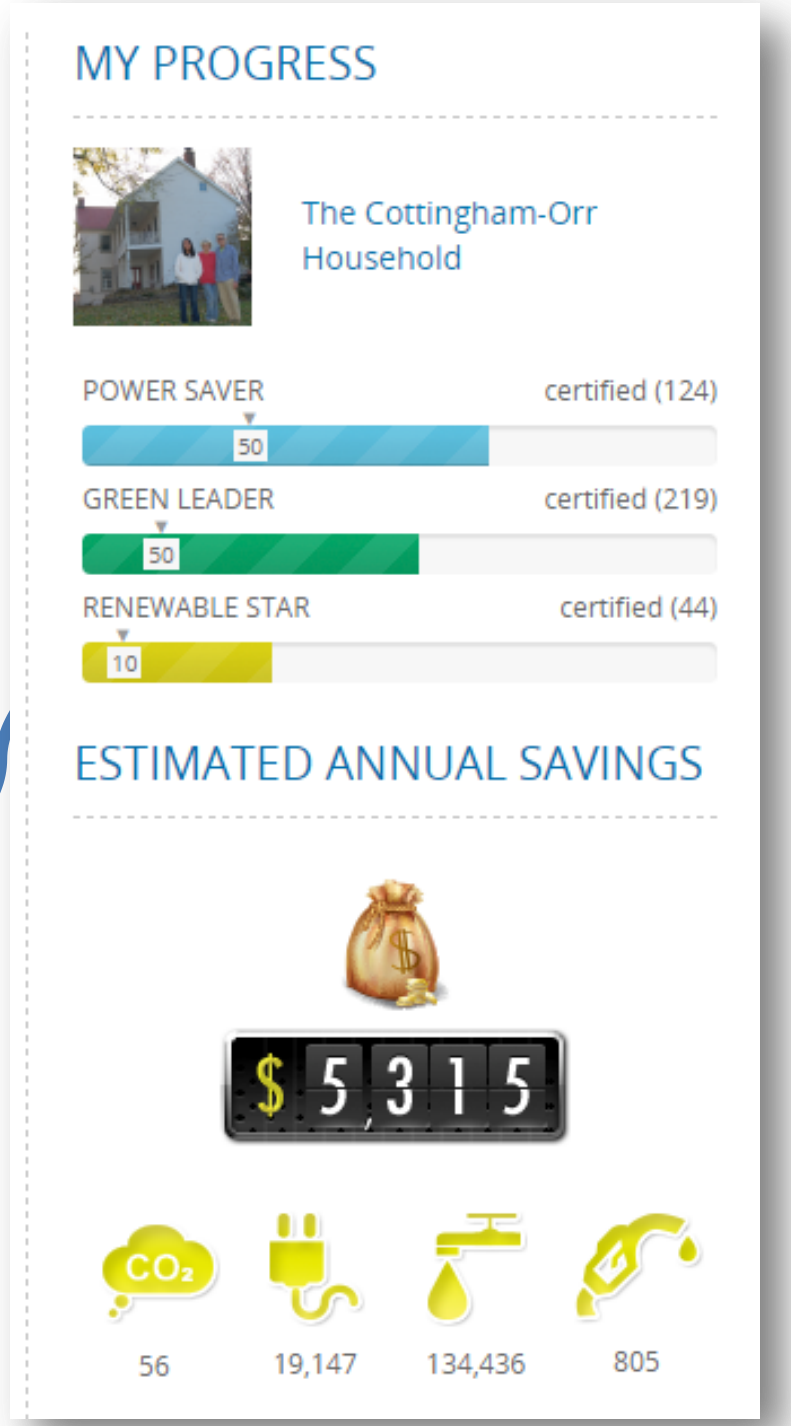
Workshops & Green Ambassadors

Online Interactive Site

160 Actions, Resources, Incentives in one place

Earn Points, Medals & Certify

See Impact of Actions



FREDERICK COUNTY OFFICE OF SUSTAINABILITY & ENVIRONMENTAL RESOURCES

Workshops & Green Ambassadors

Online Interactive Site

160 Actions, Resources, Incentives in one place

Earn Points, Medals, & Certify

See Impact of Actions

Join Green Teams

TEAM OSER — Municipal & Custom Online Green Teams

Members	5 participants

1. Green Homes Challenge (leader)
Frederick, MD

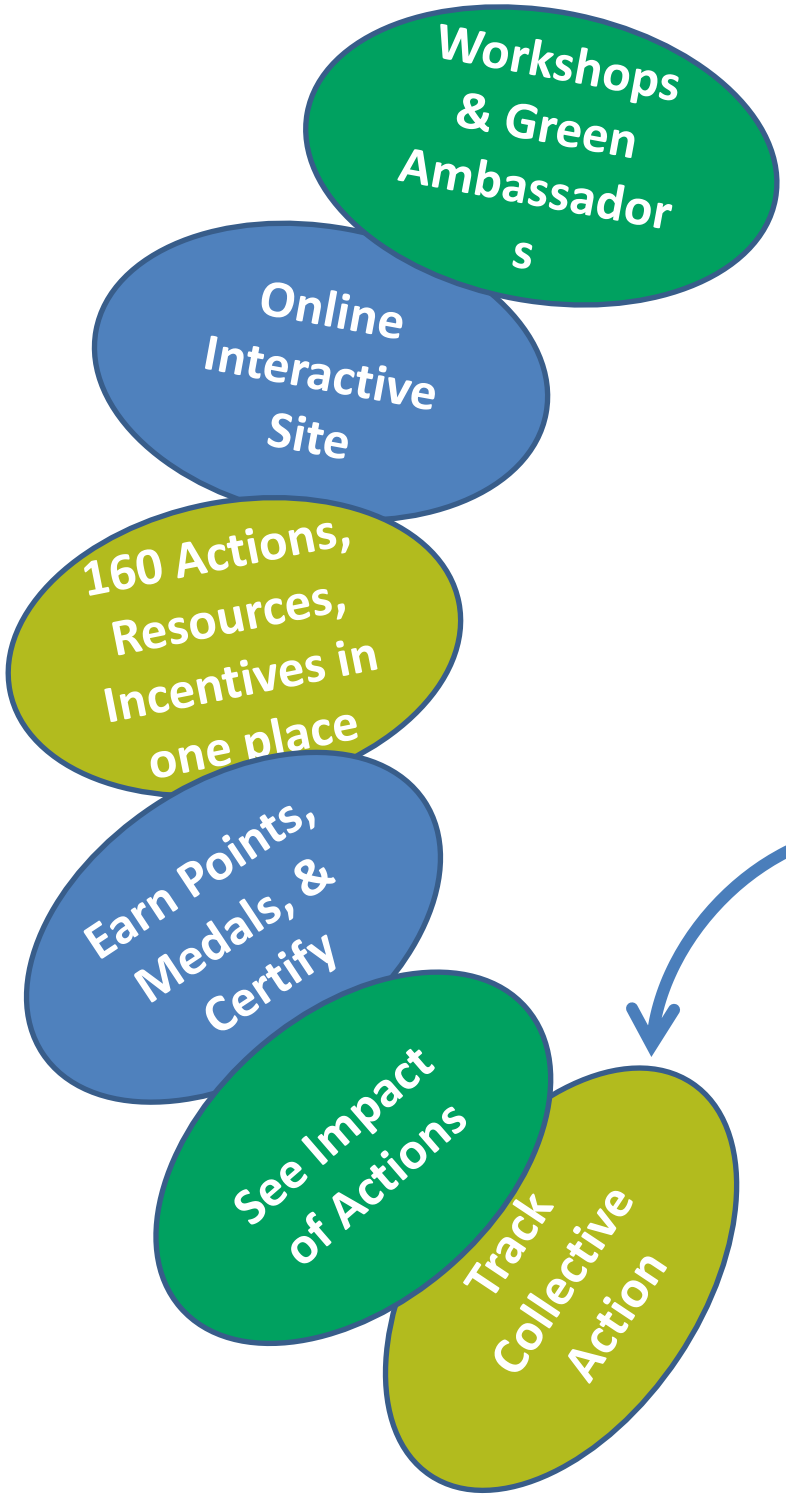
2. Harder Family
Middletown, MD

3. Moore-Dellyannis
,

4. The Cottingham-Orr Household
Burkittsville, MD

5. The Cliber Household
New Market, MD

Actions taken	369
Total CO_2 savings	126 tons
Total dollar savings	$14,714



Municipal Team Listings

3. Urbana
68 members, 2,104 actions, 929 tons CO_2 averted, $95,951 dollar savings

4. Thurmont
61 members, 2,148 actions, 704 tons CO_2 averted, $73,057 dollar savings

5. Middletown
42 members, 1,897 actions, 759 tons CO_2 averted, $72,876 dollar savings

6. Walkersville
40 members, 1,285 actions, 485 tons CO_2 averted, $50,161 dollar savings

Green Team Action & Impact Details

Municipal Team Details

MIDDLETOWN

Members	47 participants
Actions taken	2018
Total tons of CO_2 averted	829 tons
Estimated expenses avoided	$79,033
Total kilowatt-hours of electricity saved	511,679 kilowatt-hours
Ranking	5 out of 36

Green Team Participant Details

The Nelsons

POWER SAVER — certified (99)

GREEN LEADER — certified (100)

RENEWABLE STAR — certified (57)

MEDALS

- Trailblazer
- Smart Heater/Cooler
- Switch Flipper
- Powerware Partier
- Trash Compactor
- Green Eater
- Green Cleaner
- Indoor Water Conservation
- Outdoor Water Conservation
- Paper Saver
- Green Ambassador

ESTIMATED ANNUAL SAVINGS

$ 3074

CO_2			
47	14833	148425	334

Tools, Incentives & Programs to $ave & Go Green at Home

Questions & Discussion

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240.529.3177