Renewable Heat New York

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Renewable Heat New York

Announced in Governor Cuomo’s 2014 State of the State Address

Built upon NYSERDA’s biomass heating R&D program to bring advanced technologies into the NYS heating market

Retirement of outdoor wood boilers, indoor wood boilers and wood stoves

Commercial pellet boiler heating systems

Residential pellet boiler heating systems and stoves

Residential/small commercial advanced cordwood boilers with full thermal storage

Continued R&D

Workforce development for proper system design, sizing and quality installations

John Rhodes, President and CEO, NYSERDA announcing Renewable Heat NY July 29th, 2014. Photo credit: Pyramid Energy EES.
Residential Wood Combustion by County (tons) in 2011

Source: Wood Heat Report
Per Capita Residential Wood Combustion (pounds) by County in 2011

Source: Wood Heat Report
Heating Oil Prices vs. Other Fuels ($/MMBtu) 2010-2015

*Calculations do not reflect efficiency values for the fuel. 100% efficiency is assumed.
Qualified Advanced Cordwood Boiler Technologies

Must be >60% annual efficiency by BNL PTS and be accepted by NYSDEC.
PM <0.32 lb/MBtu, report CO
Advanced cordwood boiler in outbuilding

Advanced cordwood boiler
Seasoned wood is kept dry
Thermal storage tank in basement of farmhouse
Qualified Pellet Boiler Technologies

Must be >85% thermal efficiency, PM2.5 ≤0.080 lb/MMBtu, and CO <270 ppm at 7% O₂
Bulk Pellet Storage
Maximizing performance with thermal storage

1250 Gallons Unpressurized

528 Gallons Pressurized
# Residential / Small Commercial Boilers

<table>
<thead>
<tr>
<th>System Type / Technology</th>
<th>Incentive amount</th>
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</thead>
<tbody>
<tr>
<td>Advanced Cordwood Boiler with Full Thermal Storage</td>
<td>25% of installed cost up to $5,000</td>
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<tr>
<td>Small Pellet Boiler with Thermal Storage</td>
<td>45% of installed costs up to $36,000</td>
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An additional $5,000 for the recycling of old outdoor/indoor wood boiler or $2,500 for recycling a whole house wood furnace
## Large Commercial Boilers (>300,000 Btu/h)

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<tr>
<td>Large Pellet Boiler with Thermal Storage</td>
<td>40% of total installed cost up to $200,000</td>
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<tr>
<td>Tandem Pellet Boiler with Thermal Storage</td>
<td>45% of total installed cost up to $270,000</td>
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</tbody>
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Sizing < 60% design day load, thermal storage, careful system integration with existing heating system and heat distribution system and controls.

Technical assistance for energy study, and review of commissioning and first year of Measurement and Verification.
Qualified Pellet Stove Technologies

At or below 2.0 grams per hour particulate matter emissions on the ‘EPA List of Certified Wood Heaters’
The following incentives are available toward the purchase of a new pellet stove for use in a primary residence, without natural gas service:

<table>
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<th>Qualification</th>
<th>Incentive Amount</th>
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<tr>
<td>Market Rate with Recycling</td>
<td>$1,500</td>
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<tr>
<td>Income Qualified (No Recycling)</td>
<td>$2,000</td>
</tr>
<tr>
<td>Income Qualified, add optional Recycling</td>
<td>$2,500</td>
</tr>
</tbody>
</table>

The new stove can provide either primary or supplemental heating and must be at or below 2.0 grams per hour particulate matter emissions on the ‘EPA List of Certified Wood Heaters’
Residential Pellet Stove Program Participation
Market Rate vs. Low-Moderate Income

- Market Rate: 53%
- LMI: 47%
Cost Breakout per Customer Type

Market Rate
- Incentive: $1,500
- Cost to Customer: $1,700

LMI
- Incentive: $2,000
- Cost to Customer: $2,200

LMI + Recycle
- Incentive: $2,500
- Cost to Customer: $3,000
Thank you

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