



Residential Wood Heat
REPORT CARD:
How States Balance Heating Needs
with Health Concerns

February 15, 2011



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Introduction

Why is Wood Heat Important?

Wood heat is the most common form of residential renewable energy in America today. There are about 12 million wood and pellet stoves and inserts installed in American today, which means about one in every ten American homes has a biomass stove. Between 2.1 and 2.6 million homes use wood heat as a primary or sole heat source, the 5th most common heat source in American after gas, electricity, oil and propane¹. For every home in America where wood is primary or sole heat source, another five homes use it as secondary heat source. (Fireplaces are even more common but extremely few homes use them as a heat source.)

The use of wood and wood pellets is also growing in America today, with about 250,000 more homes using wood today than in 2000. In some states, such as Connecticut, Massachusetts, Michigan, New Jersey, Ohio and Wisconsin, the number of Americans heating with wood rose between 50 – 80% since 2000.²

Why Are We Grading States?

Wood heat is a very efficient way for families to reduce their reliance on fossil fuels and can save families up to \$2,000 per winter. Its primary drawback is particulate emissions which are a health hazard. This report card rates how each state promotes cleaner and more efficient wood heat technologies by limiting the installation of more polluting wood appliances and giving incentive to install cleaner ones. By drawing comparisons between neighboring states and regions, we hope to bring attention to states that put significant resources towards an energy source that is vital to millions of low and middle-income Americans. This report card provides a framework for states to consider if they choose to direct time and resources to reducing wood smoke and helping their residents affordably heat their home with a renewable energy source.

About the Alliance for Green Heat

The Alliance for Green Heat promotes high-efficiency wood combustion as a low-carbon, sustainable, local and affordable heating solution. The Alliance seeks to make wood heat a cleaner and more efficient renewable energy option, particularly for those who cannot afford fossil fuel heat.

The Alliance for Green Heat is committed to:

- Advancing renewable, low carbon heating fuel technologies
- Promoting tax credits and other incentives for the cleanest wood and pellet stoves
- Strengthening emissions and efficiency standards in wood and pellet stoves

¹ Data on numbers of wood stoves and people who heat primarily with wood from US Census data and other sources identified in this EPA document: http://www.epa.gov/burnwise/pdfs/Woodstove_Sources.pdf

² Data from <http://factfinder.census.gov>. In five other states, using wood as a primary or sole source of heat rose between 35% and 50%: Indiana, Kansas, Maine, Nebraska and Pennsylvania. The states where wood heat declined in the past decade (between 10% and 33%) are all concentrated in the south: Florida, Georgia, Kentucky, Virginia, South Carolina and Tennessee.

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The Alliance for Green Heat works with environmental and forestry organizations, air quality experts, the wood and pellet stove industry and others in the wood burning community. The Alliance for Green Heat educates the public, the media and local, state and national policymakers about the potential of wood and pellet heat and its applications to low and middle-income populations. The Alliance is an independent non-profit organization and is tax-exempt under section 501c3 of the tax code.

What is a Model State Policy?

- **Sets limitations on the installation of traditional outdoor wood boilers.**
 - Only allows the installation of Phase II EPA qualified outdoor wood boilers. Establishes reasonable set back and stack height requirements.
- **Requires that new stoves sold are EPA certified.**
 - States that have closed the loophole allowing cheap, new stoves that are not EPA certified to be sold. Many of these are Chinese-made stoves and undermine the market for the cleaner American-made stoves.
- **Provides state or local incentives for purchase of cleaner biomass stoves.**
 - Tax deductions, credits, exemptions or rebates funded by state programs for clean stoves or fuel (cordwood/pellets).
- **Adopts stricter emission standards than EPA standards**
 - States requiring new stoves to be cleaner than the EPA standards are commended. Additionally, wood and pellet stoves are not yet in the Energy Star program but when government funds are being used to change-out old stoves or to incentivize new stoves, the new stoves should meet stricter standards than the lax and outmoded standards the EPA first set in 1988.
- **Provides a state educational website on clean burn practices.**
 - States that provide educational information on topics such as safe and clean burning practices are commended.
- **Funds change-out programs to replace old, polluting stoves.**
 - States that have chosen to work with the EPA or industry groups to replace inefficient old/uncertified stoves in their jurisdiction.

Grading

These six grading criteria were chosen as an indication of a state's commitment to supporting clean and responsible use of wood heat. These six criteria reflect the values and policies goals of the Alliance for Green Heat: that wood, like all energy sources, needs to develop to be cleaner and more efficient. The federal government provides a baseline, but it is often up to the states to develop policies and standards that fit their needs.

Naturally, some states, especially in the south, have relatively small populations heating with wood, such as Florida (.2%), Hawaii (.5%), Louisiana (.8%) and Texas (.4%). These states do not put the level of resources into this energy form that northern states do and thus they get lower scores. But many southern states, such as Alabama (2.1%), Arkansas (4.5%), Mississippi (1.8%) and Tennessee (1.9%), for example, use wood heat as a primary or sole heating fuel on a per capita basis as much or more than the national average.

Grading System

1. Restricts Installation of Traditional Outdoor Wood Boilers

Why:

Placing limitations on the sale and installation of traditional outdoor wood boilers (OWBs) is an important step states can take to reduce what is probably the worst residential source of particulate emissions from residential wood heating. Many traditional OWBs allow a slow, low-temperature burn, meaning fuel used in these units is not completely combusted, resulting in thick smoke and wasted energy.

How:

State and local governments can limit the installation of OWBs within their jurisdiction using methods such as setback requirements, minimum stack heights, emission limits, and requiring only [EPA Phase II](#) qualified models be installed.

Points:

- +3 Statewide restriction of traditional OWBs and adoption of Phase II qualified OWBs, stack height and set back limits.
- +2 Statewide adoption of Phase II qualified units and restriction of traditional OWBs.
- +1 State restriction of traditional OWBs
- +1 Local restriction on traditional OWBs.
- +0 No state or local restrictions on OWBs.

2. Limits Sales of Exempt Wood Stoves

Why:

The EPA does not certify all kinds of wood stoves and has exempted many common types from any emission standards, including pellet stoves, cook stoves,

furnaces and boilers, large masonry stoves and stoves that have high air to fuel ratios that allow large amounts of air to pass through the firebox. Some of these are typically very clean burning (pellet and masonry stoves), others are not very common (masonry and cook stoves) but some have become very popular and problematic from an efficiency and emission perspective (boilers and high air to fuel stoves). The air to fuel ratio is one key way the EPA distinguishes fireplaces from wood stoves, and to maintain this ratio, stoves are designed to allow a virtual free flow of air into the firebox which then carries excessive amounts of heat (up to 90%) and particulates up the flue. This grade is given mainly to recognize the efforts of states to restrict sales and installation of the high air to fuel stoves and restrict installation of old, uncertified stoves built before EPA regulations took effect in 1988. These less efficient and more polluting stoves help form the opinions of the public and of policymakers about wood heat generally.

How:

States and counties can prevent the widespread sale and installation of exempt and un-certified stoves by only allowing the installation of EPA certified appliances.

Points:

- +3 State limitations on installation of exempt wood stoves and stipulating standards for exempt pellet, masonry stoves and fireplaces.
- +2 State limitations on installation of exempt wood stoves, and/or over three independent local limitation programs.
- +1 Local limitation on exempt wood stoves.
- +0 No limitations on the state or local level.

3. Provides State Tax Credit or Incentives

Why:

State incentives can help lower the purchase and installation cost for renewable energy technology, decreasing payback periods. These incentives often make homeowners more willing to make the initial investment, because they know they can recoup that money in a reasonable time frame. Many jurisdictions have used incentives to steer consumers towards pellet and the cleanest and most efficient wood appliances.

How:

Incentives can come in the form of rebates, grants, tax credits, low interest loans, tax deductions, property tax exemptions, etc. Some states also offer modest sales tax incentives for pellets or cordwood.

Points:

- +3 Significant state incentives for stove purchase/installation
- +2 Modest state incentives for stove purchase/installation or over three local programs.
- +1 Minor state or local incentives.
- +0 No state or local incentive programs of any kind.

4. Stricter Emission Standards

Why:

The EPA set its current stove emission standards more than two decades ago, in 1988. These standards limit catalytic stoves to 4.1 grams/hour of particulate emissions, while non-catalytic wood stoves may emit no more than 7.5 grams/hour. In the years since these standards were written, stove technology has dramatically improved. Washington State capped emission limits at 4.5 grams an hour in 1995.

Most models today produce less than 4.5 grams per hour and many wood stoves emit less than 1.5 grams an hour.

How:

States can start improving the emissions profiles of installed stoves by restricting the sale and/or installation of wood burning stoves that do not meet their emission standards.

Points:

- +2 State emission standards stricter than EPA.
- +1 Local emission standards stricter than EPA.
- +0 Accepts EPA standards.

5. State Educational Website

Why:

Wood is a more complicated heating fuel for homeowners to use than oil, gas and propane. Homeowners need to know how to buy, harvest, store and burn wood in order to reduce emissions and maximize efficiency. While this information is often passed down within families, from parents and grandparents to children, educational resources are essential to millions of people who know less than they need to. Today, websites have replaced pamphlets as the most important education tool to reach families who heat with wood. We believe every state should offer basic information about clean burn practices, the danger of transporting invasive pests in firewood and the health impacts of wood smoke.

How:

States can publish information on an air quality, natural resources, or fire safety web pages - wherever they feel residents would be most likely to see it. States can also produce downloaded pamphlets and handbooks and link to

sites such as the [EPA's Burn Wise website](#).

Points:

- +3 Extensive educational material that includes clean burn practices, firewood purchasing advice and air quality information.
- +2 Extensive educational material.
- +1 Basic educational material on a state webpage.
- +0 No web information available.

6. Change-Out Programs

Why:

Change-out programs provide the financial and societal push for homeowners to remove their old, more polluting stove models. These efforts can have a significant impact on indoor and outdoor air quality, and help low-income residents purchase cleaner stoves that may have otherwise posed significant financial hardships.

How:

Many change-outs are conducted in conjunction with the EPA and industry groups like the Hearth, Patio and Barbeque Association (HPBA) and wood stove dealers. States can provide funding and staff support to help advertise and implement the program.

Points:

- +3 Extensive/statewide programs and/or over five different local programs.
- +2 Statewide program and/or over three different local level programs.
- +1 Local or/and expired statewide programs.
- +0 No change-out history.

Extra Credit

Why:

Extra credit covers any wood heat-related efforts taken by state which do not fall

under the six basic categories but which still deserve recognition.

How:

States can earn extra credit through efforts like thermal biomass R&D programs, including thermal biomass in a Renewable Energy Standard (RES) plan, constructing model ordinances for their local governments to adopt, etc. Many other efforts can also apply.

Points:

These efforts do not earn points, merely recognition. Although there are many unique and inventive programs addressing the different facets of wood heat issues, these are too variable and specific to judge by any one standard. They are listed merely to acknowledge valuable efforts by the states.

What we did not grade

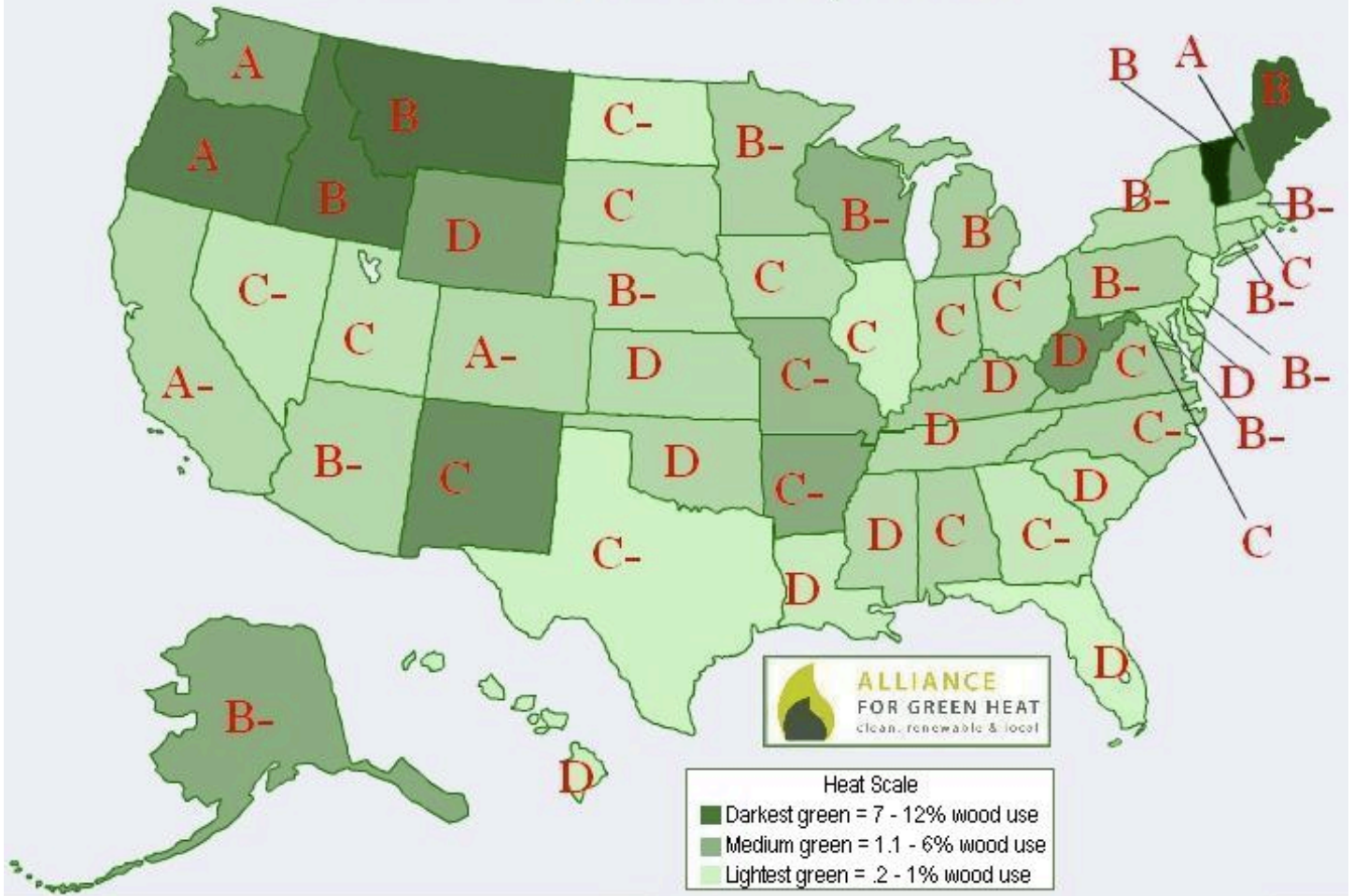
We did not rate a number of state and local programs and policies that have

direct impact on the use of wood heating and the resulting emissions such as 'burn bans' and permitting requirements for installation. Burn bans would be too difficult to rate and are mainly needed in western states that experience weather inversions. Additionally, we originally rated what types of biomass appliances different jurisdictions allowed in Property Assessed Clean Energy Loan (PACE) programs, but almost all of those programs have been halted. Ideally, PACE programs, or similar programs in the future, should not be used to fund traditional outdoor wood boilers, instead they should leverage funds to incentivize cleaner/the cleanest biomass appliances.

Scoring

A	10+ Points
A-	8-9 Points
B	6-7 Points
B-	4-5 Points
C	2-3 Points
C-	1 Point
D	0 Points

Residential Wood Heat Report Card



Heat Scale

- Darkest green = 7 - 12% wood use
- Medium green = 1.1 - 6% wood use
- Lightest green = .2 - 1% wood use

State: Alabama

Criteria	Score	Comments	
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Alabama does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.	
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Alabama.	
Provides state or local incentives for purchase of cleaner biomass stoves.	+2	Yes, up to 100% of purchase and installation costs can be claimed as a deduction if a household converts from electricity/gas to wood as the primary energy source for heating (only conversions are eligible). More information here: http://www.forgreenheat.org/incentives/states/alabama.html .	
Adopts stricter emission standards than federal regulations.	+0	No, Alabama adheres to federal standards.	
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, Alabama does not provide specific information on safe wood burning practices, proper stove upkeep and management, or wood stove emissions.	
Funds change-out programs to replace old, polluting stoves.	+0	No, Alabama has not undertaken any wood stove change-out programs at the state or local level.	
Extra Credit	--	In past decades, the University of Alabama did work on wood heat.	
	GRADE C	TOTAL 2	If you know of any additional residential wood heat programs in Alabama, please contact us and we will add the information here.

State: Alaska

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+1	Yes, at the local level and largely due to concerns about their use in cities. In June 2010, the Fairbanks City Council voted to only allow EPA phase II OWB to be installed. The city of Anchorage passed restrictions in 2009 requiring all OWBs to be EPA phase II and meet certain setback and stack height requirements.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Alaska.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Yes, there is a local option property tax incentive. In May 2009, House Bill 121 enabled municipalities with areas that fail to meet federal or state air quality standards for PM 2.5 to pass an ordinance to provide an air quality tax credit. More specifically, legislation was enacted in June 2010 to authorize municipalities to pass ordinances that exempts residential renewable energy systems from taxation. Residential renewable energy systems include biomass qualify. (Not all biomass systems may qualify.) More information here: http://www.forgreenheat.org/incentives/states/alaska.html .
Adopts stricter emission standards than federal regulations.	+0	No, Alaska adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+2	Yes, Alaska's Department of Environmental Conservation offers a section on their website covering exempt, catalytic, and non-catalytic stoves with information on installation and correct use as well as wood stove emissions. It is available here .
Funds change-out programs to replace old, polluting stoves.	+1	Not at the state level. In March 2009 there was a request for proposals to conduct a change-out, but the RPF was cancelled later that month and the change-out did not occur. The Fairbanks/North Star Borough has initiated a change-out program to improve air quality. More information here: http://www.forgreenheat.org/incentives/change_out_program.html
Extra Credit	--	Alaska regulates smoke from wood combustion in fireplaces and wood stoves on the basis of a 50% opaqueness standard and has engaged in state funded research.

Evaluated By: Alliance for Green Heat

	GRADE B-	TOTAL 5	If you know of any additional residential wood heat programs in Alaska, please contact us and we will add the information here.
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State: Arizona

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+1	Yes, on a local level. Some towns in Arizona restrict the installation of traditional OWBs.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Arizona.
Provides state or local incentives for purchase of cleaner biomass stoves.	+2	Yes, Arizona provides a state tax deduction for qualifying biomass stoves. Residents can deduct up to \$500 of the cost of upgrading an existing fireplace to an EPA-certified stove. More information here: http://www.forgreenheat.org/incentives/states/arizona.html .
Adopts stricter emission standards than federal regulations.	+0	No, Arizona adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+1	Arizona's Department of Environmental Quality offers a .pdf explaining the dangers of PM emissions, but does not provide significant information for residents to properly use a wood stove. However, Arizona's Department of Environmental quality has an informational flier about wood smoke here .
Funds change-out programs to replace old, polluting stoves.	+1	Yes, Arizona in a partnership with American Lung Association is running the Clean Heat Exchange change-out program in Navajo and Apache counties; it contributes a \$1,000 rebate towards EPA Certified woodstoves and \$1,500 towards pellet stoves. The program is running until the end of 2011. More information here: http://www.forgreenheat.org/incentives/change_out_program.html .
Extra Credit	--	Arizona includes thermal biomass in its carbon reduction plan- its RES definition of "Eligible Renewable Energy Resources" includes biomass and biogas technologies that displace conventional energy heating resources. Maricopa County prohibits the use of residential wood-burning fireplaces during high air pollution episodes.

Evaluated By: Alliance for Green Heat

	GRADE B-	TOTAL 5	If you know of any additional residential wood heat programs in Arizona, please contact us and we will add the information here.
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State: Arkansas

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Arkansas does not enforce voluntary EPA standards, allowing the sale and use of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Arkansas
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Arkansas' incentive programs focus on electrical-generating renewable energy systems rather than thermal applications.
Adopts stricter emission standards than federal regulations.	+0	No, Arkansas adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+1	Yes, but very limited. The Arkansas Department of Environmental Quality provides guidelines on outdoor wood burning and general air quality information but does not address the operation or installation of wood or pellet stoves or their emissions.
Funds change-out programs to replace old, polluting stoves.	+0	No, Arkansas has not undertaken any wood stove change-out programs at the state or local level.
Extra Credit	--	The University of Arkansas Division of Agriculture state extension has a web page on wood stoves and indoor air quality at http://www.arhomeandgarden.org/your_home/woodstoves.htm
	GRADE C-	TOTAL 1
		If you know of any additional residential wood heat programs in Arkansas, please contact us and we will add the information here.

State: California

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+1	Yes, at the local level. Bay Area AQMD, Glenn County APCD, Kern APCD and Feather River AQMD restrict the sale or resale, installation or transfer of wood-burning devices that do not meet EPA Phase II certification (or is a pellet stove or masonry heater in some places). Butte AQMD, Mendocino County AQMD and the Town of Mammoth Falls prohibit the installation of non-EPA outdoor wood boilers. Other air districts with regulations include: Northern Sonoma County, Placer County, Sacramento Metropolitan, San Joaquin Valley, San Luis Obispo County, Shasta County, South Coast and Yolo Solano.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+2	Yes, at the local level. In 2005, the cities of Sebastopol and Fairfield each enacted legislation limiting the use of exempt wood stoves. Many Air Districts also restrict what can be sold including: Bay Area AQMD, Butte AQMD, Feather River AQMD, Glenn County APCD, Great Basin Unified APCD, Kern APCD, Mendocino County AQMD, Northern Sonoma County APCD, Placer County APCD, Sacramento Metropolitan AQMD, San Joaquin Valley APCD, San Luis Obispo County APCD, Shasta County AQMD, South Coast AQMD, Tehama County APCD and Yolo Solano AQMD.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No. There are no statewide or local incentive programs in California. The programs in this state are change-out oriented programs on an Air District basis; the state only regulates mobile sources of air pollution.
Adopts stricter emission standards than federal regulations.	+0	No, California air districts adhere to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+3	Yes, the California Environmental Protection Agency website provides a .pdf handbook titled "How to Burn More Efficiently". It is available here and many air districts and local jurisdictions have extension education information. The Wood Burning Handbook gives detailed air pollution information on wood smoke through the link above.
Funds change-out programs to replace old, polluting stoves.	+3	Yes, many local governments have sponsored several change-out programs. Marin County provides a \$250 rebate and Yolo County provides \$200 for residents switching old non-compliant stoves to EPA certified units. In Sacramento County, there are rebates of \$200-750 for residents in designated Environmental Justice areas, with smaller incentives available to residents in non Environmental Justice areas replacing an uncertified stove. There also have been programs in Bay Area AQMD, Butte AQMD, El Dorado County, Feather River AQMD, North Coast Unified AQMD, Placer county APCD, San Joaquin Valley APCD, Shasta County

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		AQMD, Tuolumne and the town of Truckee. More information here: http://www.forgreenheat.org/incentives/change_out_program.html	
Extra Credit	--	In some Air Districts the first level of the burn ban requires highly polluting stoves be shut off but EPA-certified units may continue to operate.	
	GRADE A-	TOTAL 9	If you know of any additional residential wood heat programs in California, please contact us and we will add the information here.

State: Colorado

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+1	Yes. Outdoor wood-fired boilers are subject to Colorado Air Quality Control Commission Regulation No. 1. This regulation states that OWB smoke emissions must be less than 20 percent average opacity over six minutes.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+2	Yes, in most populated parts of state around Denver. The seven county Denver-Metro area bans the installation of new/exempt/ used uncertified wood burning appliances, and stipulates what masonry stoves can be installed. Telluride, Mt. Crested Butte, Grand Junction, and Breckenridge all have laws requiring new stoves meet certain emission requirements.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Boulder had a very interesting, limited biomass incentive program for homes on electric heat. At the state level, Colorado's incentive programs focus on electrical-generating renewable energy systems rather than thermal applications. More information here: http://www.forgreenheat.org/incentives/states/colorado.html .
Adopts stricter emission standards than federal regulations.	+1	In 7 county Denver area, some wood burning devices such as masonry stoves have emission-based standards whereas the EPA does not.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+2	Yes, a multi-page section of the Colorado Department of Public Health and Environment lists emissions from wood smoke and covers the health effects, approved stoves, and provides guidance for residential burning. It is available here .
Funds change-out programs to replace old, polluting stoves.	+2	Yes, Colorado has helped to conduct local change-outs with HPBA and other stakeholders since 1995, like the Delta County change-out. This ongoing program offers rebates averaging \$670 for low-income residents, and smaller discount systems for all incomes. There is also a Mesa County program offering up to \$3,000 for low income homeowners. Mt. Crested Butte and the town of Telluride both had unique permit/loan based change-outs.
Extra Credit	--	In the Denver-metropolitan area, seven Colorado counties are subject to increased emission standards on "red" advisory days. All uncertified burning appliances, including corn and pellet stoves, are banned from use on these advisory days. Only EPA Phase II (Colorado Phase III) wood stoves, inserts, pellet stoves and inserts, and approved masonry heaters may be used on these days. Colorado includes biomass systems in its RES carbon reduction plans

Evaluated By: Alliance for Green Heat

	GRADE A-	TOTAL 9	If you know of any additional residential wood heat programs in Colorado, please contact us and we will add the information here.
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State: Connecticut

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+2	Connecticut is unique in that it established statewide set-back limits for OWBs but is one of last two New England states to still allow installation of traditional OWBs. A 2005 law also sets stack-height, opacity and other modest restrictions. Many towns also restrict OWBs including (but not limited to): Granby, Tolland, Portland and Norfolk.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Connecticut.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Yes. At the state level, the Energy Conservation Loan program offers loans of \$400-\$25,000 for households installing energy saving devices- including wood and pellet stoves. The loans are very low interest, with rates at 1%, 3% or 6% depending on income, family size, and location. The loan repayment term is up to 10 years. More information here: http://www.forgreenheat.org/incentives/states/connecticut.html
Adopts stricter emission standards than federal regulations.	+0	No, Connecticut adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+2	Yes, the Connecticut Department of Environmental Protection website discusses reducing wood smoke related pollution with OWBs and Woodstoves as well as providing information on proper use and maintenance. It can be accessed here . It also compares emissions from EPA certified and non-certified stoves at the link above.
Funds change-out programs to replace old, polluting stoves.	+0	No, Connecticut has not participated in change-out programs at the state or local level.
Extra Credit	--	Biomass is eligible to receive grant money through the Connecticut Clean Energy Fund.
	GRADE B-	TOTAL 5
If you know of any additional residential wood heat programs in Connecticut, please contact us and we will add the information here.		

State: Delaware

Criteria	Score	Comments	
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Delaware does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.	
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Delaware.	
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Delaware's incentive programs focus on electrical-generating renewable energy systems rather than thermal applications.	
Adopts stricter emission standards than federal regulations.	+0	No, Delaware adheres to federal standards.	
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, Delaware's Division of Air & Waste Management website posts warnings about open burning but does not address the operation or installation of wood or pellet stoves or their emissions.	
Funds change-out programs to replace old, polluting stoves.	+0	No, Delaware does not conduct change-out programs at the state or local level.	
Extra Credit	--	In 1995, the Delaware DNREC conducted a fuel-wood use survey to analyze the incidence and intensity of residential fuel-wood use in the state. This data was used to gain a clearer idea of emission estimates and whether additional regulatory steps needed to be taken to limit wood burning.	
	GRADE D	TOTAL 0	If you know of any additional residential wood heat programs in Delaware, please contact us and we will add the information here.

District of Columbia

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, DC does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of DC
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	The DC City council approved a residential biomass grant program, but the program has not been implemented.
Adopts stricter emission standards than federal regulations.	+0	No, DC adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+1	Yes, the DC Department of the environment website does briefly address biomass heating in a PDF of various energy sources, it can be found here . However, no wood stove emissions educational page is available.
Funds change-out programs to replace old, polluting stoves.	+0	No, DC does not conduct change-out programs at the state or local level.
Extra Credit	--	DC has participated in the Community Woodlands Alliance, a pioneering program to use urban waste wood for heating.
	GRADE C	TOTAL 2
		If you know of any additional residential wood heat programs in DC please contact us and we will add the information here.

State: Florida

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Florida does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Florida.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Florida's incentive programs focus on electrical-generating solar renewable energy systems rather than thermal applications and biomass.
Adopts stricter emission standards than federal regulations.	+0	No, Florida adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, The Florida Department of Environmental Protection website has an inadequate page on general air quality without working links.
Funds change-out programs to replace old, polluting stoves.	+0	No, Florida does not conduct change-out programs at the state or local level.
Extra Credit	--	The University of Florida IFAS Extension has information on woody biomass as an energy source at http://edis.ifas.ufl.edu/fr283 .
	GRADE D	TOTAL 0
		If you know of any additional residential wood heat programs in Florida, please contact us and we will add the information here.

State: Georgia

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Georgia does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Georgia.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Yes, Georgia provides a fuel incentive program which exempts biomass fuels, including cord wood and pellets from sales tax. For more information: http://www.forgreenheat.org/incentives/states/georgia.html .
Adopts stricter emission standards than federal regulations.	+0	No, Georgia adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, Georgia's Department of Natural Resources website has guidelines for general air quality standards but does not address the operation or installation of wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+0	No, Georgia does not conduct change-out programs at the state or local level.
Extra Credit	--	We are not aware of other biomass heat programs or activities.
	GRADE C-	TOTAL 1
		If you know of any additional residential wood heat programs in Georgia, please contact us and we will add the information here.

State: Hawaii

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Hawaii does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Hawaii.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Hawaii incentive programs focus on electrical-generating solar and wind renewable energy systems rather than thermal applications and biomass.
Adopts stricter emission standards than federal regulations.	+0	No, Hawaii adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, Hawaii's Department of Natural Resources website has guidelines for general air quality standards but does not address the operation or installation of wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+0	No, Hawaii's Department of Health website has guidelines for general air quality standards but not for the burning of wood or use of woodstoves.
Extra Credit	--	We are not aware of other biomass heat programs or activities.
	GRADE D	TOTAL 0
		If you know of any additional residential wood heat programs in Hawaii, please contact us and we will add the information here.

State: Idaho

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Idaho does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Idaho.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Yes, stoves meeting EPA or Oregon Department of Environmental Quality Standards are eligible for a low-interest loan from the Idaho Office of Energy Resources. Loan amounts range from \$1,000-\$15,000, at an interest rate of 4%. For more information: http://www.forgreenheat.org/incentives/states/idaho.html
Adopts stricter emission standards than federal regulations.	+0	No, Idaho adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+2	Yes, the Idaho Department of Environmental Quality website provides guidelines for cleaner burning and guidelines for woodstove owners as well as various regulations regarding the sale and use of stoves. It can be accessed here . The link above also contains a decent amount of air quality information and links to useful resources.
Funds change-out programs to replace old, polluting stoves.	+3	Yes, under the Residential Alternative Energy tax deduction, 40% of purchase and installation costs can be deducted in the first year, and 20% the next three years. There is a maximum deduction of \$5,000 each year, and a maximum of \$20,000 total. This tax incentive is only available for residents who turn in old stoves and replace an old, non-EPA certified stove in their home. Preten, Pinehurst and the Nez Perce Tribe also have had local change-out programs. For more information: http://www.forgreenheat.org/incentives/change_out_program.html
Extra Credit	--	Old uncertified or newer exempt stoves cannot be re-sold if a resident is applying for a tax credit on a new model. The stove must be destroyed by a recycling company and the receipt filed with tax returns.
	GRADE B	TOTAL 6
		If you know of any additional residential wood heat programs in Idaho, please contact us and we will add the information here.

State: Illinois

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+1	At least one local government, Rock Falls, mandates setbacks of 25 feet from property lines for all OWBs. Those with EPA Phase I qualification and those which burn only corn/pellets have more lenient setbacks than uncertified models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Illinois.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Illinois does not currently offer any state incentives for residential biomass systems, although there is an unfunded program for CHP systems. Their programs focus on solar electricity and solar water heater installations.
Adopts stricter emission standards than federal regulations.	+0	No, Illinois adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, Illinois's Environmental Protection Agency website addresses open burning but does not address the operation, installation or emissions of wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+1	Yes, in 2000-2001 Illinois participated in the HPBA Great Lakes States wood stove change-out program. It was an early success story and broke new ground with several tactics that are now part of all model programs. For more information: http://woodstovechangeout.org/index.php?id=25
Extra Credit	--	We are not aware of other biomass heat programs or activities.
	GRADE C	TOTAL 2
		If you know of any additional residential wood heat programs in Illinois, please contact us and we will add the information here.

State: Indiana

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+1	In 2006, local governments in Evansville City and Indianapolis enacted municipal regulations banning new installations of OWBs. Evansville grandfathered in existing units. There is a draft rule as of February 10, 2011, Rule 326, proposing restricting OWBs to EPA certified units and imposing stack height and setback limits.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Indiana.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Indiana does not currently offer any state incentives for residential biomass systems of fuel. Their programs focus on solar and geothermal installations, as well as energy efficiency measures.
Adopts stricter emission standards than federal regulations.	+0	No, Indiana adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+1	Yes, Indiana's Department of Environmental Management provides a .pdf fact sheet describing the emissions and health effects of wood burning and how to reduce pollution from indoor burning. It can be accessed here .
Funds change-out programs to replace old, polluting stoves.	+1	Yes, in 2000-2001 Indiana participated in the HPBA Great Lakes States wood stove change-out program. It was an early success story and broke new ground with several tactics that are now part of all model programs. For more information: http://woodstovechangeout.org/index.php?id=25
Extra Credit	--	Indiana has put significant resources into managing outdoor wood boilers. http://www.in.gov/idem/6507.html
	GRADE C	TOTAL 3
		If you know of any additional residential wood heat programs in Indiana, please contact us and we will add the information here.

State: Iowa

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+1	As a state, Iowa does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models. Central City has put a moratorium on all installations of OWBs within its city limits. Linn County is also considering similar legislation to regulate the boilers.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Iowa.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Iowa does not currently offer state incentives for residential biomass systems. Their programs focus on solar, wind, and methane systems as well as electricity generation.
Adopts stricter emission standards than federal regulations.	+0	No, Iowa adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+1	A very short section of the Iowa Department of Natural Resources website addresses proper burning habits, along with other tips for improving air quality. It is accessible here .
Funds change-out programs to replace old, polluting stoves.	+1	Yes, in 2000-2001 Iowa participated in the HPBA Great Lakes States wood stove change-out program. It was an early success story and broke new ground with several tactics that are now part of model programs. For more information: http://woodstovechangeout.org/index.php?id=25
Extra Credit	--	We are not aware of other biomass heat programs or activities.
	GRADE C	TOTAL 3
		If you know of any additional residential wood heat programs in Iowa, please contact us and we will add the information here.

State: Kansas

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Kansas does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Kansas.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Kansas does not currently offer state incentives for residential biomass systems. Their programs focus on renewable electricity generation.
Adopts stricter emission standards than federal regulations.	+0	No, Kansas adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, the Kansas Department of Health and Environment website addresses particulate emissions but does not address the operation, installation or emissions of wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+0	No, Kansas does not specifically conduct change-out programs at a state or local level
Extra Credit	--	There is a section on choosing a home heating system, with information about wood heat at: www.douglas.ksu.edu/DesktopModules/ViewDocument.aspx?DocumentID=1746 .
	GRADE D	TOTAL 0
		If you know of any additional residential wood heat programs in Kansas, please contact us and we will add the information here.

State: Kentucky

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Kentucky does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Kentucky.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Kentucky does not currently offer state incentives for residential biomass systems.
Adopts stricter emission standards than federal regulations.	+0	No, Kentucky adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, the Kentucky Division for Air Quality Website discusses open burning and stack height regulations but does not address the operation, installation or emissions of wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+0	No, Kentucky does not specifically conduct change-out programs at a state or local level
Extra Credit	--	The University of Kentucky extension has a page on wood stove safety at https://www.ca.uky.edu/news/?c=n&d=519 .
	GRADE D	TOTAL 0
		If you know of any additional residential wood heat programs in Kentucky, please contact us and we will add the information here.

State: Louisiana

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Louisiana does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Louisiana.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Louisiana does not currently offer state incentives for residential biomass systems.
Adopts stricter emission standards than federal regulations.	+0	No, Louisiana adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, the Louisiana Department of Environmental Quality website does not address the operation, installation or emissions of wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+0	No, Louisiana does not specifically conduct change-out programs at a state or local level
Extra Credit	--	We are not aware of other biomass heat programs or activities.
	GRADE D	TOTAL 0
		If you know of any additional residential wood heat programs in Louisiana, please contact us and we will add the information here.

State: Maine

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+3	Yes, 2008 regulations allow only new installations of only Phase II qualified boilers. Setback distances have been set. Unqualified units still in use must be located 250ft from the nearest property line. Phase I units must be installed 100ft from the nearest property line, and 50ft for Phase II units. No outdoor wood boiler, no matter its emission rating, may be placed closer than 500ft from the property line of a state licensed school, daycare, or health facility.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Maine.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Yes. At the state level, the Home Energy Loan Program (HELP) provides low-interest loans to low-income households for energy improvements. Efficient wood and pellet stoves qualify as heating system replacements, and are eligible for \$2,800-\$30,000 loans at a fixed rate of 3.95%. Income limits apply - most Maine homeowners are eligible. For more information: http://www.forgreenheat.org/incentives/states/maine.html .
Adopts stricter emission standards than federal regulations.	+0	No, Maine adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+3	Yes, the Maine Bureau of Air Quality website includes pages covering outdoor wood boilers and wood smoke concerns in its topics of interest section. It can be accessed here . Also, the Maine Bureau of Air Quality has a page devoted to wood stove emissions here .
Funds change-out programs to replace old, polluting stoves.	+0	No, Maine does not currently conduct change-out programs at a state or local level. Local dealers may offer change-out deals.
Extra Credit	--	Maine is engaged on variety of levels, including a draft goal by the former governor for 1/10 homes in the state to have a pellet stove by 2010.
	GRADE B	TOTAL 7
		If you know of any additional residential wood heat programs in Maine, please contact us and we will add the information here.

State: Maryland

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+2	Yes, Maryland only allows the installation of Phase II units but the state does not have any property set-backs.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of Maryland.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Yes. At the state level, the Wood Heating Fuel Exemption says that all wood or "refuse derived" heating fuel for residential use is tax-free. At the local level in Montgomery County, residents are eligible for a \$250 property tax credit through the Renewable Energy Tax Credit. A wood or pellet stove will be assessed as an energy conservation device. For more information: http://www.forgreenheat.org/incentives/states/maryland.html .
Adopts stricter emission standards than federal regulations.	+0	No, Maryland adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+1	Yes, the Maryland Department of Natural Resources addresses firewood.
Funds change-out programs to replace old, polluting stoves.	+0	No, Maryland has not conducted change-out programs at the state or local level, although there is interest in a outdoor wood boiler change-out.
Extra Credit	--	In the 2011 session of the legislature, HB 829 was introduced to begin a residential wood or pellet stove grant program. http://mlis.state.md.us/2011rs/bills/hb/hb0829f.pdf
	GRADE B-	TOTAL 4
		If you know of any additional residential wood heat programs in Maryland, please contact us and we will add the information here.

State: Massachusetts

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+3	Yes. Starting in December 2008, only EPA Phase II qualified models may be installed in the state. There are setback and stack height regulations as well. Residential heaters must be located at least 50 feet from the home it is heating and at least 75 feet from the nearest home. All new or existing smokestacks must extend two feet higher than any roof structure within 150 feet of the unit.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Massachusetts.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No. Massachusetts does not currently offer state incentives for residential biomass systems.
Adopts stricter emission standards than federal regulations.	+0	No, Massachusetts adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+2	Yes, an extensive page on the Massachusetts Department of Environmental Protection website provides information on state regulation, choosing the right stove, burning cleanly, emissions and health impacts of wood smoke and outdoor wood boilers. It can be accessed here .
Funds change-out programs to replace old, polluting stoves.	+0	No, Massachusetts does not conduct change-out programs at the state or local level. Residents are referred to periodic EPA change-out programs.
Extra Credit	--	Massachusetts has engaged in extensive research and activity regarding wood mainly for electricity, but also for thermal applications.
	GRADE B-	TOTAL 5
		If you know of any additional residential wood heat programs in Massachusetts, please contact us and we will add the information here.

State: Michigan

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+1	Yes, on a local level, Manton City Council banned outdoor wood boilers and furnaces. The Michigan Department of Environmental Quality web site urges residents not to install one of these units, but there is no legislation regulating their use.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Michigan.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No. There are no known incentives for residents of Michigan
Adopts stricter emission standards than federal regulations.	+0	No, Michigan does not currently offer state incentives for residential biomass systems.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+2	Yes, the Michigan Department of Environmental Quality website provides tips for cleaner burning and provides links to outside sites with additional information. It can be accessed here .
Funds change-out programs to replace old, polluting stoves.	+3	Yes, in 2000-2001 Michigan worked with the HPBA to participate in the Great Lakes States wood stove change-out program. It was an early success story and broke new ground with several tactics that are now part of all model programs. In 2008, The Great Michigan Change-out Campaign offered up to \$500 in rebates and discounts toward the purchase and installation of a new stove. Retailers and the Michigan United Conservation Clubs also offered significant discounts and/or rebates as a part of the campaign. For more information: http://woodstovechangeout.org/index.php?id=25 and http://www.forgreenheat.org/incentives/states/michigan.html
Extra Credit	--	Michigan was one of the states petitioning EPA to regulate outdoor wood boilers, and has engaged in numerous initiatives to help residents better heat with wood. Michigan Department of Environmental Quality published a model Michigan Model Ordinance (pdf).

Evaluated By: Alliance for Green Heat

	GRADE B	TOTAL 6	If you know of any additional residential wood heat programs in Michigan, please contact us and we will add the information here.
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State: Minnesota

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+1	Yes, the town of Shorewood requires all 'outdoor wood burning furnaces' to meet EPA requirements, a setback limit of 200 ft, chimney above 20 ft, on no property smaller than three acres and is restricted from burning in the summer. The town of Houston follows similar restrictions while the town of La Crescent bans them entirely.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect and can be installed in the state of Minnesota.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No. There are no known incentives for residents of Michigan
Adopts stricter emission standards than federal regulations.	+0	No, Minnesota adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+3	Yes, the Minnesota Pollution Control Agency provides a section on its website providing information on the dangers of wood smoke, how to lodge a complaint and best burn practices. It is available here . Also, the Minnesota Pollution Control Agency website contains a section thoroughly describing wood smoke emissions and health effects here .
Funds change-out programs to replace old, polluting stoves.	+1	Yes, the Minnesota Pollution Control Authority worked with the HPBA to participate in the Great Lakes States change-out program in 2000 and 2001. There are no known current programs in place. For more information: http://woodstovechangeout.org/index.php?id=25 .
Extra Credit	--	
	GRADE B-	TOTAL 5
		If you know of any additional residential wood heat programs in Minnesota, please contact us and we will add the information here.

State: Mississippi

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Mississippi does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Mississippi.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Mississippi does not currently offer state incentives for residential biomass systems.
Adopts stricter emission standards than federal regulations.	+0	No, Mississippi adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, the Mississippi Department of Environmental quality does not address the operation, installation or emissions of wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+0	No, Mississippi does not conduct change-out programs at the state or local level.
Extra Credit	--	The Mississippi State University Extension has studied on wood pellets at http://msucares.com/news/print/fwnews/fw10/100211.html .
	GRADE D	TOTAL 0
		If you know of any additional residential wood heat programs in Mississippi, please contact us and we will add the information here.

State: Missouri

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Missouri does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Missouri.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Yes, The Wood Energy Tax Credit, as effective January 1, 1997, allows individuals or businesses processing Missouri forestry industry residues into fuels an income tax credit of \$5.00 per ton of processed material, e.g. wood pellets. For more information: http://www.forgreenheat.org/incentives/states/missouri.html .
Adopts stricter emission standards than federal regulations.	+0	No, Missouri adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, Missouri's Department of Natural Resources website does not address the operation, installation or emissions of wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+0	No, Missouri does not conduct change-out programs at the state or local level.
Extra Credit	--	The University of Missouri Extension has a pdf file on wood fuel for heating at extension.missouri.edu/explorepdf/agguides/forestry/g05450.pdf .
	GRADE C-	TOTAL 1
If you know of any additional residential wood heat programs in Missouri, please contact us and we will add the information here.		

State: Montana

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Montana does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect and can be installed in the state of Montana.
Provides state or local incentives for purchase of cleaner biomass stoves.	+3	Yes. The Montana Alternative Energy Systems Credit works at the state level, providing up to \$500 tax credit for installing a non-fossil form of energy such as a low emission biomass combustion device. 100% of purchase and installation costs can be claimed through property tax exemptions up to \$20,000 for a single family or \$100,000 for multi-family/commercial applications. The Alternative Energy Revolving Loan Program also provides loans to individuals or businesses, including purchasing and installing biomass systems. Montana's incentive programs are described at: http://www.forgreenheat.org/incentives/states/montana.html .
Adopts stricter emission standards than federal regulations.	+0	No, Montana adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+1	Yes, Montana's Department of Natural Resources website includes information on proper use of biomass stoves within their forestry section. It can be accessed here . However, no wood stove emissions educational page is available.
Funds change-out programs to replace old, polluting stoves.	+2	Yes, programs can be found at the county level. In Lincoln County, residents who qualify for public assistance and use wood-burning appliances that are more than 8 years old can apply for a full wood stove replacement . Libby, Montana was the site of a very well publicized concentrated effort by the EPA and HPBA to conduct a full change-out between 2005 and 2007. The Libby change-out replaced 1,130 non-EPA woodstoves in one community. Gallatin County also had a change-out program.
Extra Credit	--	http://www.montana.edu/wwwpb/pubs/mt8405.html
	GRADE B	TOTAL 6
		If you know of any additional residential wood heat programs in Montana, please contact us and we will add the information here.

State: Nebraska

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Nebraska does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect can be installed in the state of Nebraska.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Yes, Nebraska provides loans for home energy improvements, including biomass systems, through the Dollar and Energy Savings Loans program. It is partially funded through the ARRA. This program applies to fireplace inserts with dedicated outdoor air intake and EPA certified wood stoves. These devices must also be shown to replace an existing form of heat. For more information: http://www.forgreenheat.org/incentives/states/nebraska.html
Adopts stricter emission standards than federal regulations.	+0	No, Nebraska adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+2	Yes, Nebraska's Energy Office provides an in-depth page describing everything from the various types of wood burning appliances and maintenance to storing wood and building fires. It can be accessed here . However, no wood stove emissions educational page is available.
Funds change-out programs to replace old, polluting stoves.	+1	Yes, in 2000-2001 Nebraska participated in the HPBA Great Lakes States wood stove change-out program. It was an early success story and broke new ground with several tactics that are now part of all model programs. There are no current change-out programs. For more information: http://woodstovechangeout.org/index.php?id=25 .
Extra Credit	--	There is a University of Nebraska fact sheet on wood burning, a version is available here .
	GRADE B-	TOTAL 4
If you know of any additional residential wood heat programs in Nebraska, please contact us and we will add the information here.		

State: Nevada

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Nevada does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of Nevada.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No. There are no known incentives for residents of Nevada.
Adopts stricter emission standards than federal regulations.	+0	No, Nevada adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, Nevada's Bureau of Air Quality Planning's website posts warnings about open burning, but does not address the operation, installation or emissions of wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+1	At the county level, the Washoe County District Health Department has teamed up with local businesses to offer refunds up to \$600 on the purchase of a new, EPA-certified wood or pellet stove when replacing a pre-1992 stove. For more information: http://www.forgreenheat.org/incentives/change_out_program.html
Extra Credit	--	In Washoe County, pellet stoves may be installed in any home but fireplaces and wood stoves may only be installed on lots of 1 acre or more. When a house is sold, solid fuel burning units must be inspected by a registered wood stove inspector.
	GRADE C-	TOTAL 1
If you know of any additional residential wood heat programs in Nevada, please contact us and we will add the information here.		

State: New Hampshire

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+3	Yes, after April 1, 2010, all boilers sold must meet EPA Phase II emission level boilers. Unqualified units must be 200ft from the nearest residence, with a stack 2ft higher than the peak of any occupied building within 300ft of the unit. Phase I units must be located 100ft from the nearest property line, with the same stack height rules as an unqualified boiler. Phase II units must be 50ft from the nearest property line- they do not have stack limits.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of New Hampshire.
Provides state or local incentives for purchase of cleaner biomass stoves.	+3	Yes, the Residential Bulk-Fed Wood-Pellet Central Boiler and Furnace Rebate Program offers a 30% tax credit up to \$6,000 for homeowners who install high efficiency, bulk-fed biomass central heating systems. Additionally, the Local Option Property Tax Exemption allows cities and towns to offer property tax exemptions on the assessed value of a renewable system on the property. It applies to wood-fired central heating systems. Twenty eight cities and towns offered this incentive for wood burning appliances as of 2008. For more information: http://www.forgreenheat.org/incentives/states/new_hampshire.html .
Adopts stricter emission standards than federal regulations.	+0	No, New Hampshire adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+3	Yes, the New Hampshire Department of Environmental Services has published an environmental fact sheet on wood stoves and air pollution as a .pdf file. It covers the public health risk from wood smoke, selecting and installing a stove, choosing proper fuel, and proper burning techniques. It can be accessed here .
Funds change-out programs to replace old, polluting stoves.	+1	The Keene Change-Out provides rebates of \$1,000 for replacement of currently operating non-EPA-certified woodstoves with new certified wood, or pellet stoves.
Extra Credit	--	New Hampshire's climate action plan specifically mentions using wood for heating and CHP electricity production to reduce dependence on imported fuels and create economic opportunities within the state.

	GRADE A	TOTAL 10	If you know of any additional residential wood heat programs in New Hampshire, please contact us and we will add the information here.
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State: New Jersey

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+1	Yes, New Jersey law NJAC 7:27-3 mandates that stationary devices like OWBs may not produce visible smoke for more than 3 minutes in any 30 minute period. This essentially renders any installation of OWBs at a residence illegal, and infractions carry charges of \$300 for a first offense of any reported visible smoke.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of New Jersey.
Provides state or local incentives for purchase of cleaner biomass stoves.	+2	Yes, New Jersey provides property tax exemption covering 100% of added value for any sustainable biomass systems that meets on site heating demands. More information is available at http://www.forgreenheat.org/incentives/states/new_jersey.html .
Adopts stricter emission standards than federal regulations.	+0	No, New Jersey adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+2	Yes, a .pdf is available from the New Jersey Department of Environmental Protection cautioning residents to use EPA certified stoves whenever possible and follow clean burn practices like avoiding green or treated wood. It is available here , and lists wood stove emissions and health effects. Information on wood burning, specifically on OWBs is available here .
Funds change-out programs to replace old, polluting stoves.	+0	No, New Jersey does not conduct change-out programs at the state or level.
Extra Credit	--	We are not aware of other biomass heat programs or activities.
GRADE B-	TOTAL 5	If you know of any additional residential wood heat programs in New Jersey, please contact us and we will add the information here.

State: New Mexico

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, New Mexico does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of New Mexico.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No. There are no known incentives for residents of New Mexico
Adopts stricter emission standards than federal regulations.	+0	No, New Mexico adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+1	Yes, the New Mexico Environment Department website does have some information on managing smoke emissions. It can be accessed here .
Funds change-out programs to replace old, polluting stoves.	+1	Yes, at the local level. There was a local change-out program in Questa New Mexico.
Extra Credit	--	We are not aware of other biomass heat programs or activities.
	GRADE C	TOTAL 2
		If you know of any additional residential wood heat programs in New Mexico, please contact us and we will add the information here.

State: New York

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+3	Yes, at the state level there are restrictions requiring all new OWBs to be EPA qualified, 100ft setbacks and stack height requirements. At the local level, thirty five NY municipalities have reportedly banned OWBs entirely. An additional 28 municipalities have enacted some degree of regulations to limit boiler installation and use. Stack heights must be a minimum of 18 feet. The full list and explanations are available here .
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of New York.
Provides state or local incentives for purchase of cleaner biomass stoves.	+2	Yes, there are several state incentives in New York. A minor incentive comes in the form of New York's elimination of state sales tax on the purchase of wood pellet fuel. The Energy Conservation Improvements Property Tax Incentive allows 100% of added value to a property from an EPA-certified biomass fueled stove to be exempt from state property taxes. There is also a loan program of \$2,500-\$20,000 at a rate of 5.99% APR, which includes EPA Phase II wood or pellet stoves as energy efficiency devices. To be eligible, an approved BPI-certified contractor must install the stove. For more information: http://www.forgreenheat.org/incentives/states/new_york.html
Adopts stricter emission standards than federal regulations.	+0	No, New York adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, the New York Department of Environmental Conservation focuses on burn barrels and other open burning rather than burning in enclosed stoves on its website. No wood stove emissions educational page is available.
Funds change-out programs to replace old, polluting stoves.	+0	No, New York does not currently conduct change-out programs at the state or local level.
Extra Credit	--	We are not aware of other biomass heat programs or activities.
	GRADE B-	TOTAL 5
		If you know of any additional residential wood heat programs in New York, please contact us and we will add the information here.

State: North Carolina

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, North Carolina does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of North Carolina.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Yes, on a local scale, North Carolina has implemented a Local Financing Program for Renewable Energy and Energy Efficiency which authorizes cities and counties to provide a revolving and hypothetically indefinite loan for energy efficiency measures that could thermal biomass systems. For more information: http://www.forgreenheat.org/incentives/states/north_carolina.html .
Adopts stricter emission standards than federal regulations.	+0	No, North Carolina adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, the North Carolina Department of Environment and Natural Resources website does not address the operation, installation or emissions of wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+0	No, North Carolina does not currently conduct change-out programs at the state or local level.
Extra Credit	--	The North Carolina University Extension has an article on wood heating safety at http://jackson.ces.ncsu.edu/index.php?page=news&ci=ENVI+5 .
	GRADE C-	TOTAL 1
		If you know of any additional residential wood heat programs in North Carolina, please contact us and we will add the information here.

State: North Dakota

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, North Dakota does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of North Dakota.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, North Dakota's incentive programs focus on fuel and electrical-generating renewable energy systems rather than thermal applications.
Adopts stricter emission standards than federal regulations.	+0	No, North Dakota adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, North Dakota's Division of Air Quality's website posts warnings about open burning, but does not address the operation, installation or emissions of wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+1	Yes, in 2000 and 2001 North Dakota participated in the HPBA Great Lakes States change-out program. There are no known change-outs currently in place at the state or local level. For more information: http://woodstovechangeout.org/index.php?id=25 .
Extra Credit	--	We are not aware of other biomass heat programs or activities.
	GRADE C-	TOTAL 1
		If you know of any additional residential wood heat programs in North Dakota, please contact us and we will add the information here

State: Ohio

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+1	Yes, several townships and counties in Ohio have enacted setback requirements and other regulations on OWBs, including Canton, Jackson, Nimishillen, and Osnauburg. In 2008, Ohio EPA issued draft rules concerning OWBs which would limit months of legal use, require 200ft setbacks and stack height minimums for all new units, and set emissions limits for OWBs in restricted areas (villages/cities) and unrestricted areas.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of Ohio.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Ohio does not offer any state incentives for residential biomass systems.
Adopts stricter emission standards than federal regulations.	+0	No, Ohio adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No. A few alerts have been published by the Ohio State Fire Marshall's office warning residents about the dangers of wood stoves, but there are no state pages educating residents on how to properly install and use a wood stove or on wood stove emissions.
Funds change-out programs to replace old, polluting stoves.	+1	Yes, in 2006-2007 Dayton, Ohio helped to fund the Greater Dayton Woodstove Change-out Program. Ninety two stoves were changed in 2006-2007. There was also a change-out program in Washington County. There are no current change-outs being conducted in the state. For more information: http://www.forgreenheat.org/incentives/change_out_program.html .
Extra Credit	--	We are not aware of other biomass heat programs or activities.
GRADE C	TOTAL 2	If you know of any additional residential wood heat programs in Ohio, please contact us and we will add the information here.

State: Oklahoma

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Oklahoma does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of Oklahoma.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Oklahoma does not offer incentives for thermal biomass
Adopts stricter emission standards than federal regulations.	+0	No, Oklahoma adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, Oklahoma's Department of Environmental Quality's website does not address the operation, installation or emissions of wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+0	No, Oklahoma does not currently conduct change-out programs at the state or local level.
Extra Credit	--	Oklahoma State University Extension has an article on firewood at mastergardener.okstate.edu/articles/.../10-16-09%20Firewood.doc .
	GRADE D	TOTAL 0
If you know of any additional residential wood heat programs in Oklahoma, please contact us and we will add the information here		

State: Oregon

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+1	Yes, the Oregon Environmental Quality Commission passed the Heat Smart for Clean Air bill (SB102) in 2009, which sets emission standards for outdoor wood boilers in the state.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+2	Yes, in Oregon “no person may sell, offer to sell or advertise to sell a used, non-certified woodstove and no building permits will be issued for the installation of a used, non-certified woodstove.” This mainly applies to older stoves because exempt stoves, as of the time this report was being finalized, may still be sold.
Provides state or local incentives for purchase of cleaner biomass stoves.	+3	Yes. At the state level, the Residential Energy Tax Credit provides a tax credit for the purchase of new energy efficient wood and pellet stoves. The credit is \$300 or 25% of the net purchase price of the stove. Qualifying stoves must meet Washington State standards: 4.5g/hr for non-catalytic wood stoves and 2.5 g/hr for catalytic wood stoves or pellet stoves. Oregon also offers a \$10 tax credit per cord of dry wood or ton of pellets purchased for a stove meeting the WA emission standards. Oregon provides a 100% property tax exemption for any renewable energy systems, including biomass, which are used to heat homes under the Renewable Energy Systems Exemption. For more information: http://www.forgreenheat.org/incentives/states/oregon.html .
Adopts stricter emission standards than federal regulations.	+0	Oregon adheres to federal standards for general use.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+3	Yes, the Oregon Department of Energy has a page on biomass emissions, including from wood, here . However, the Oregon Department of Agriculture website also posts warnings about open burning.
Funds change-out programs to replace old, polluting stoves.	+2	Yes, Jackson and Klamath Counties provide a low-income wood stove change-out program, which assists needy families in switching out non-certified solid fuel heating devices including biomass. Other programs include Oakridge and Pendleton County. For more information: http://www.forgreenheat.org/incentives/change_out_program.html .

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Extra Credit	--	If an old non-certified or exempt stove is removed from a home, it may not be resold or reinstalled elsewhere, and uncertified stoves must be removed when a home is sold.	
	GRADE A	TOTAL 11	If you know of any additional residential wood heat programs in Oregon, please contact us and we will add the information here.

State: Pennsylvania

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+3	Yes, at the state level there is a restriction requiring new purchases and installations of OWB be EPA Phase II certified. There is a 50 foot setback from the property line requirement as well as a minimum stack height of 10 feet above the ground. Existing units were grandfathered in. More information here .
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of Pennsylvania.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	A loan program, now expired, was available in Pennsylvania through the Keystone HELP loan program for the purchase of a wood or pellet furnace (does not apply to stoves) that is at least 78% efficient. For more information: http://www.forgreenheat.org/incentives/states/pennsylvania.html .
Adopts stricter emission standards than federal regulations.	+0	No, Pennsylvania adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, the Pennsylvania Department of Environmental Protection has published fact sheets on open burning but not on biomass stoves.
Funds change-out programs to replace old, polluting stoves.	+1	Yes. Pennsylvania does not currently conduct change-out programs at a state level, but the state worked with the HBPA on a huge change-out in the Pittsburgh area in 2005. For more information: http://woodstovechangeout.org/index.php?id=26 .
Extra Credit	--	The town of Smethport is making headlines as it works to become the first small US town to use a woody biomass powered CHP system for district heating. After visiting Austrian sites, local foresters are working with government officials to realize the project.
	GRADE B-	TOTAL 5
		If you know of any additional residential wood heat programs in Pennsylvania, please contact us and we will add the information here.

State: Rhode Island

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+1	Yes, at the local level. North Smithfield and Woonsocket passed ordinances regulating the use of OWBs in 2008 and several other towns are considering drafting their own. In January 2010, a bill was introduced to the legislature, which would regulate OWBs at the state level. HB5218 would allow only Phase I or Phase II boilers to be installed in the state of Rhode Island. Phase I boilers would have a setback of 100 feet from the nearest property line and a stack 2 feet taller than the roof peak of any building within 300 feet of the unit. Phase II boilers would be required to sit at least 50 feet from the nearest property line.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of Rhode Island. The proposed bill HB5728 would have banned the installation or use of any non EPA-certified wood-burning stove that is not at least 50 feet from any lot line and 200 feet from any house other than the one it heats but failed to pass.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Yes. Residents can contact their local government to see if biomass is eligible in their area for the Local Option Property Tax Exemption for Renewable Energy Systems. The state-level statute does not define a “renewable energy system,” so it is left to local governments to decide if wood stoves or boilers are applicable. For more information: http://www.forgreenheat.org/incentives/states/rhode_island.html .
Adopts stricter emission standards than federal regulations.	+0	No, Rhode Island adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, the Rhode Island Department of Environmental Management website does not address the operation, installation or emissions of wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+0	No, Rhode Island does not conduct change-out programs at the state or local level.
Extra Credit	--	We are not aware of other biomass heat programs or activities.

Evaluated By: Alliance for Green Heat

	GRADE C	TOTAL 2	If you know of any additional residential wood heat programs in Rhode Island, please contact us and we will add the information here.
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State: South Carolina

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, South Carolina does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or Installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of South Carolina.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, South Carolina does not offer any state incentives for residential biomass systems.
Adopts stricter emission standards than federal regulations.	+0	No, South Carolina adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, the South Carolina Department of Health and Environmental Control website discusses open burning but does not address the operation, installation or emissions of wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+0	No, South Carolina does not conduct change-out programs at the state or local level.
Extra Credit	--	We are not aware of other biomass heat programs or activities.
	GRADE D	TOTAL 0
		If you know of any additional residential wood heat programs in South Carolina, please contact us and we will add the information here.

State: South Dakota

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, South Dakota does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of South Dakota.
Provides state or local incentives for purchase of cleaner biomass stoves.	+2	Yes, South Dakota offers a property tax exemption for renewable energy systems, including wood and pellet-fired furnaces (not stoves). This exemption covers 100% of installed cost, with the full system value subtracted from property taxes for the first three years, then 75% 50% and 25% in the following three years, respectively. This incentive is adjusted to allow for the federal income tax credit in determining the installed cost of the system. For more information: http://www.forgreenheat.org/incentives/states/south_dakota.html .
Adopts stricter emission standards than federal regulations.	+0	No, South Dakota adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, South Dakota's Department of Environment and Natural Resources' website posts warnings about open burning, but not enclosed burning in wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+1	Yes, in 2000 and 2001 South Dakota participated in the HPBA Great Lakes States change-out program. There are no known change-outs currently in place at the state or local level. For more information: http://woodstovechangeout.org/index.php?id=25 .
Extra Credit	--	OWB nuisance complaints could be addressed under restriction 74:36:12:01 , which states that the owner or operator of a source may not discharge into the ambient air from a single unit of emissions an air pollutant of a density equal to or greater than that designated as 20 percent opacity.

Evaluated By: Alliance for Green Heat

	GRADE C	TOTAL 3	If you know of any additional residential wood heat programs in South Dakota, please contact us and we will add the information here.
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State: Tennessee

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Tennessee does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of Tennessee.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Tennessee does not offer any state incentives for residential biomass systems.
Adopts stricter emission standards than federal regulations.	+0	No, Tennessee adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, the Tennessee Department of Environment and Conservation posts warnings about open burning, but not enclosed burning in wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+0	No, Tennessee does not conduct change-out programs at the state or local level.
Extra Credit	--	The University of Tennessee Extension has material on heating with wood here .
GRADE D	TOTAL 0	If you know of any additional residential wood heat programs in Tennessee, please contact us and we will add the information here.

State: Texas

Criteria	Score	Comments	
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Texas does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.	
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of Texas.	
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Yes, the Texas property tax code allows exemptions for the appraised property value that arises from the installation of a device designed to produce thermal energy, including biomass. For more information: http://www.forgreenheat.org/incentives/states/texas.html .	
Adopts stricter emission standards than federal regulations.	+0	No, Texas adheres to federal standards.	
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, the Texas Commission on Environmental Quality website has general advisories on air quality but does not address the operation, installation or emissions of wood or pellet stoves.	
Funds change-out programs to replace old, polluting stoves.	+0	No, Texas does not conduct change-out programs at the state or local level.	
Extra Credit	--	We are not aware of other biomass heat programs or activities.	
	GRADE C-	TOTAL 1	If you know of any additional residential wood heat programs in Texas, please contact us and we will add the information here.

State: Utah

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Utah does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of Utah.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Utah specifically states that its residential and even commercial biomass incentives apply only to fuel or electricity production. Biomass thermal is ineligible for state tax incentives.
Adopts stricter emission standards than federal regulations.	+0	No, Utah adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+2	Yes, Utah’s Division of Air Quality provides information on its website covering selecting the right wood, buying and improving stoves, and burning cleaner. It is available here .
Funds change-out programs to replace old, polluting stoves.	+0	No, Utah has not participated in or conducted any change-out programs at the state or local level.
Extra Credit	--	On “red” days in the Utah Winter Air Quality Program, staff inspects valleys for smoke coming from chimneys to administer fines. Highly efficient stoves do not produce visible chimney smoke. The Utah State University Extension service also provides this educational document available here .
	GRADE C	TOTAL 2 If you know of any additional residential wood heat programs in Utah, please contact us and we will add the information here.

State: Vermont

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+3	Yes, at the state level. All OWBs sold or distributed in Vermont after March 31, 2008 are required to meet NESCAUM's particulate matter recommended emission limits of 0.44lb/mmBTU. All OWBs must be at least 200 feet from any home other than the one it serves, effectively eliminating their use in densely populated suburban areas. Stacks must extend higher than the roof peak of the structure it serves if any other home is located within 500 feet of the boiler.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of Vermont.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Yes, PACE financing did provide loans for home energy improvements including biomass in some municipalities. The loan is typically repaid via a special property assessment over a 20 year period. For more information: http://www.forgreenheat.org/incentives/states/vermont.html .
Adopts stricter emission standards than federal regulations.	+0	No, Vermont adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+1	Yes, a short page on the Vermont Department of Environmental Conservation website provides tips for cleaner burning and warns of the dangers of breathing compounds found in wood smoke. It can be accessed here .
Funds change-out programs to replace old, polluting stoves.	+2	Yes, in the past. In 2009, the Woodstove Change-out Campaign provided vouchers for rebates of \$450 to encourage people to replace their old, conventional woodstoves with a certified wood, pellet or gas stove that burns more cleanly and efficiently. Funding was limited and organizers do not have another change-out planned. For more information: http://www.forgreenheat.org/incentives/change_out_program.html .
Extra Credit	--	Twenty percent of Vermont's students attend a school heated by wood. While not a carbon reduction plan per se, Vermont has established a feed-in tariff or standard offer for renewable electricity and heat, which requires utilities to pay a fixed contract price for wind, solar, biomass, and hydroelectric power.

	GRADE B	TOTAL 7	If you know of any additional residential wood heat programs in Vermont, please contact us and we will add the information here.
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State: Virginia

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Virginia does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of Virginia.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Yes, in Virginia multi-fuel heating stoves used for residential heating is exempt from state sales and use tax, although devices designed to burn cordwood are not included. For more information: http://www.forgreenheat.org/incentives/states/virginia.html .
Adopts stricter emission standards than federal regulations.	+0	No, Virginia adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+2	Yes, the Virginia Department of Mines, Minerals & Energy has published a .pdf file discussing home heating and cooling which includes an in-depth discussion of wood burning appliances and recommendations for using them safely. It can be accessed here . Discussion of wood stoves begins on the 16 th page. The link above also contains a section on wood heat and the environment with some discussion of emissions.
Funds change-out programs to replace old, polluting stoves.	+0	No, Virginia has not participated in or conducted any change-out programs at the state or local level.
Extra Credit	--	We are not aware of other biomass heat programs or activities.
	GRADE C	TOTAL 3
		If you know of any additional residential wood heat programs in Virginia, please contact us and we will add the information here.

State: Washington

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+2	Yes, installation of outdoor boilers is effectively banned in Washington since all wood appliances must meet Washington emissions standards of 4.5 grams per hour. The state is willing to consider allowing indoor or outdoor boilers whose manufacturers can show their units emit no more than 4.5 grams of fine particulate per hour.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+2	Yes, EPA exempt stoves may no longer be installed, resold, or given away for use in the state.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Washington does not offer any state incentives for residential biomass systems that are not part of change-out programs (see below).
Adopts stricter emission standards than federal regulations.	+3	Yes, Washington is the model for strict state emission standards. Non-catalytic biomass stoves must meet a limit of 4.5 grams per hour of particulate matter. For catalytic stoves, the limit is 2.5 grams per hour. Pellet stove manufacturers must also test to prove compliance with state law.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+3	Yes, the Washington Department of Ecology website provides a page on wood stoves, fireplaces, and pellet stoves. It outlines wood smoke emissions and health concerns, state regulations, and clean burning tips. It can be accessed here .
Funds change-out programs to replace old, polluting stoves.	+3	Yes, at a county and local level in many areas. Puget Sound provides rebates to exchange old stoves- \$750 for an EPA-certified woodstove or \$1,500 for a pellet stove. Low-income households are eligible for \$2,800 for wood and \$3,000 for pellets. Spokane County residents in the Smoke Control Zone can apply for a \$600-800 voucher when replacing an old, non-certified wood stove or fireplace insert. Klamath Falls and Darrington are running change-outs. Yakima County, Puget Sound, Colville, Lummi and Swinomish Tribe, Marysville, Vancouver, Whatcom/Island, Pend Oriella, Ferry and Steven County have all operated change-out programs in the past. For more information: http://www.forgreenheat.org/incentives/states/washington.html .
Extra Credit	--	Washington is engaged on many levels including the 1995 adoption of stricter emission standards established them as a leader in modern wood heat policies.

Evaluated By: Alliance for Green Heat

	GRADE A	TOTAL 12	If you know of any additional residential wood heat programs in Washington, please contact us and we will add the information here.
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State: West Virginia

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, West Virginia does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of West Virginia.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No. While there are currently no incentives available, the West Virginia legislature considered a bill that would have provide a one-time tax credit for residents who purchase a new pellet stove or EPA-certified wood stove. It would also have provided an additional credit for the purchase of wood pellets within the state of West Virginia.
Adopts stricter emission standards than federal regulations.	+0	No, West Virginia adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, the West Virginia Department of Environmental Protection website only discusses outdoor wood burning. No mention is made of woodstoves or boilers.
Funds change-out programs to replace old, polluting stoves.	+0	No, West Virginia has not conducted change-out programs at the state or local level.
Extra Credit	--	The West Virginia University Extension has a page on firewood at ext.wvu.edu/agriculture/safety/firewood .
	GRADE D	TOTAL 0
If you know of any additional residential wood heat programs in West Virginia, please contact us and we will add the information here.		

State: Wisconsin

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+1	Yes, at the local level. Several communities in Wisconsin have taken the step of creating ordinances that ban or regulate the use of OWBs. By 2007, at least 34 Wisconsin municipalities had passed regulations along these lines, including the towns of Mitchell and Wilson , as well as Lacrosse and Oneida counties. The Wisconsin Department of Natural Resources (DNR) has developed a guidance document and model ordinance for communities interested in regulating the installation and use of OWBs. As in many state, local health departments have the authority to address public health hazards and health nuisances under Wisconsin State Statute 254, including complaints about OWBs.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of Wisconsin.
Provides state or local incentives for purchase of cleaner biomass stoves.	+1	Yes. At the state level, Wisconsin's Renewable Energy Sales Tax Exemption has exempted biomass sold as fuel for residential use from state sales and use tax since 1979. Biomass was re-defined in 2007 to include energy crops, biological wastes, biomass residues, and landfill gas in addition to the original firewood. For more information: http://www.forgreenheat.org/incentives/states/wisconsin.html .
Adopts stricter emission standards than federal regulations.	+0	No, Wisconsin adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+1	Yes, a page on the Wisconsin Department of Health Services website addresses outdoor wood boilers and their associated emissions and health hazards. It is available here .
Funds change-out programs to replace old, polluting stoves.	+2	Yes. Wisconsin participated in the HPBA-sponsored Wood Stove Change-Out in 2000-2001. The Oneida Tribe also ran a change-out program and currently Dane County is offering a wood stove change-out program to replace older stoves with cleaner models.
Extra Credit	--	Wisconsin is engaged with wood heat in ways too numerous to list here and provides model text for their towns and counties to regulate outdoor wood burning: Full Text (pdf)

Evaluated By: Alliance for Green Heat

	GRADE B-	TOTAL 5	If you know of any additional residential wood heat programs in Wisconsin, please contact us and we will add the information here.
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State: Wyoming

Criteria	Score	Comments
Sets limitations on the installation of traditional outdoor wood boilers.	+0	No, Wyoming does not enforce voluntary EPA standards, allowing the sale and installation of both EPA-qualified and unqualified boiler models.
Limits sales and/or installation of stoves that are exempt from EPA regulation.	+0	No. New stoves that have been manufactured to be exempt from EPA regulation and stoves built before regulations took effect are legal for installation in the state of Wyoming.
Provides state or local incentives for purchase of cleaner biomass stoves.	+0	No, Wyoming's incentive programs focus only on solar electrical-generating renewable energy systems.
Adopts stricter emission standards than federal regulations.	+0	No, Wyoming adheres to federal standards.
Provides educational web pages on use of wood stoves and impact of wood smoke.	+0	No, Wyoming's Division of Air Quality's website posts restrictions and warnings about open burning, but not enclosed burning in wood or pellet stoves.
Funds change-out programs to replace old, polluting stoves.	+0	No, there are no known change-outs in place in Wyoming
Extra Credit	--	The University of Wyoming Extension has material on firewood at gf.state.wy.us/services/news/pressreleases/08/10/10/081010_4.asp - 30k.
GRADE D	TOTAL 0	If you know of any additional residential wood heat programs in Wyoming, please contact us and we will add the information here.