

Biomass Thermal Utilization (BTU) Act of 2017 (H.R. 3161, S. 1480)

House Co-sponsors: Reps. Kelly (R-PA-3), Welch (D-VT-1), and Kuster (D-NH-2)

Senate Co-sponsors: Sens. King (I-ME), Collins (R-ME), Shaheen (D-NH), Hassan (D-NH), and Merkley (D-OR)

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.

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 currently 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 2017 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.

Section 1

The title underscores that heat from biomass is an underutilized energy source in this country. Converting biomass—in the form of wood chips, pellets, sawmill residuals, or agricultural waste — 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.

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 woody and agricultural 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 2016.

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 HHV, 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 credit.

This provision would apply to expenses incurred in years following its enactment, and the tax credit would expire at the end of 2022.

Who supported
the BTU Act in
the past?

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