



John Ackerly, President



Leveraging the Cheapest
Fuel: Cord wood and
pellets

Alliance for Green Heat Goals

- ✓ 501c3 nonprofit funded by foundations & grants
- ✓ Voice for wood heat consumers in Wash. DC
- ✓ Work for more incentives for the cleanest & most efficient biomass heaters
- ✓ Call on government to provide R&D funding for ultra-clean “next generation” stoves
- ✓ Believe in more regulation of wood burning
 - ✓ No new installs of unqualified outdoor boilers
 - ✓ No new installs of uncertified stoves in urban areas

In association with



A coalition of individuals, businesses and organizations demonstrating that plant material can be used to meet local energy needs while reducing greenhouse gas emissions, creating jobs and contributing to state, regional and national energy goals.

www.newyorkbiomass.org

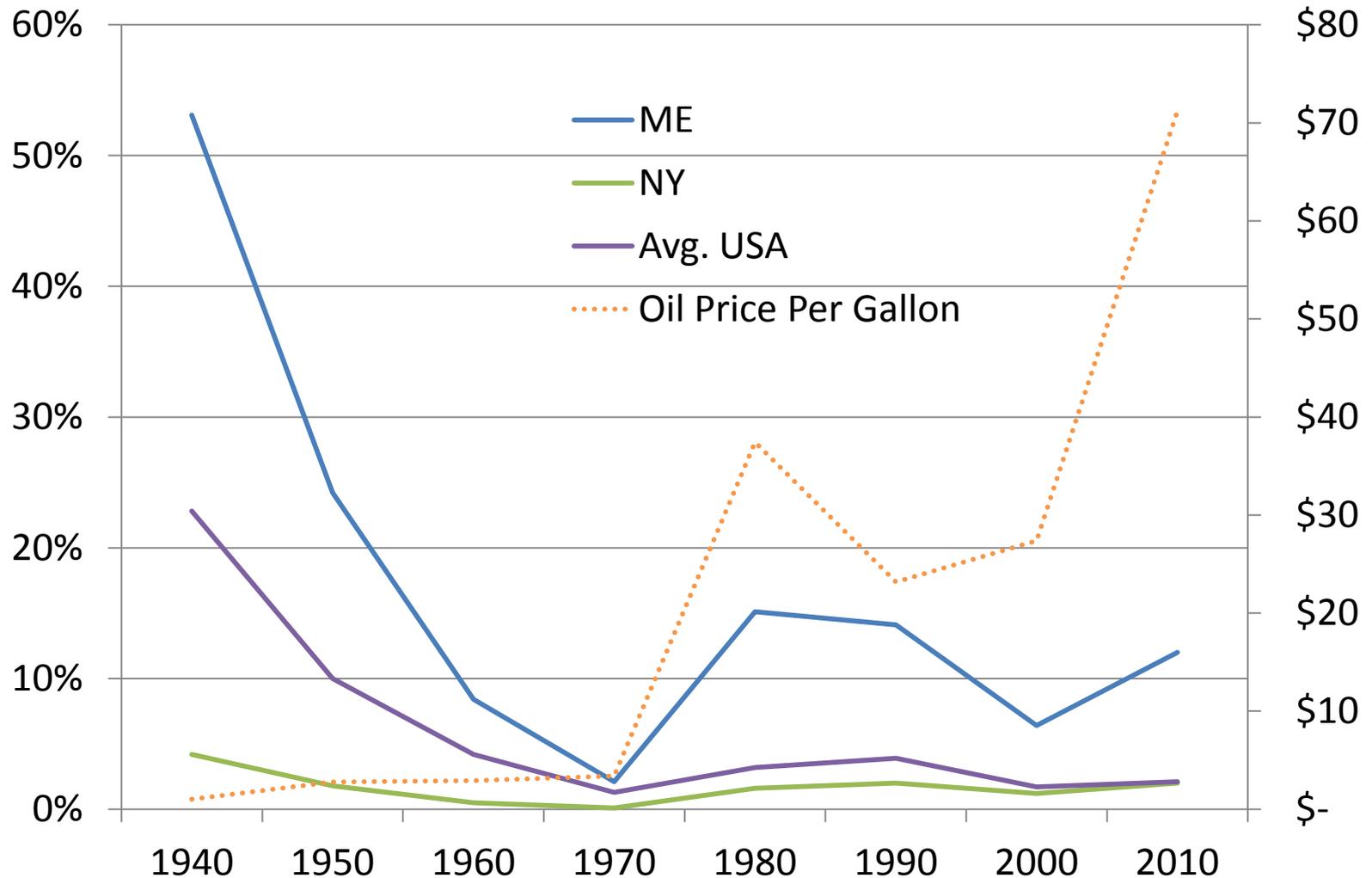
Troy, NY: World Center of Stove Factories, 1830

Nearly 200 wood stove factories in Troy, alone



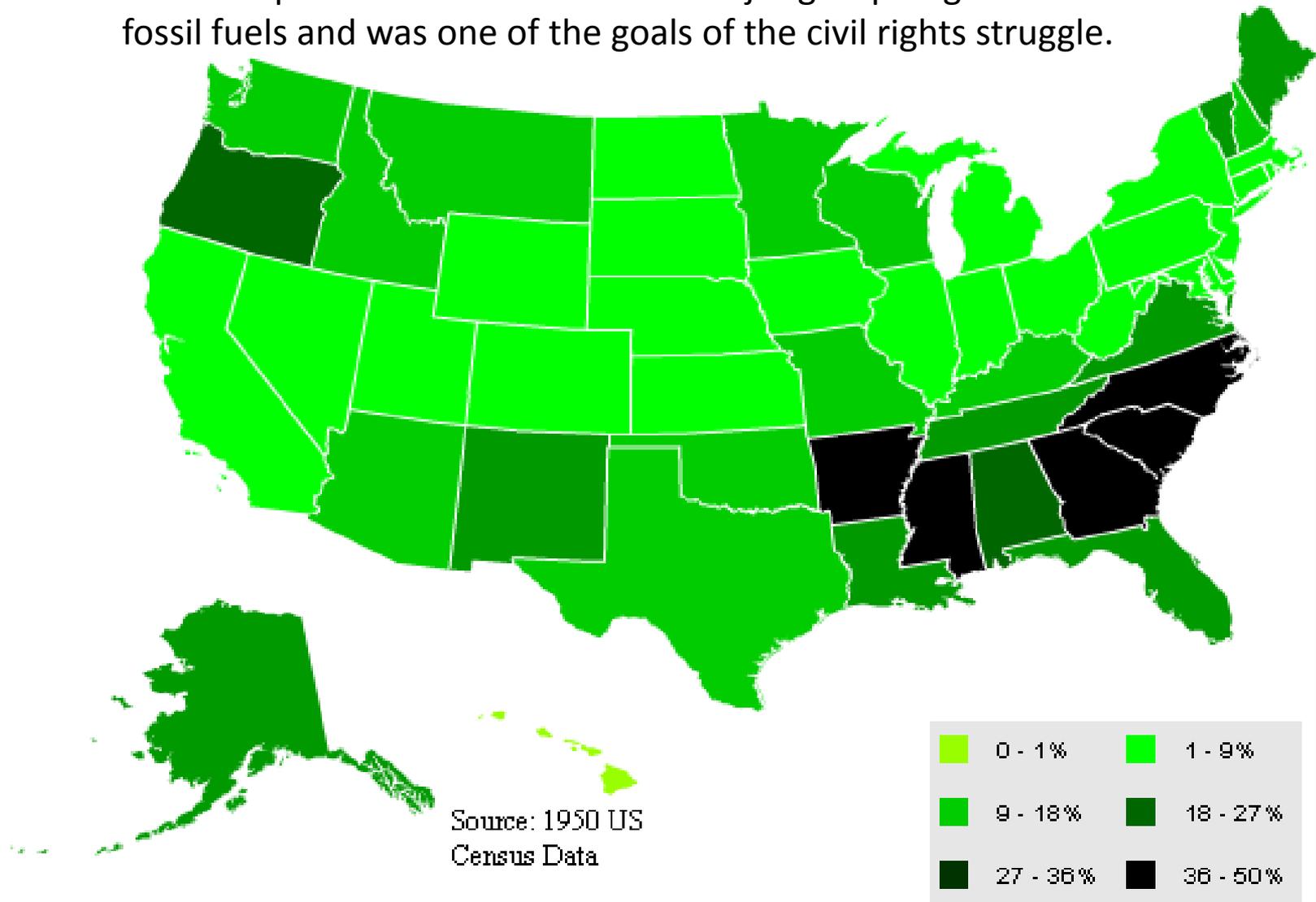
Per Capita Primary Heating with Wood

* 2.3% of US homes have primary wood heat. Another 8% have secondary wood heat. (U.S. Census)



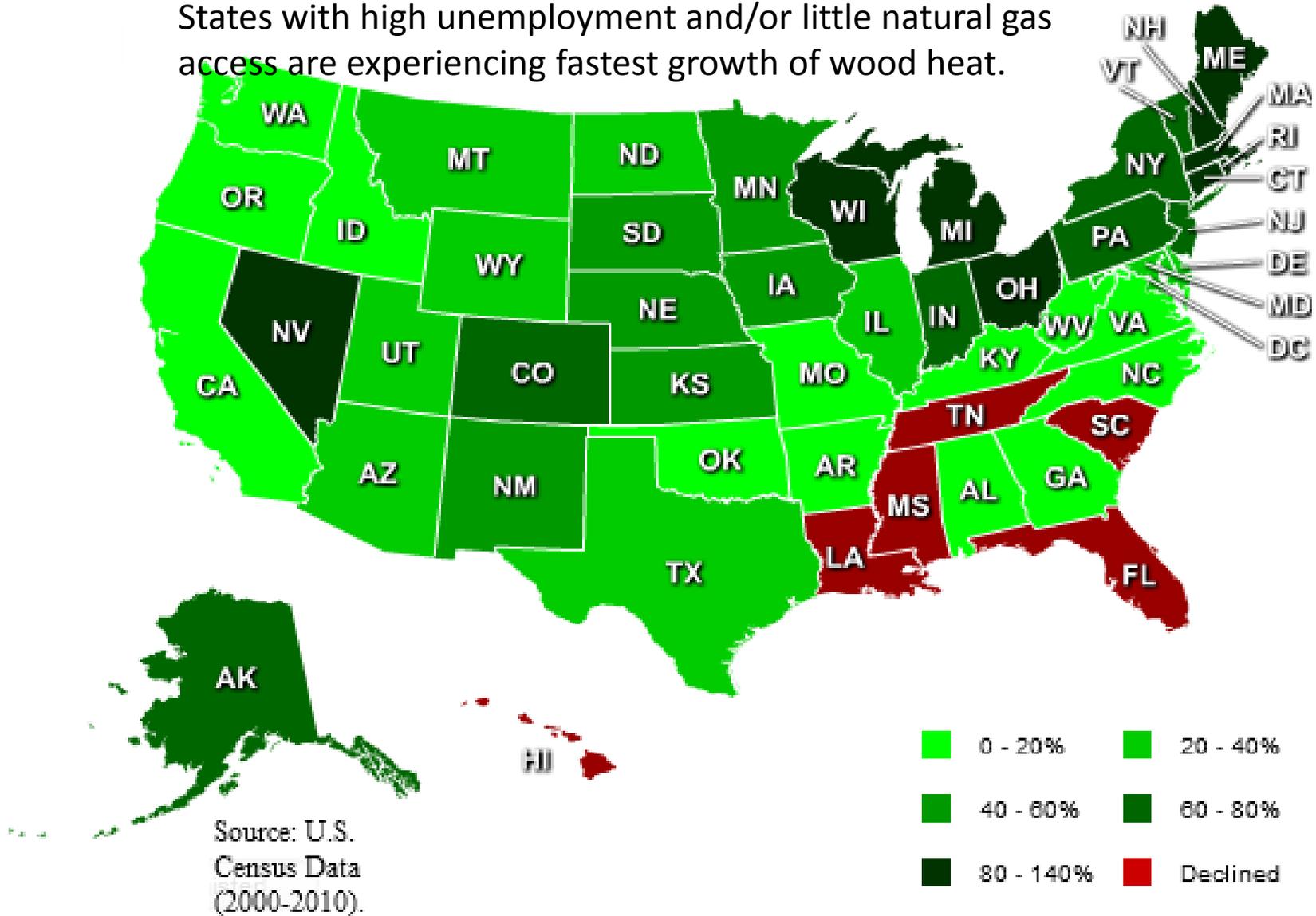
Primary Wood Heat Households Per Capita (1950)

The rural poor in the south was last major group to get access to fossil fuels and was one of the goals of the civil rights struggle.



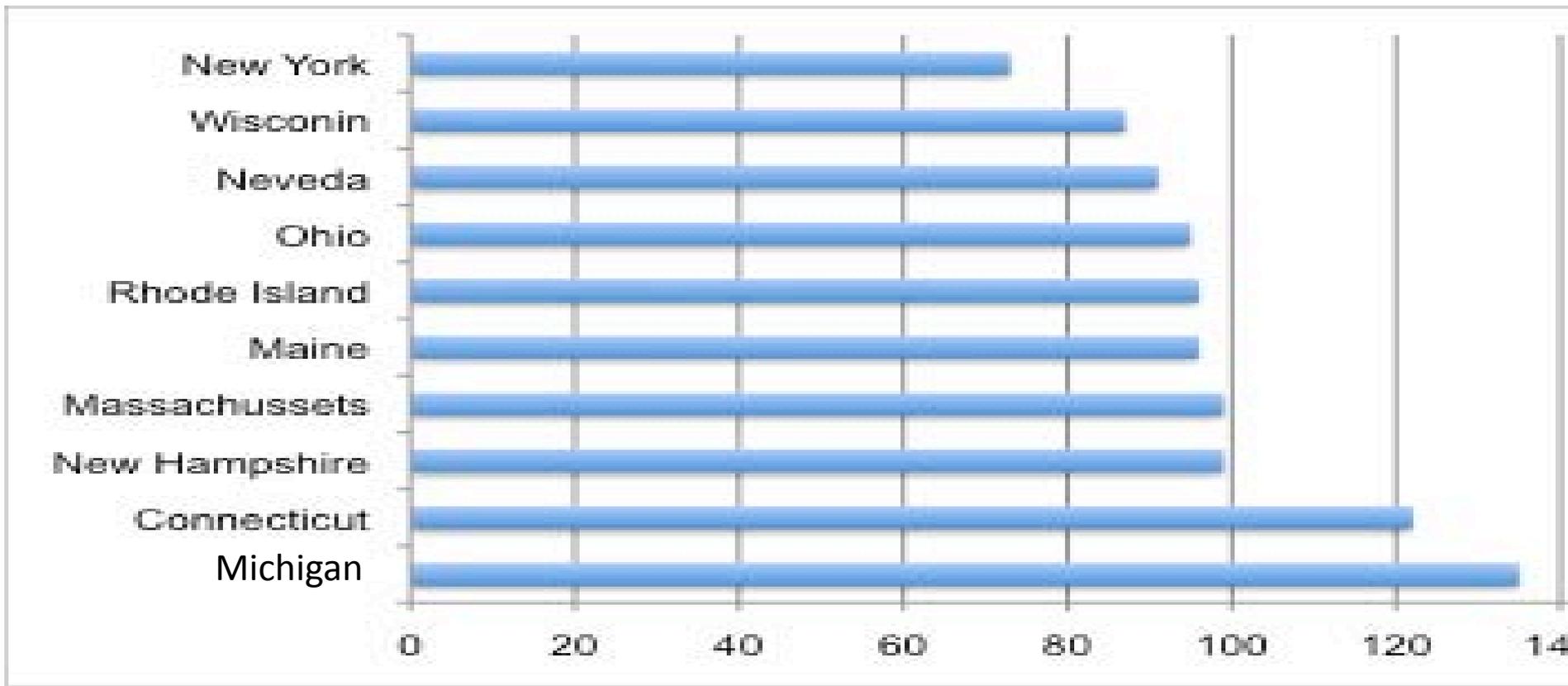
Rise of Residential Wood Heat in U.S. 2000-2010

States with high unemployment and/or little natural gas access are experiencing fastest growth of wood heat.



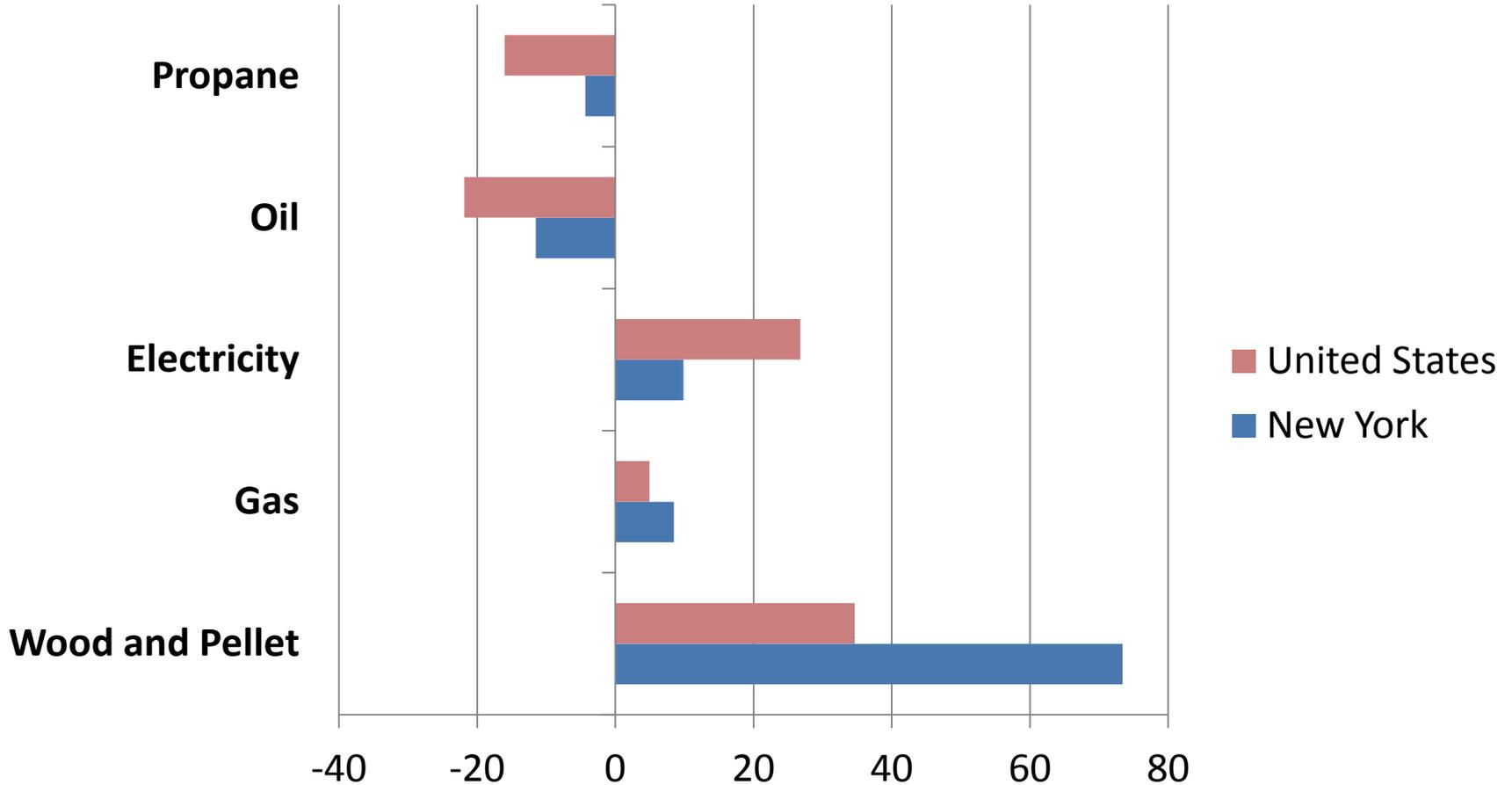
Top 10 States with Fastest Growth in Primary Wood Heating (US Census)

Some of most populated states – NY, Ohio, Michigan & Mass. are experiencing highest wood heat growth. However, this does not mean corresponding growth in clean burning appliances. Many old, uncertified stoves are coming back into use.



NY Heating Fuel Change % (2000-2010)

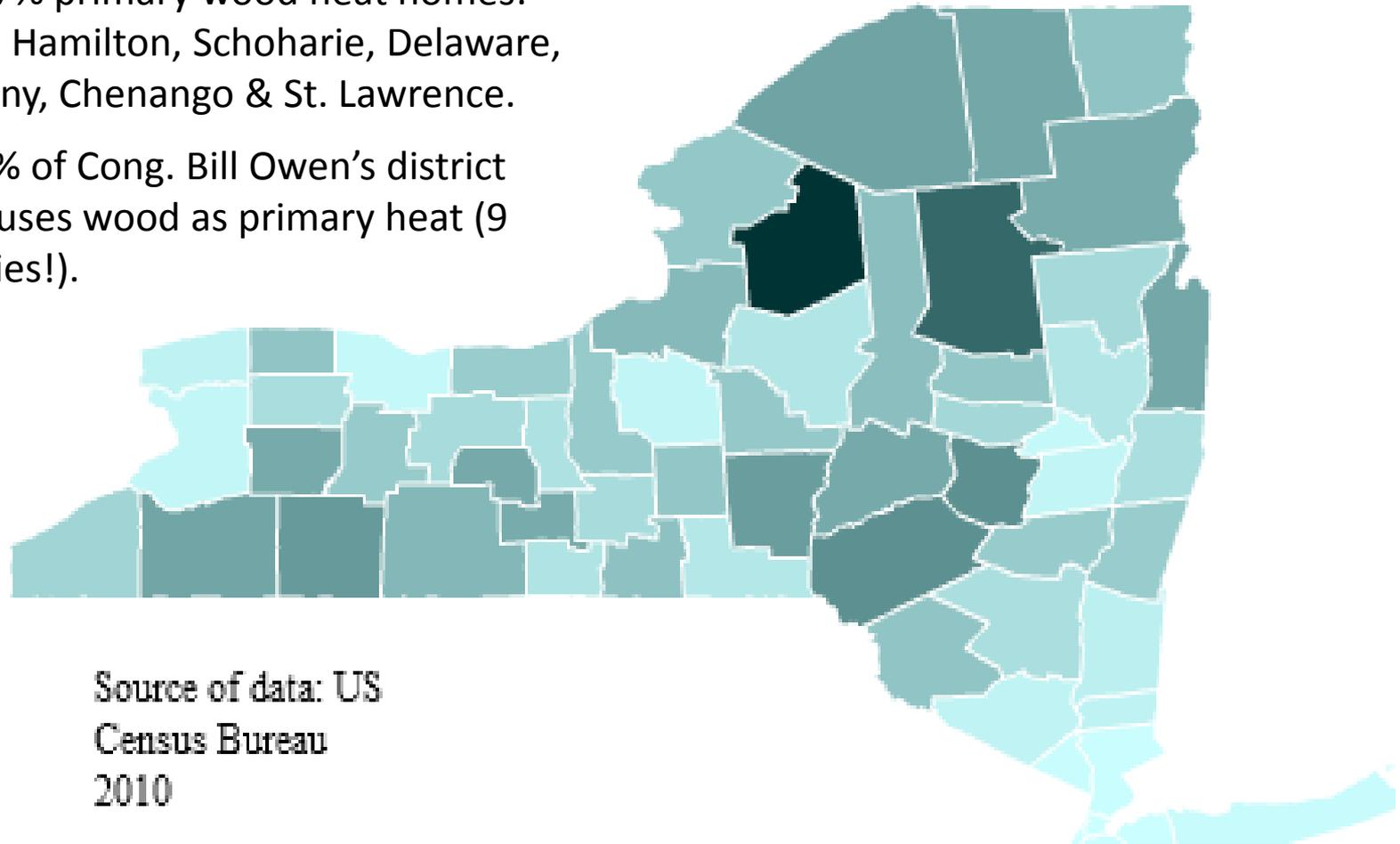
□ Primary wood heating in NY is double the national growth rate (US Census).



Per capita wood heater users

□ Seven counties have between 12% and 27% primary wood heat homes: Lewis, Hamilton, Schoharie, Delaware, Allegany, Chenango & St. Lawrence.

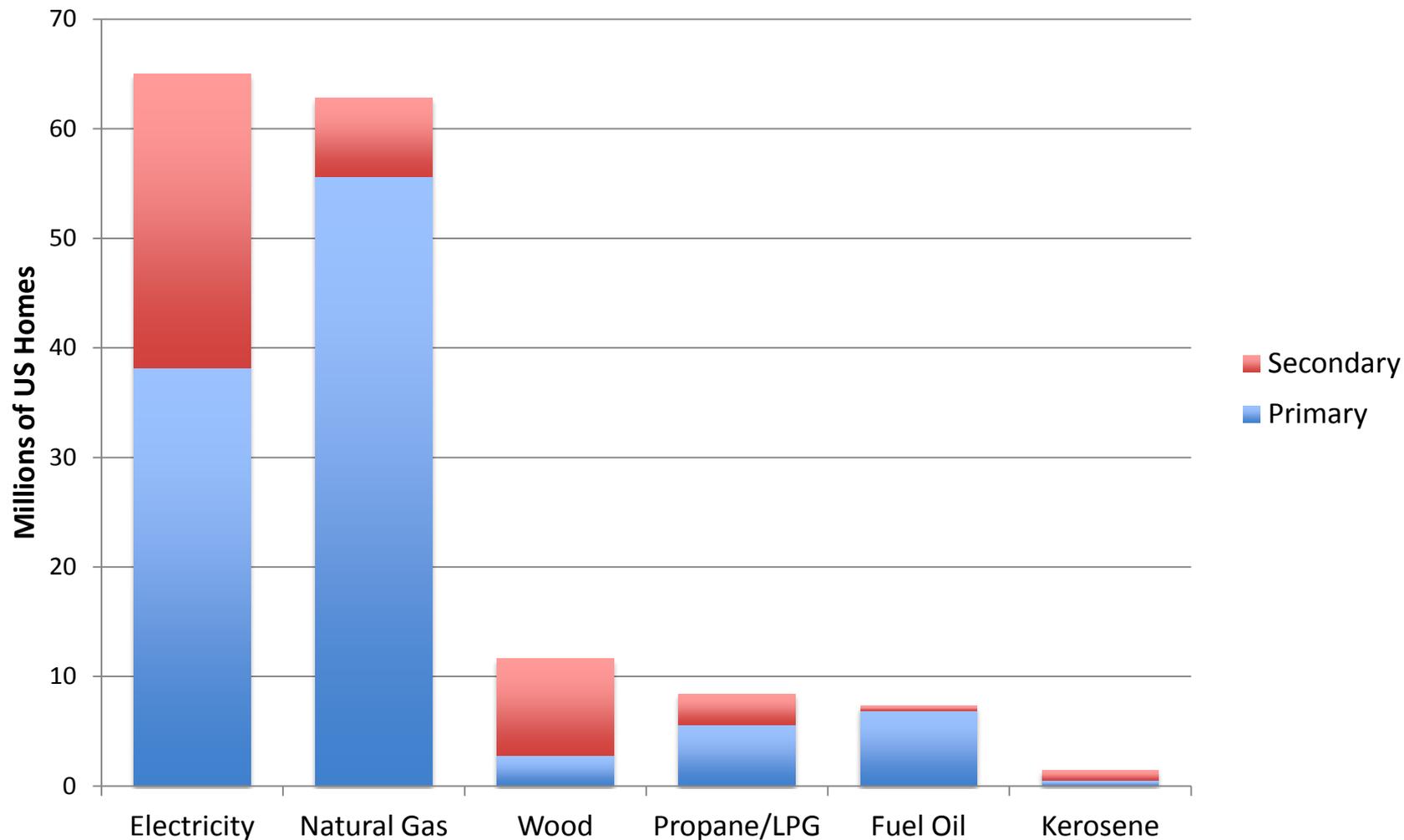
□ 12% of Cong. Bill Owen's district (#23) uses wood as primary heat (9 counties!).



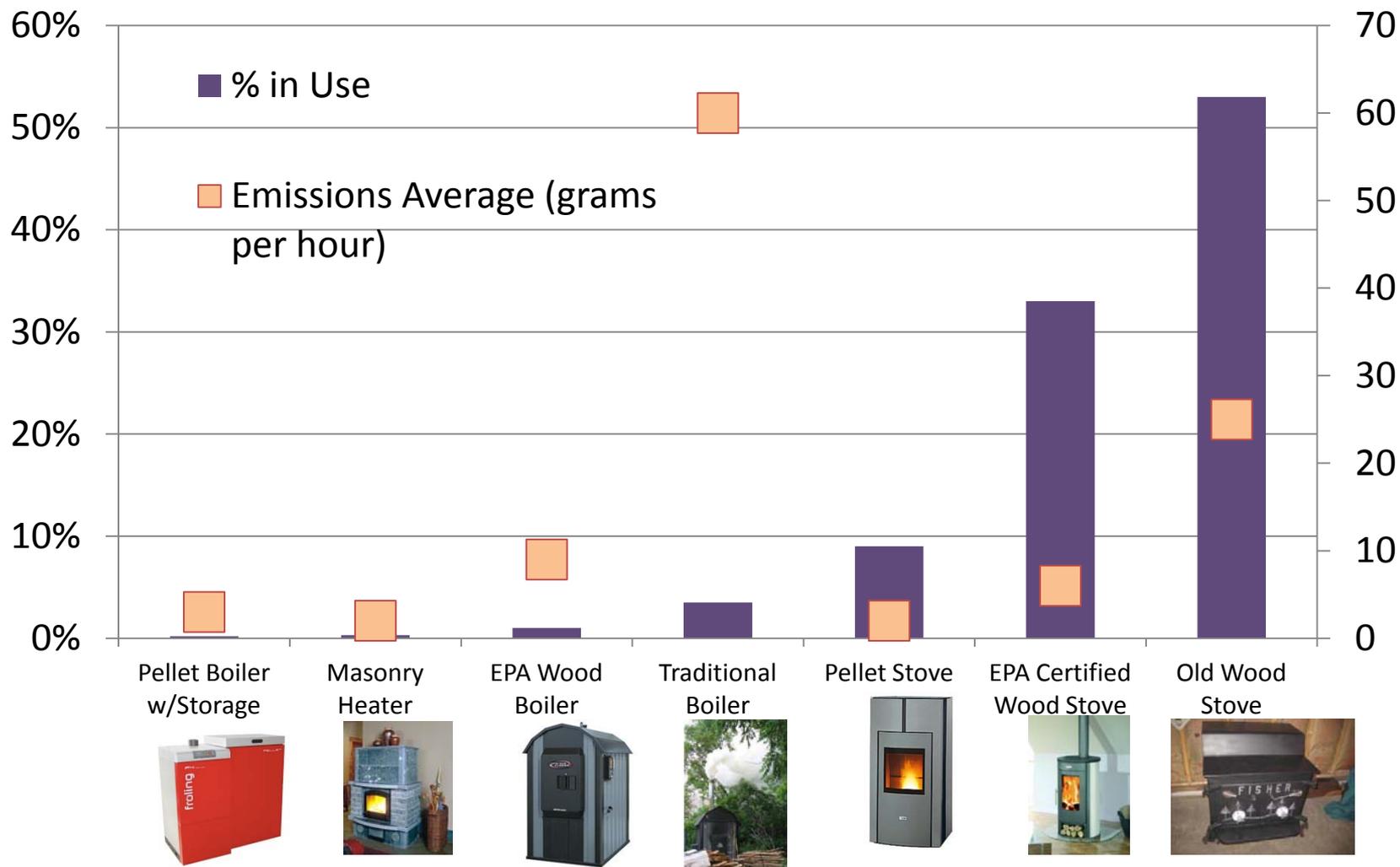
Source of data: US
Census Bureau
2010

2010: Wood overtakes propane and oil as 3rd most common heating fuel (EIA)

□ Energy audits & weatherization programs need to integrate a focus on wood heaters.



Most Wood Heating Equipment is Outdated and Too Polluting

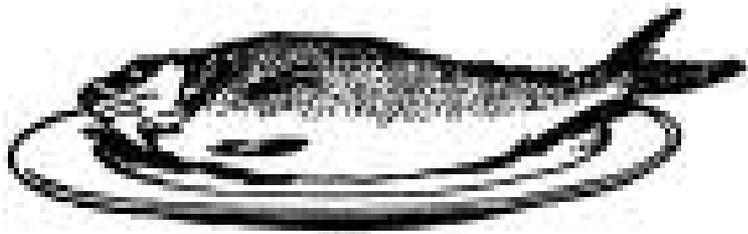


Wood Heat Provides Financial Security

- **More stoves = greater fuel security**
 - You can get your own fuel for wood stoves in rural areas.
 - A wood stove can avoid the worst case scenario and prevent a house from going cold.
 - Wood can heat home when fossil fuel HEAP \$ runs out.
- **More stoves = fewer emergency shut offs**
 - The more homes with wood stoves, the more families can provide heat for themselves. Saves utilities time and money.
Electricity needed for pellets but not wood stove
- **More stoves = more food security**
 - “Heat or eat” dilemma is greatly reduced or avoided.
 - Heating bills do not have to compete with food, medicine and other bills.

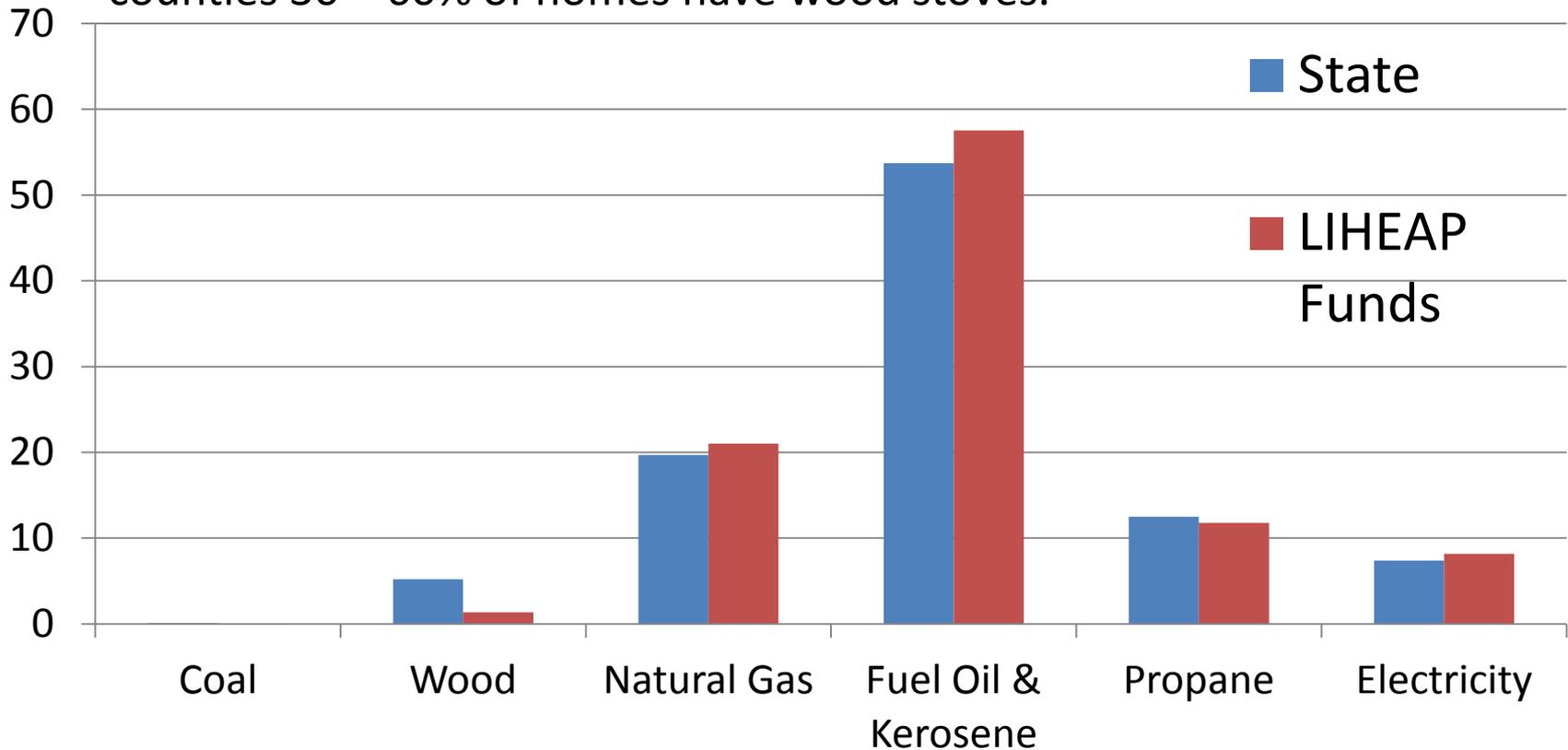
Encourage Self-sufficiency, for those who really want to be.

- Give a woman a fish and she eats for a day. Teach her to fish and she eats for a lifetime
- Nearly 2/3 of all Americans cut or gather their own firewood (most people who heat with wood have a proclivity for self-sufficiency, unlike those who use wood in fireplaces for ambience).



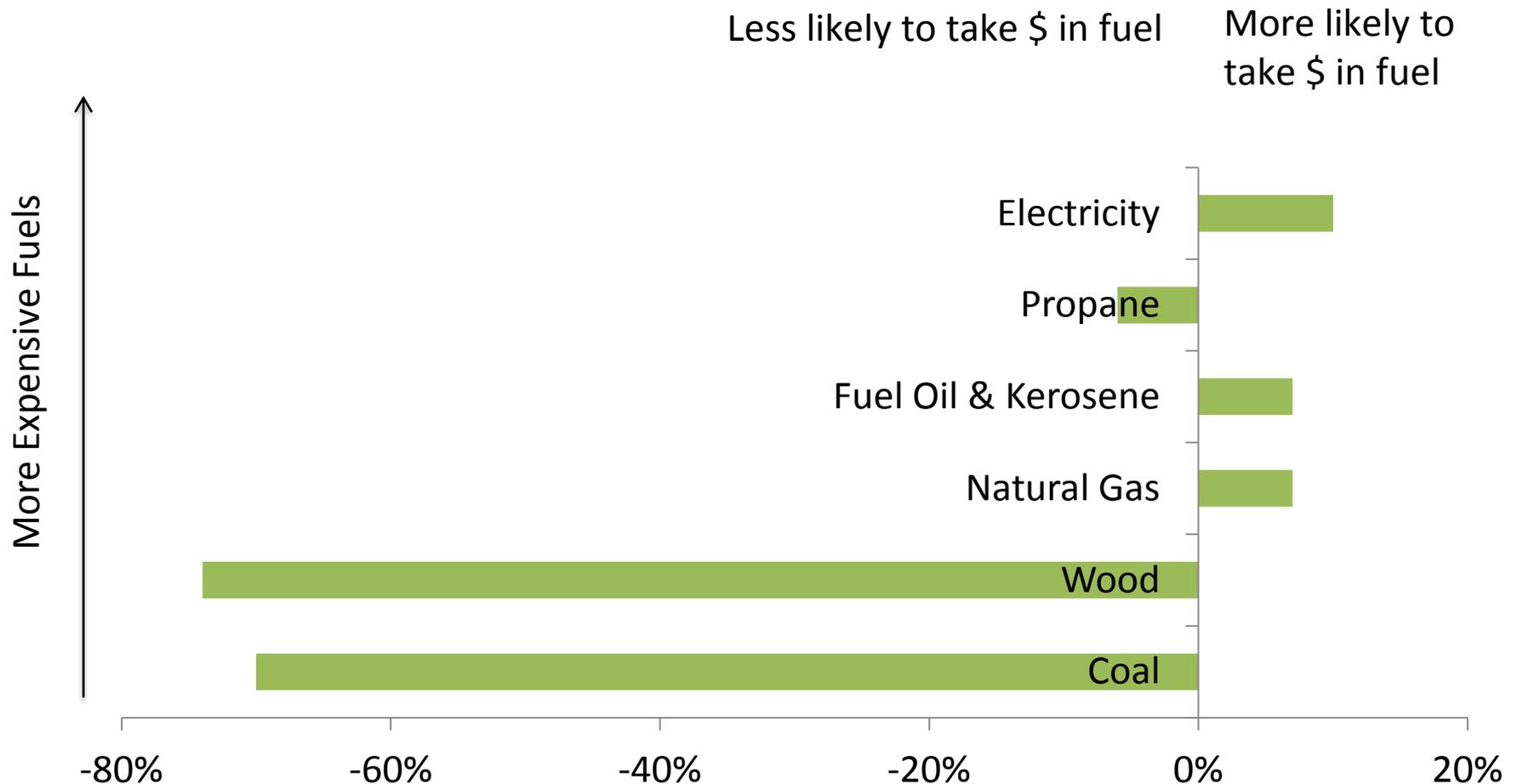
% of Homes Using Fuels vs. Taking it for Energy Assistance in NH

□ Benefit structures lead families to take the more expensive secondary fuel if their primary fuel is a wood or coal stove. In many rural NY counties 30 – 60% of homes have wood stoves.

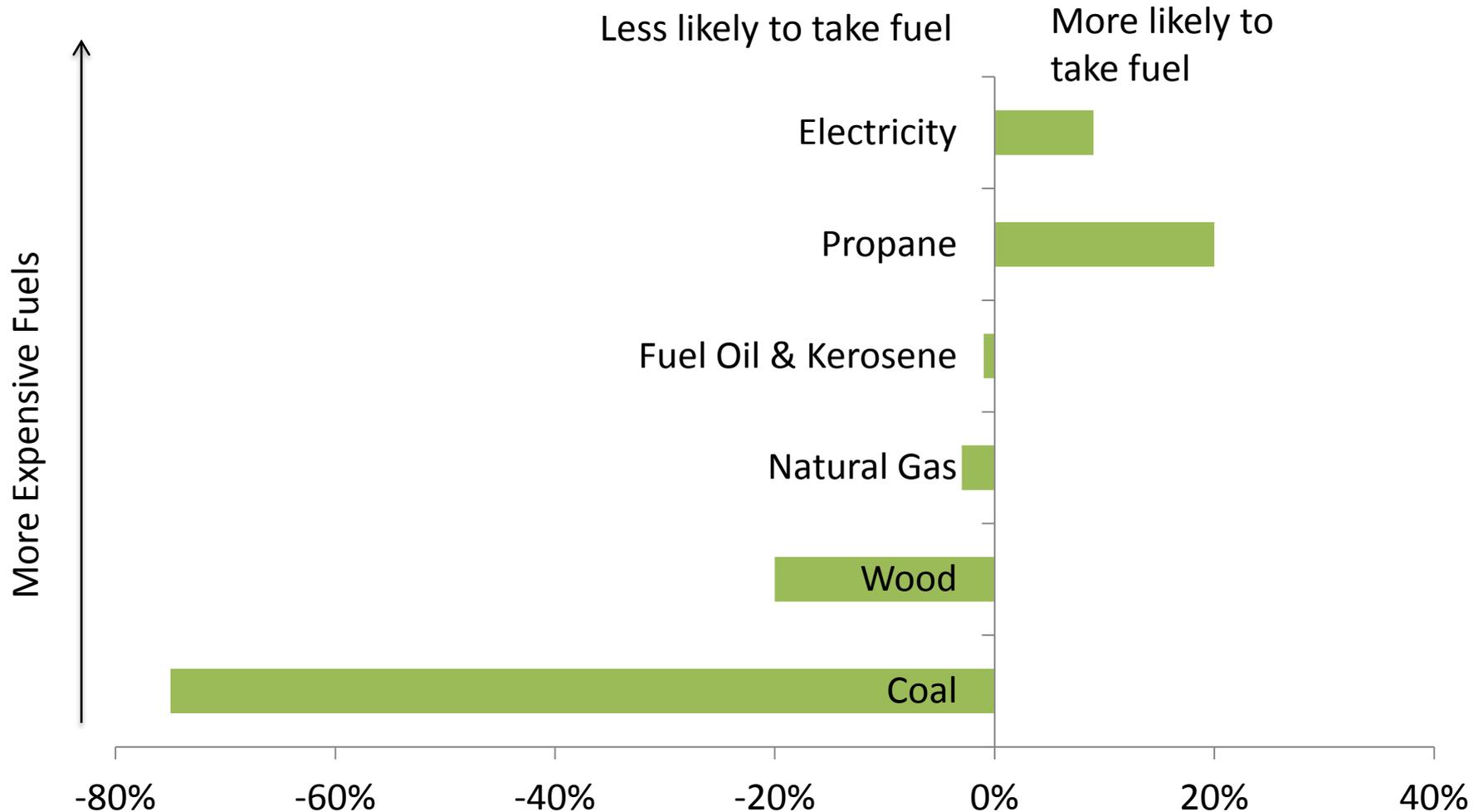


% of Households on Heating Assistance in NH

- Cheaper fuels have least demand for energy assistance
- With exception of propane, more demand for expensive fuels.



Same story: Maryland Heating Assistance Goes to More Expensive Fuels



NH and MD Data shows ...

- ✓ People on cheaper fuels, i.e. wood and coal, do not need energy assistance as much, or
- ✓ They are people resistant to taking public assistance, or
- ✓ They take their fuel benefit in another fuel, such as oil, propane or electricity, or
- ✓ A combination of all the above.

➔ **Our conclusion: For those that want it, wood heat can reduce the need for heating assistance because the fuel can be acquired for free.**

Firewood Keeps Heating \$ in the Community

□ Whether the firewood dealer is an established business or the homeowner's cousin, 100% of heating assistance stays in the community and circulates.



How to appeal to the consumer?

- Health & safety messaging not nearly as effective as cost savings.
- Wet wood is a waste. You need twice as much to get the same amount of heat.
- EPA certified stoves use are 50% more efficient and can use 30 – 50% less wood for same heat.



BURN WISE

START TO BURN WISE!

SEASON WOOD
Burn only wood that has dried at least 6 months.

EPA-CERTIFIED
Use only EPA-certified wood stoves, pellet stoves or fireplace inserts; or use vented gas-heating appliances.

YOU WILL

SAVE MONEY
EPA-certified wood stoves use one-third less wood for the same amount of heat.

SAVE ENERGY
EPA-certified wood stoves are 50% more energy efficient than pre-1990 models.

PROTECT YOUR HEALTH
EPA-certified wood stoves emit 70% less particle pollution than pre-1990 models.

 For More Information Visit www.epa.gov/burnwise/

 CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION

□ 78% of money spent on fuel oil leaves the region and a majority leaves the country. (EIA)

□ \$8.39 billion in oil purchases leaves the state of NY

State	Average Gallons of Fuel Oil Used per Year by All Users	Average Total Expenditure Per Year (at \$3.65/gal)	Amount that does NOT stay in the State *
Connecticut	720,225,000	\$ 2,628,821,250	\$ 2,050,481,000
Maine	376,200,000	\$ 1,373,130,000	\$ 1,071,041,000
Massachusetts	915,750,000	\$ 3,342,487,500	\$ 2,607,140,000
New Hampshire	368,100,000	\$ 1,343,565,000	\$ 1,047,981,000
New York	2,947,500,000	\$ 10,758,375,000	\$ 8,391,533,000
Rhode Island	166,400,000	\$ 607,360,000	\$ 473,741,000
Vermont	180,900,000	\$ 660,285,000	\$ 515,022,000
Total	5,675,075,000	\$ 20,714,023,750	\$ 16,156,939,000

* Research & graphics by Future Metrics &



Case study #1: New York warm-up-tompkins-county

- Provides \$500 rebate and 3% interest on loan
- \$3,500 pellet stove & weatherization saves \$900 per year in energy cost.

The screenshot shows the website for the Cooperative Extension Tompkins County. The header includes the organization's name and a search bar. A navigation menu lists various topics like Agriculture, Community, Energy, Environment, Family, Food, Gardening, Your Home, Your Money, and Youth. The main content area features a large image of wood pellets with a caption: "Wood pellets. Photo by Bob Jager / Flickr. CC-BY-SA-2.0. via Wikimedia Commons". Below the image is a testimonial from Lisa Ferguson, a resident of Ithaca, who states: "The first month we used it we paid for the loan and the pellets and still saved \$100 over our budget payment for fuel. Then, the rest of the winter, we only used the furnace once or twice." To the right of the testimonial is a cartoon character of a woman in a blue dress. Below the testimonial is a call to action: "Are you ready for a warmer, cheaper, and more comfortable winter? Join the growing ranks of Tompkins County residents and convert to a pellet stove!". On the far right, there are three buttons labeled "WHY should I?", "HOW can I?", and "WHO can help me?". At the bottom right, there is a video player with a play button and the text "Listen to more stories from participants." The footer indicates the page was last updated on January 17, 2012.

Cooperative Extension Tompkins County

SEARCH OUR SITE

ABOUT US | DIVERSITY | DONATE | EVENTS | HOME | JOBS | RESOURCES | STAFF | VOLUNTEER

Agriculture | Community | Energy | Environment | Family | Food | Gardening | Your Home | Your Money | Youth

PROGRAMS & WORKSHOPS

- ▶ EmPower NY Workshops
- ▶ Energy Efficiency Framework for CCE Educators
- ▶ Lighten Up CFL Distributions
- ▶ NY EnergySmart Communities
- ▶ Warm Up Tompkins
 - ▶ About the Program
 - ▶ Contact Us
 - ▶ Stories from Participants
 - ▶ Why Convert to a Pellet Stove?

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IN THE PRESS

For a comprehensive discussion of pellet stoves, take a look at [this article](#) that appeared in Mother Earth News in 2009.

Wood pellets. Photo by Bob Jager / Flickr. CC-BY-SA-2.0. via Wikimedia Commons

Home » Energy » Programs & Workshops » Warm Up Tompkins

WARM UP TOMPKINS

The first month we used it we paid for the loan and the pellets and still saved \$100 over our budget payment for fuel. Then, the rest of the winter, we only used the furnace once or twice.

—Lisa Ferguson, Town of Ithaca

Are you ready for a warmer, cheaper, and more comfortable winter?
Join the growing ranks of Tompkins County residents and convert to a pellet stove!

WHY should I?
HOW can I?
WHO can help me?

Listen to more stories from participants.

Last Updated: January 17, 2012

Case Study #2: Montana



- ✓ States can cut costs by providing high efficiency stoves to families rather than providing higher, prolonged assistance to heat homes with low efficiency stoves.
- ✓ Air quality benefits also helped reduce medical expenses and absenteeism, etc.
- ✓ Fuel funds were kept in poor, disadvantaged communities.

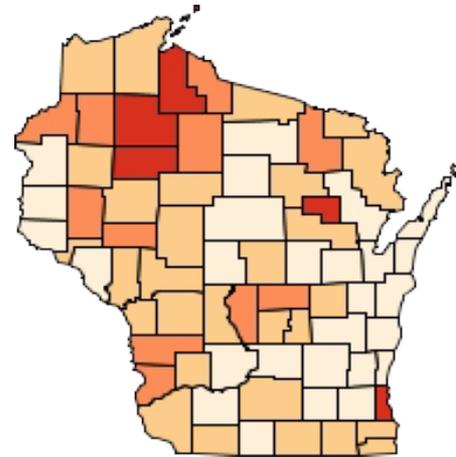
Case Study #3: Maine



- ✓ Energy Efficiency Maine may give \$1 million in grants for subsidizing purchases of wood pellet stoves.
- ✓ Maine's Community Action agencies may provide up to 300 LIHEAP clients with wood pellet stoves
- ✓ Some want Maine and other Northeast states to push for changes to LIHEAP language to permit additional funding for "fossil fuel independence" initiatives

Case Studies #4: Wisc. & MD

- Wisconsin planning on a pilot program for LIHEAP recipients. 15 – 30 would be provided a pellet heater following approval and recommendation by an energy auditor and in conjunction with weatherization.
- Maryland Energy Administration has approved \$50,000 for a pilot program directed at the general population for wood and pellet stoves.

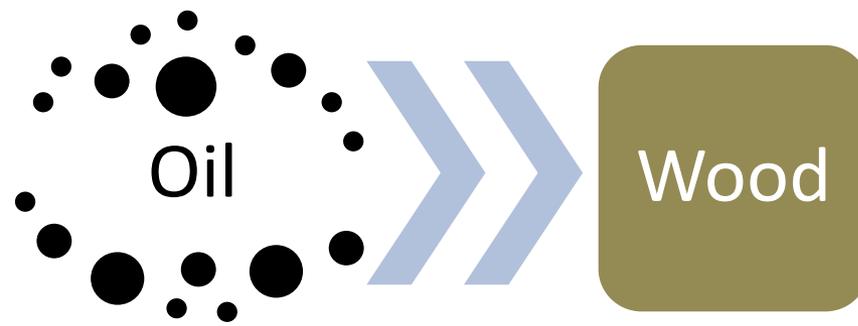
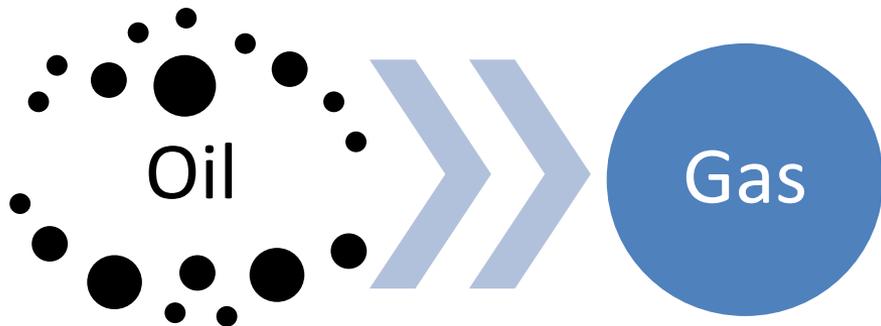


Maryland Energy

ADMINISTRATION

Powering Maryland's Future

It's time to Allow Fuel Switching: gov't should not restrict consumer choice



How can HEAP move more families to lower cost fuels?

- ✓ Can HEAP incentivize more families to take lower wood benefit instead of higher oil benefit?
- ✓ Can HEAP encourage use of secondary space heating in big, leaky homes? (wood, electric)
- ✓ Can HEAP pay or subsidize switching from oil to gas for homes where gas lines are available?
- ✓ For poorest families who cannot get off HEAP, can investing in fuel switching be justified if cheaper alternative is feasible?

Recommendation #1

Define old, uncertified wood stoves as a “Health and Safety hazard”

- ✓ Wood stoves made before 1988 and not certified by the EPA emit harmful levels of smoke, and often emit high levels of CO and creosote – both are dangerous.
- ✓ Any household using a stove as a primary or secondary heating unit should be eligible for a new, clean, high efficiency stove
- ✓ LIHEAP can save \$ over time by giving benefit in wood instead of oil and help family stay off LIHEAP.
- ✓ Allow counties to run a pilot program to see if they can save money.



Recommendation #2

Expand focus on stove in energy audits

- Many energy auditors are not trained to inspect stoves as they are furnaces, even in areas where more than 50% of homes use their stove nearly every day.
- Energy auditing software often omits wood and pellet stoves.
- Energy audits in rural areas need to calculate cost benefits of switching to wood or pellets.



The Wood Stove Checklist for Energy Auditors

About the Checklist

This Checklist is designed to assist residential energy auditors in providing recommendations to homeowners about their wood stove, which may be their primary or secondary heating system. The two most prominent energy auditor accreditors, Building Performance Institute (BPI) and Residential Energy Services Network (RESNET), provide homeowners with the best guarantee that they will receive a thorough and professional energy audit. However, BPI and RESNET-trained auditors do not necessarily have any expertise in wood stoves. Wood stoves have often been left out of energy audits in rural areas, but it is important to include them, particularly up north, where wood stoves are a common and integral part of a home's heating system.

This checklist is produced by the Alliance for Green Heat, a non-profit educational organization, with funding from the University of Maryland Extension Service. If you have any comments or additions, please email us at info@greenheat.com so that we can improve future versions. This checklist does not attempt to address wood or pellet boilers or pellet stoves.

How to use this checklist

This checklist is for energy auditors, but since it does not require any testing tools, it can also be used by homeowners. However, it is not meant to help identify potential problems or serve as a guide for repairing them. Jobs such as cleaning and doing a full inspection of chimneys, for example, should be left to a professional chimney sweep. The checklist form at the back of this guide can be used by energy auditors as part of their written report for the homeowner.

The Basic Checklist

EPA Certification: One of the best and most obvious things you can do for a homeowner is to confirm whether their stove is EPA certified. Almost all stoves

made since 1988 are EPA certified and hopefully the homeowner will know. Pellet stoves are not required to be EPA certified so this is not relevant for them. If the homeowner doesn't know if the stove is certified, check the back of the stove to see if it has the EPA certified plate. You may need a mirror and flashlight to see it. See Diagram 1 for proof of EPA certification on back of stove.

Proof of EPA Certification can be found on the lower back side of a wood stove.

If the stove is not EPA certified, you should recommend an upgrade, especially if the homeowner burns a cord of wood or more each year.



Recommendation #3

Expand Focus on Wood Stoves in Weatherization Programs

- ❑ Weatherization programs should prioritize wood stoves in rural, poor homes.
- ❑ Gaskets, glass and firebrick should be inspected and repaired, where necessary.
- ❑ Evidence of smoke (and CO) leaking into home should be remedied.
- ❑ Unsafe or unlawful stove installation should be addressed.
- ❑ Chimneys inspected & cleaned.



Recommendation #4: Renewable Energy Partners

- ✓ Partnership with NYSERDA?
- ✓ Ongoing 50% state rebate up to \$1,000 for families who earn up to \$50,000 or \$70,000 to buy a new wood or pellet stove (only rural families eligible for wood)
- ✓ Only eligible for families on oil, propane or electricity.
- ✓ Only the cleanest and most efficient wood and pellet stoves eligible



Recommendation #5

Bulk delivery of logs for firewood

- ✓ Can HEAP urge families to buy truckloads of logs at \$40 a cord and cut and split it themselves?
- ✓ Using the \$250 benefit to buying uncut logs offers homes choice of getting 5 times as much fuel, if they are willing to put in labor.



Recommendation #6

Require More of Firewood Dealers

- Ensure firewood receipts meet state law of providing name, address & phone of business, how much wood was delivered, etc.
- Firewood dealers should be required to measure and document moisture content of firewood.
- No deliveries of unseasoned wood during the heating season.



Thank you!

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FOR GREEN HEAT
clean, renewable & local

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