



GREEN HOMEOWNERS UNITED



Patrick
Green Homeowner
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Residential Opportunities in the Inflation Reduction Act

Clean Energy Funding Series, UW-Extension

May 23, 2023

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Green Homeowners United



GREEN JOBS ACCELERATOR
Employ more people of color in family-supporting green jobs.





U.S. DEPARTMENT OF ENERGY
Home Energy Score
CERTIFIED ASSESSOR



WE ARE LiUNA!
Feel the Power.



Wisconsin Sustainable Business Council Member





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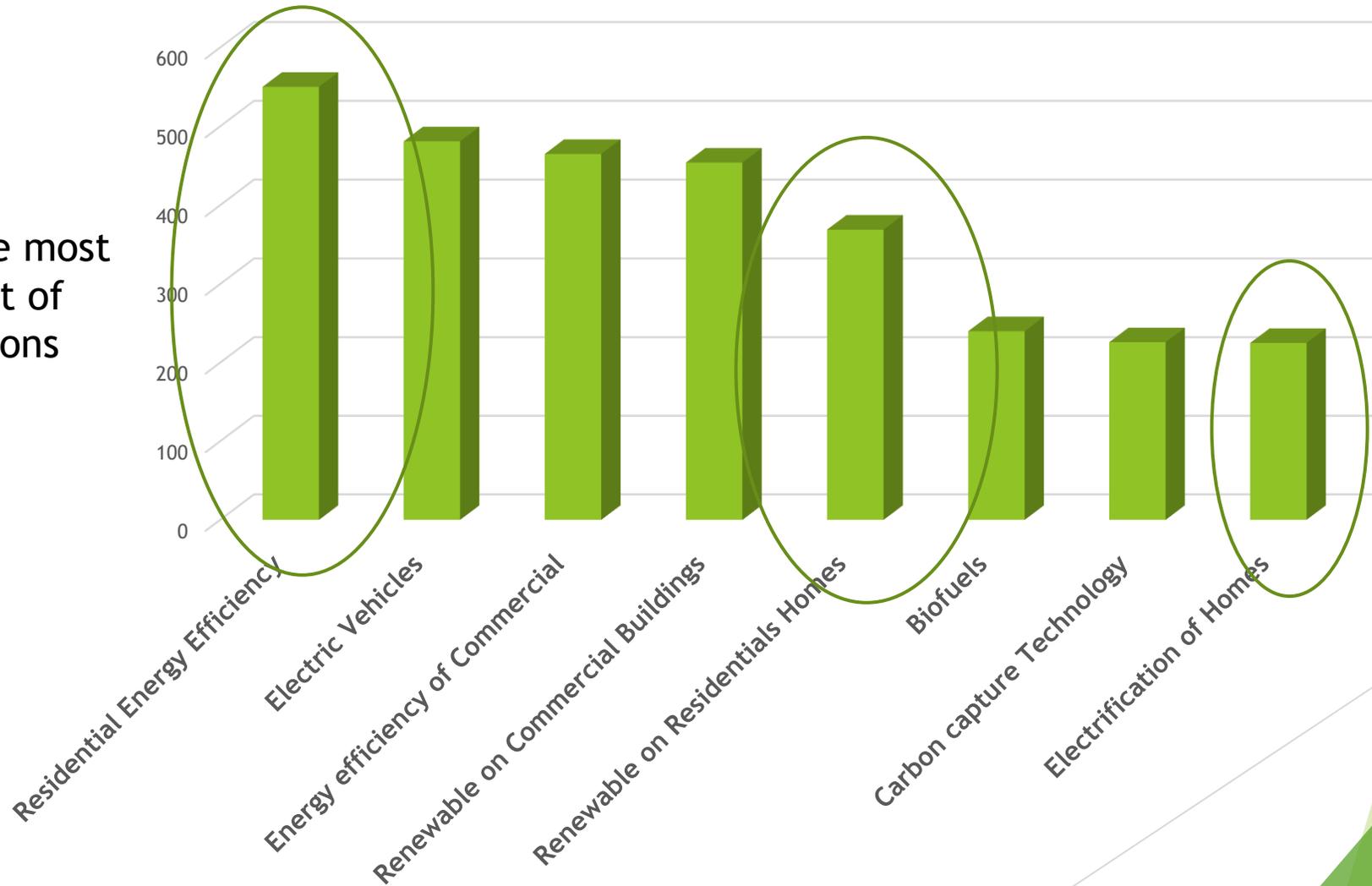
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Residential Energy Efficiency is Largest Source of CO2 Reduction Potential

Metric Tons of CO2



Homes are the most
important part of
cutting emissions

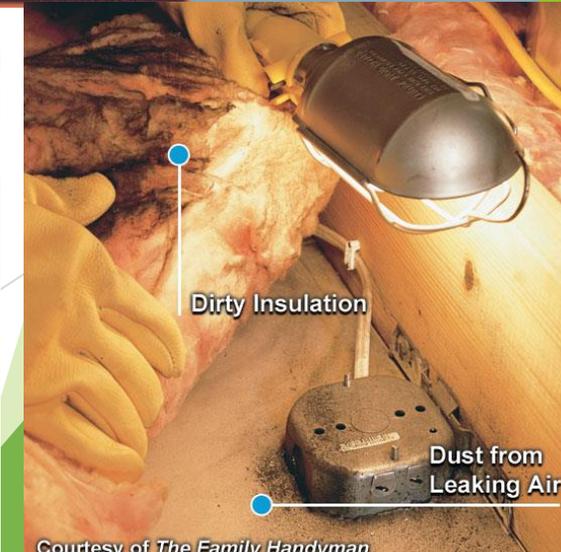
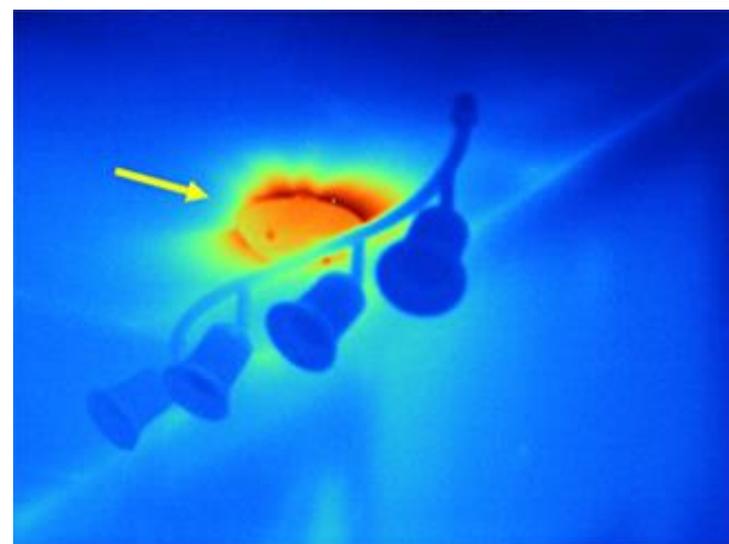
What Research tells us about WI



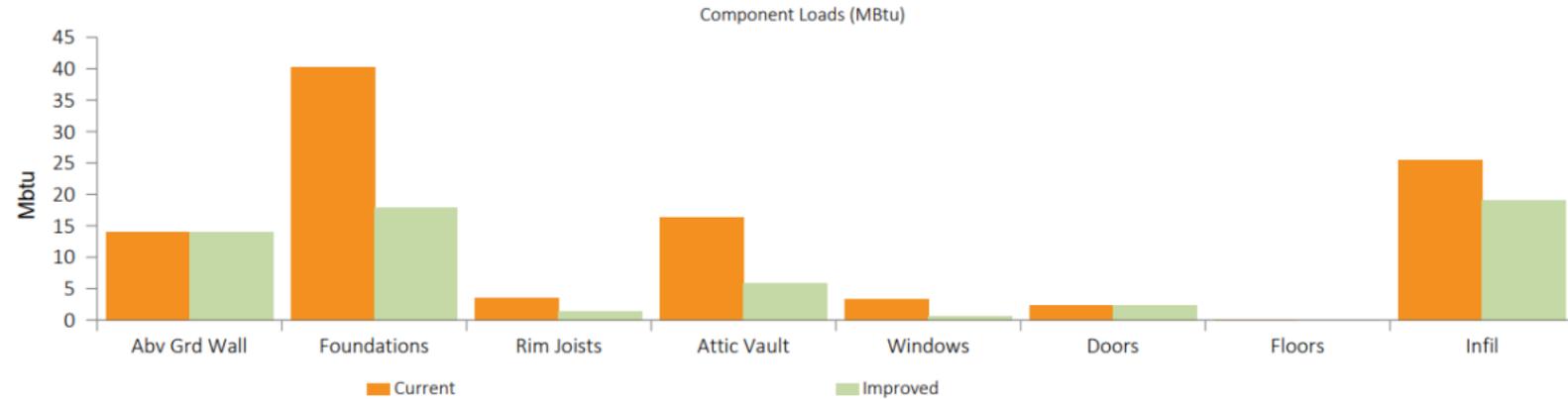
- ▶ From Focus on Energy Cadmus 2021 potential study
 - ▶ *The residential sector benefits the greatest from increased program funding...Under the current funding allocation policy, available budget is not sufficient to capture a proportionate amount of cost-effective residential savings compared to nonresidential sectors. Therefore, increases in funding lead to significant increases in the residential potential as more budget is available to attain cost-effective savings.*
 - ▶ The single-family market natural gas economic savings potential is more than commercial, governmental, agricultural, industrial and multifamily *combined!* And a higher electric economic savings potential than any other industry
- ▶ It means homes are a HUGE area to cut carbon emissions and save money in WI!

What's in an Energy Assessment

- ▶ Sometimes called “energy audits”
- ▶ We look at insulation levels, identify air leaks, check mechanical efficiencies, check solar feasibility, examine windows and recommend strategies to fix them.
- ▶ We often use a special calibrated fan called a “blower door” to measure how drafty a home is, and show you where the leaks are.
- ▶ We'll provide you a list of how much each improvement is expected to save you.
- ▶ Average \$300-\$800. And they now can unlock special rebates & tax credits!



HOMES Rebates



- ▶ If you get an energy assessment, you can receive rebates off improvements as follows thanks to the Inflation Reduction Act:
 - ▶ For improvements that reduce energy use by 20%, you can get \$2,000 off
 - ▶ Or \$4,000 off if homeowner is <80% area median income!
 - ▶ For improvements that reduce energy use by 35%, you can get \$4,000 off
 - ▶ Or \$8,000 off if homeowner is <80% area median income!
- ▶ **Rebates MAY be retroactive** (state by state), but not likely to be available until end of 2023/early 2024. And they ARE expected to stack with Focus on Energy rebates and federal tax credits



AUDIT

North 1st Street , Milwaukee, WI 53212

Recommendations

These are items that will show up with a cost and savings on the report. Change their status to 'Noted' or 'Declined' if you don't want to recommend them.

STATUS

⋮ Thermostat Set Points Thermostat	\$92
⋮ Upgrade Lighting Lighting	\$92
⋮ Insulate Attic Attic	\$36
⋮ Insulate Basement Basement	\$262
⋮ Seal Air Leaks Air Leakage	\$184
⋮ Add Tank or Pipe Wrap Tank or Pipe Wrap	\$7

METRIC	BASELINE	IMPROVED	SAVED
Electric Energy Usage kWh/year	10,287	9,113	1,174
Total Energy Usage MMBtu/year	193.26	121.68	71.58
Fuel Energy Cost \$/year	\$ 1,185	\$ 679	\$ 506
Electric Energy Cost \$/year	\$ 1,459	\$ 1,292	\$ 167
Total Energy Cost \$/year	\$ 2,644	\$ 1,971	\$ 673
CO2 Production Tons/year	14.7	10.4	4.3
Payback years			17
Total Energy Savings			37%
Total Carbon Savings			29%



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- ▶ For years low-income weatherization and state utility programs have focused on incentivizing contractors to do attics. Now we have tons of homes that look like this.
- ▶ We'll save more money and energy covering the bottom half!



- ▶ Window salesperson: “*upgrading your windows will save 50% on your heating bills!*”
- ▶ No, they won’t.



“Electrification” Rebate

- ▶ Designed to get us off of natural gas & propane in favor of electric
- ▶ Up to \$8,000 for a “heat pump” to replace an air conditioner. (*Imagine an air conditioner that can also heat the home too!*)
- ▶ Up to \$1,750 for a “heat pump water heater” pictured above
- ▶ More for electrical re-wiring, heat pump dryers, electric ovens and more
- ▶ NOT retroactive! Not available until likely early 2024!
- ▶ NOTE: in many parts of the country (ex: Midwest), at today’s electric vs gas rates, it could cost more to have a heat pump than a good gas furnace, but would be significantly less energy use and could run off of renewable power!



Rebates: Income based eligibility

	80% of Area Median Income	150% AMI
1 person	\$47,280	\$88,650
2 people	\$54,080	\$101,400
3 people	\$60,800	\$114,000
4 people	\$67,520	\$126,600
5 people	\$72,960	\$136,800
6 people	\$78,400	\$147,000

Note, amounts adjust annually

50% of heat pump cost, up to \$8,000
50% of insulation/HVAC/air-sealing/etc, up to \$4,000

100% of heat pump cost, up to \$8,000,
80% of insulation/HVAC/air-sealing/etc,
up to \$8,000

While there is an income limit for electrification rebate, there isn't for the HOMES rebate

Energy Efficiency Tax Credit

- ▶ There was a one-time minor tax credit for energy efficiency improvements (lifetime cap: \$500). It has now been increased and made an annual tax credit!
- ▶ For the next ten years, 30% of what you pay for energy efficiency improvements, to a max of a \$1,200 credit
 - ▶ Unless heat pump or HP water heater, then it is \$2000 max
 - ▶ Windows/furnace/AC/boiler are now capped at \$600 max per year
 - ▶ Insulation/air-sealing materials can be \$1,200/year
- ▶ Energy assessments can now get an up to \$150 federal tax credit!



Examples

- ▶ Example 1
- ▶ A family of 4 who earns \$60,000 gets an energy assessment of the home. The energy assessor shows that insulation in the attic and air sealing the home, insulating the basement and upgrading the furnace would reduce the utility bill by 35%
 - ▶ They would get \$8,000 off those improvements immediately from IRA, and between \$1,350-\$2,025 off from Focus on Energy
 - ▶ They could get a new “heat pump” to replace an old AC unit \$8,000 off
 - ▶ They could also qualify for a tax credit of ~\$2,000 for a heat pump, and up to \$1,200 for insulation

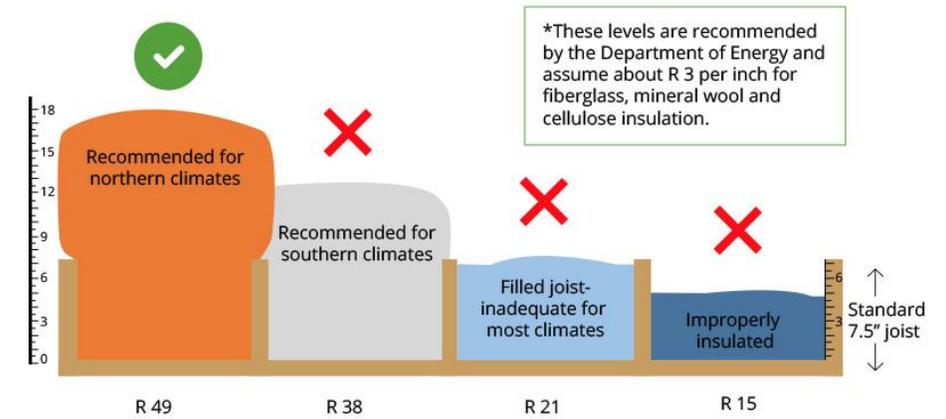


Examples

▶ Example 2

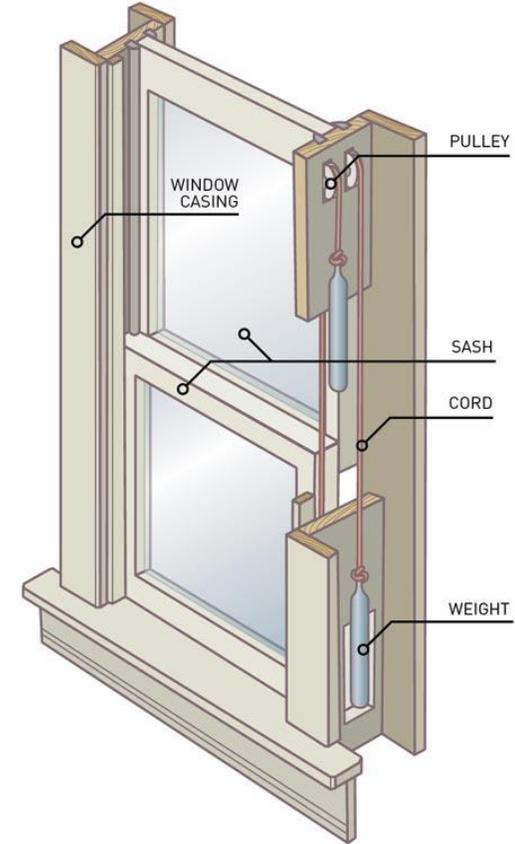
- ▶ A family of 2 who earns \$90,000 pays to add insulation and install just 5 windows but doesn't get an energy assessment.
 - ▶ They would qualify for an up to \$1,200 federal tax credit

Is your attic adequately insulated?



Examples

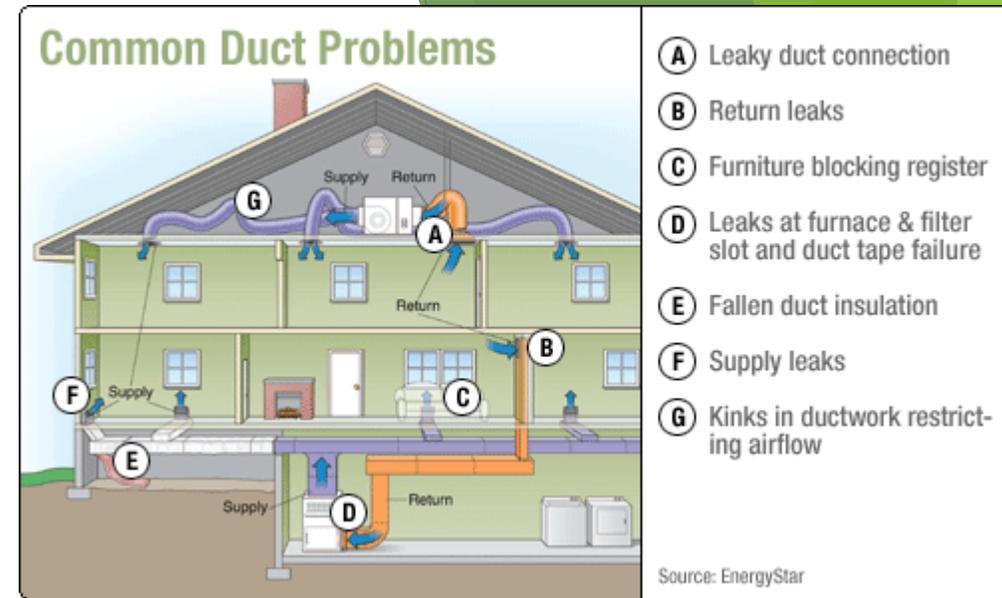
- ▶ Example 3
- ▶ A homeowner earning \$60,000 wants to replace 20 windows in the home.
 - ▶ If she/he replaced ~5x a year, they'd get \$600 federal tax credit per year, or \$3,200 in total federal tax credit
 - ▶ If she/he replaced them all in one year, and got an energy assessment showing doing so (or doing that with other small improvements) would save 20% on their annual utility bills, she/he would receive rebate of \$2,000 plus the \$600 tax credit



Examples

► Example 4

- An owner of a 6-unit apartment building with tenants of not-low-incomes gets an energy assessment and wants to replace furnace(s), insulate the attic and the basement to reduce utility bills by 35%
 - They would get \$4,000 per unit in instant rebates, or \$24,000 off
 - If the apartment has more low/moderate income tenants, the rebate amount is then \$8,000 per unit, or \$48,000 total



Preparing: Your Home



- ▶ What you can do to prepare
 - ▶ You'll have 10 years to use the \$1,200 annual energy efficiency federal tax credit. Figure out your plan to do some upgrades each year
 - ▶ We recommend attic insulation and/or a few windows this year, you can get the tax credits for 2023 (and Focus rebate for attic), and these are unlikely to achieve 20%+ reductions on their own.
 - ▶ Get an energy assessment to find out how your home can best achieve a 20%+ energy reduction.
 - ▶ The assessor will need to use a BPI-2400 modeling program like Optimiser or Snuggpro
 - ▶ Don't upgrade now assuming you'll get the rebates later, but upgrading now isn't a bad thing, you can still likely use rebates on other improvements later!

Preparing: Workforce

- ▶ Thanks to these funds, we are going to need armies of...
 - ▶ Energy assessors to look at homes
 - ▶ *(every home is eligible for tax credit now for getting an energy assessment)*
 - ▶ Insulation & air-sealing professionals to seal homes and apartments
 - ▶ *(HOMES rebate will mostly help insulation projects)*
 - ▶ HVAC techs to install heat pumps, and plumbers to replace electric or propane water heaters with heat pump water heaters
 - ▶ *(HEERA rebates, & federal tax credit is higher)*



What About Financing?



- ▶ These rebates and tax credits are great, but they usually won't cover 100% of the cost of improvements. Financing can help you spread the cost out of larger projects to do them now, when we really need to cut carbon emissions!

Examples of options:		Who offers?
<u>Green Mortgages:</u>	many banks offer <i>green mortgages</i> to finance energy upgrades up to 30 years when you buy or refinance a home	More than 10 lenders in WI, including Associated Bank, Merchants' Bank, Tri City, GreenPenny, etc.
<u>Short term</u>	Some contractors help with 12-24 month low or 0% interest financing to spread the cost out a bit	We do, but others may too
<u>Green home improvement loans</u>	Some lenders offer 5-15 year home improvement loans (similar to home equity)	Ex: GreenPenny solar and/or green equity loan Summit credit Union Me2 loan
<u>"Green Banks"</u>	Wisconsin is exploring a publicly administered revolving green loan fund from IRA and Infrastructure funds	TBD, Governor Evers launched a commission on April 19 th to explore



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