

# Biomass Thermal Utilization (BTU) Act of 2015 (H.R.1145, S.727)

House Co-sponsors: Representatives Welch (D-VT), Gibson (R-NY), Kuster (D-NH), Pingree (D-ME), Hanna (R-NY), Ashford (D-NE), Stefanik (R-NY), Guinta (R-NH), Tonko (D-NY), Peterson (D-MN), and Nolan (D-MN)

Senate Co-sponsors: Senators King (I-ME), Collins (R-ME), Shaheen (D-NH), Merkley (D-OR), Baldwin (D-WI), Ayotte (R-NH), Franken (D-MN)

## What is thermal biomass?

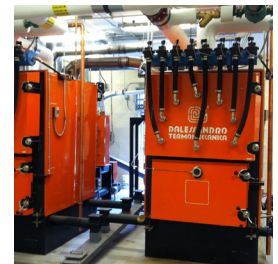
A thermal biomass system is a stove, furnace or boiler that runs on biomass fuels such as wood pellets and chips, solid wood or agricultural residues. The system produces thermal energy for heating residential, commercial and industrial buildings, as well as process heat for industrial applications.

Wood pellets, chips and solid wood are the most common fuels for biomass heating systems, although agricultural wastes will see growth in the future.

Wood pellets are generally made from wood waste, condensed under heat and pressure, with no additives. They have high energy density, low moisture content, and are as easy to transport and use as traditional

fossil fuels. Wood chips offer a slightly less refined form of biomass fuel, but also allow for easy transport and storage.

Advanced combustion technologies allow the use of biomass fuels with very high efficiencies and low emissions. Leading technologies have been developed in Europe, and are now entering the U.S. market. Domestic U.S. manufacturers are also developing advanced technologies.



*A biomass thermal system can provide hot air, water, and process heat*

## What are the economic and environmental benefits of renewable thermal biomass?

These technologies utilize fuels and feedstocks that support forest- and agricultural-based economic development in rural regions. Many rural regions are dependent on imported fossil heating fuels such as oil and propane, and do not have access to natural gas. Locally produced biomass fuels can displace dependence on these expensive imported fuels, thereby keeping fuel dollars local and greatly reducing heating costs.

Wood pellet and chip manufacturing, as well as dedicated production of agricultural feedstocks for thermal applications can help revitalize economies in regions that have been impacted by decline in forest industry or agriculture. Biomass thermal creates and helps retain jobs.

Biomass fuels are low carbon and result in net reduction of greenhouse gas emissions when displacing high carbon intensity fuels such as heating oil. In addition, the use of wood fuels reduces sulfur emissions that contribute to acid rain.

The use of biomass fuels produced in America helps strengthen American energy independence and security.



*Biomass fuels can be conveniently delivered in bulk*

## Why is the BTU Act important?

The BTU Act adds high efficiency biomass thermal technologies to the list of renewable energy technologies that current benefit from investment tax credits under section 25D (residential) and Section 48 (commercial/ industrial) of the tax code (see third page).

This investment credit currently applies to solar thermal and geothermal technologies, but not to biomass thermal. The BTU Act corrects this oversight. The BTU Act only qualifies the most efficient and advanced technologies for the credit.

Investment credits are needed for advanced

biomass thermal technologies because of their comparatively high up front capital cost. This "capital hurdle" must be overcome to build the market and gain economies of scale that will bring system costs down.

Similar policy has been very effective in reducing the cost of solar (PV and thermal) and geothermal technologies.

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## Legislative Summary

The BTU Act of 2015 seeks to recognize and promote the many economic and environmental benefits that biomass thermal energy provides by opening the door to two sections of the Internal Revenue Code that already incentivize renewable energy. Currently, a host of renewable energy technologies qualify for investment tax credits for capital costs incurred in residential and commercial installations. Simply, this legislation seeks to achieve parity between thermal biomass and other renewable systems.

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### Section 1

The title underscores that heat from biomass is an underutilized energy source in this country. Converting biomass—in the form of agricultural crop waste, wood chips, pellets or sawmill residuals— into thermal energy is one of the most efficient uses of this resource. Biomass heating systems now entering the marketplace operate at efficiency levels of 80 percent or higher.

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### Section 2, Residential Tax Credit

This provision adds biomass fuel property to the list of existing technologies that qualify for the residential renewable energy investment tax credit in Section 25d of the Internal Revenue Code. To qualify, the biomass fuel property must operate at a thermal efficiency rate of at least 75 percent Higher Heating Value (HHV) and be used to either heat space within the dwelling or heat water.

Included in this section is a broad definition of “biomass fuel.” The term applies both to agricultural and woody biomass, wood processing residues and wastes and grasses. Essentially, any plant derived fuel that is available on a recurring and renewable basis is eligible, including densified biomass fuel. This provision would apply to expenses incurred in years following 2015. This modification to the 25d tax credit would expire at the end of 2020.

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### Section 3, Industrial Investment Tax Credit

This provision adds open-loop biomass heating property to the list of existing technologies that qualify for the commercial renewable energy investment tax credit in Section 48 of the Internal Revenue Code. Qualifying biomass heating property must operate at thermal output efficiencies of at least 65 percent (higher heating value) and be used to generate heat, hot water, steam or industrial process heat.

The credit specified in this section is two tiered. For those technologies that operate at thermal output efficiencies between 65 percent and 80 percent, the investment tax credit is limited to 15 percent of installed capital cost. Technologies operating at thermal output efficiencies greater than 80 percent would be eligible for the full 30 percent investment tax credit under Section 48.

This provision would apply to expenses incurred in years following its enactment, and the tax credit would expire at the end of 2020.

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Who supports  
the BTU Act?

Active Energy and Solar Development  
Add-On Energy, LLC  
Adirondack Hearth and Stove  
AFS Energy Systems  
Alaska Masonry Heat  
Alliance for Green Heat  
Alodyne, LLC  
Alternative Energy of Maine  
Alternative Heating of North America  
American Bio Boilers Corp.  
American Forest Foundation  
Applied Ceramics, Inc.  
Arbor Day Foundation  
Berlin Area Renewable Energy Initiative  
Bioenergy Project Partners, LLC  
Biomass Combustion Systems  
Biomass Energy Lab  
Biomass Energy Works  
Biomass Thermal Energy Council  
Bridgewell Resources  
Central Boiler, Inc.  
Chip Energy Inc.  
Choquette Heating & A- C  
Clayloft studio  
Community Power Corporation  
Continental Biomass Industries  
Custom Masonry, LLC  
Cutting Edge Energy Systems  
Dale Anderson Masonry, Inc.  
Denali Energy  
Design Masonry LLC  
Earthtech Energy  
EcoHeat Solutions LLC  
Enwave Seattle  
EXIT Realty Trailblazers  
FHS  
Fiber By-Products, Corp.  
Firespeaking, LLC  
Forest Concepts, LLC  
Forest Energy Corp  
Forward Thinking Consultants, LLC  
FVB Energy Inc  
Gaelectric North America  
Ganneston Construction  
GARN Wood Heating Systems  
Green Globe Services, LLC  
Greenwood Clean Energy  
GRZ LLC  
Heartwood Tree Service  
Home & Hearth Conservation Inc.  
Home and Hearth Masonry  
Hot Rock Masonry  
Houles  
Housing Trust of Rutland County  
Innovative Natural Resource Solutions, LLC  
Integrated Energy Systems, PLLC  
International Applied Engineering, Inc.  
Interphase Energy LLC  
Jettco Builders  
JMH Chimney  
Kingdom Biofuel LLC  
Kirtland Products, LLC  
Koda Energy LLC  
Legal Logging and Firewood  
Lopez Quarries  
LPC Services Inc.  
Maine Energy Systems  
Maine Pellet Fuels Association  
Masonry Heater Association  
Masonry Heater Design House  
Mc Ranch  
Mendocino Forest Products Company LLC  
Messersmith Manufacturing Inc.  
Nordic LLC  
North Stone Heat Supply  
Northeast BioEnergy Systems, LLC  
Northeast Mill Services, Inc.  
Northern Forest Center  
Northwest Manufacturing, Inc.  
Ochoco Lumber Co.  
Oregon State University  
Pellergy LLC  
Pellet Fuels Institute  
Precision Energy Services  
Renewable Energy Center LLC  
Renewable Energy Consultants, LLC  
Renewable Resource Innovative Design  
Group Enterprise  
Sandri Energy, LLC  
Sheridan Brick & Stone Work  
Sol Fire Masonry Heaters  
Solartechnic Contractors, Inc  
Solid Rock Masonry  
Somerset Pellet Fuel  
Southern Tier Biomass, LLC  
Studio in the woods  
Sullivan Alliance for Sustainable Development  
Sustainable Northwest  
Tarm USA, Inc.  
TempleFire  
The County Stove Shop  
The Pizza Via Co  
Timber Products Inspection  
Vermeer  
Vermont Energy Investment Corporation  
Viessmann Manufacturing Company (U.S.)  
West Oregon Wood Products, Inc  
Westhoff Cone & Holmstedt  
Wilder Plumbing & Heating Inc.  
Woodbury's Plumbing and Heating  
Wooden Sun  
WoodFuels North Carolina LLC  
WoodMaster Boilers  
Woodshed Renewables, LLC  
Yale Mechanical

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