WOOD PELLET SUPPLY

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Benefits of Using Wood Fuel Pellets

• Economical & Environmental Benefits

• Consider this...
  • Fuel cost per million BTU can be less than half the cost of using oil, propane or electricity.

  • One ton of wood pellets has the energy equivalency of 2.8 barrels of #2 fuel oil. (Energy Information Administration)

  • Direct thermal conversion of 3 million tons of wood pellets displaces the equivalent of almost 8.5 million barrels of #2 fuel oil. That is 356 million gallons! (Energy Information Administration)
Benefits of Using Wood Fuel Pellets

• Consider this...
  • Direct thermal conversion of pellets has an efficiency level of approximately 80%.
  
  • Every ton of pellets used vs. oil reduces CO$_2$ emissions by about 1.5 tons.
  
  • Pellet distribution costs less than the cost of distributing wood chips.
Expectations of a Wood Pellet Boiler System

• Boiler Lifespan
  • 30 years or more

• Maintenance
  • Annual cleaning and maintenance
  • Ash cleanout

• Wood Pellet Supply
• Pellet Delivery
• Pellet Storage
Wood Pellet Supply

• Locate nearby wood pellet plants

• Determine your approximate annual volume requirement
  • For example... if you currently burn oil, then,

  \[
  \frac{\text{# gallons of oil}}{120 \text{ gallons/ton}} = \text{# of tons of wood pellets needed}
  \]

  \[
  \frac{2,400 \text{ gallons of oil}}{120 \text{ gallons/ton}} = 20 \text{ tons of wood pellets}
  \]
Wood Pellet Delivery

• Delivery Range from Pellet Plant
  • Approximately 300 miles

• Bulk Delivery
  • Approximately 28 tons

• Bulk Delivery Pricing
  • Approximate $ from Bear Mountain
    • Seattle = $750
    • Yakima = $700
    • Spokane = $975
    • Tri-Cities = $750
Wood Pellet Storage

• Auger Fed Systems
  • Typically located within 10 ft.

• Vacuum Fed or Custom Systems
  • Can be located up to 70 ft. or more away

• Pellets need to be in dry storage
Pricing – Why Wood Fuel Pellets Makes Sense

Compare Fuel Costs per million BTU

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>Cost per Million BTU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood Pellets</td>
<td>10.16</td>
</tr>
<tr>
<td>Bulk Pellets</td>
<td>$135 - $150 per ton</td>
</tr>
<tr>
<td>Oil (#2)</td>
<td>26.76</td>
</tr>
<tr>
<td>Propane</td>
<td>32.15</td>
</tr>
<tr>
<td>Electricity</td>
<td>25.67</td>
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</tbody>
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Central Washington Biomass Energy Workshop | Presentation by Bear Mountain Forest Products (www.bmfp.com)
Wood Pellet Standards - What to look for?

- PFI Standards Program (www.pelletheat.org)
- Wood Pellet Specifications to focus on...

1. Wood Species
2. Heat Value as Received
Wood Fuel Pellet Standards – What to look for?

• Wood Pellet Specifications to focus on...

3. Moisture Content

![Graph showing the amount of time to heat with pellets at different moisture contents.](image-url)
Wood Fuel Pellet Standards – What to look for?

• Wood Pellet Specifications to focus on...

3. Ash Content as Received by Weight
Questions? Comments?

Wood Pellet Supply

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