



# Minnesota Woody Biomass Facility Directory



**Minnesota Department of Natural Resources  
Division of Forestry  
Forest Products Utilization & Marketing Program**

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Bob Bartz, Consultant

Minnesota Pollution Control Agency staff.

This directory is a companion to the DNR publication “Woody Biomass Utilization Report”, also released in October 2008.

The directory is not an exhaustive list of woody biomass-using facilities in Minnesota. Some facilities chose not to have a listing in the directory for various reasons, including proprietary and privacy concerns. Using best available information, contacts and sources, an attempt was made to contact as many woody biomass-using facilities as possible and produce a useful directory.

<p>Ainsworth Engineered (USA) LLC  9358 Hightway 53 south  Cook MN 55723</p> <p>Contact: Kent Jacobson  Woodlands manager</p>	<p><b>Type of Energy Facility:</b> <i>Steam, thermal oil</i></p> <p><b>Year Installed:</b> <i>1980/2001</i></p> <p><b>Season of Use:</b> <i>Continuous</i></p> <p><b>Facility Output:</b> <i>Heat and Steam</i></p> <p><b>District Heat:</b> <i>No</i></p>
<p><b>Facility Size; Output per Hour:</b> <i>104MM BTUs, , &lt;80,000 lbs steam</i></p> <p><b>Size of fuel Used:</b> <i>small uniform</i></p> <p><b>Percent of Fuel used by TYPE:</b> <i>21% sawdust, shavings other mill residue 79% chips derived from mill residue.</i></p> <p><b>Fuel Supply Source:</b> <i>100% mill residue</i></p> <p><b>Annual volume used:</b> <i>none provided</i></p> <p><b>Fuel Supply Radius:</b> <i>Residue on site</i></p>	
<p><b>Comments:</b> Operations curtailed at this plant as of October 2008.</p>	

<p>Ainsworth Engineered (USA) LLC  29647 US Hwy 2 East  Bemidji MN 56601</p> <p>Contact: Kent Jacobson  Woodlands manager</p>	<p><b>Type of Energy Facility:</b> <i>Steam 7Thermal Oil</i></p> <p><b>Year Installed:</b> <i>1982</i></p> <p><b>Season of Use:</b> <i>Contiuous</i></p> <p><b>Facility Output:</b> <i>Heat</i></p> <p><b>District Heat:</b> <i>No</i></p>
<p><b>Facility Size; Output per Hour:</b> <i>135 MM BTUs</i></p> <p><b>Size of fuel Used:</b> <i>Small Uniform size</i></p> <p><b>Percent of Fuel used by TYPE:</b> <i>100% Chips from mill residue</i></p> <p><b>Fuel Supply Source:</b> <i>100% Mill residue from operations.</i></p> <p><b>Annual volume used:</b> <i>50,001-200,000 Green tons</i></p> <p><b>Fuel Supply Radius:</b> <i>All from internal operations</i></p>	
<p><b>Comments:</b> Operations curtailed at this plant as of October 2008.</p>	

<p>Ainsworth Engineered (USA) LLC  502 County Road 63  Grand Rapids MN 556744</p> <p>Contact: Kent Jacobson  Woodlands Manager</p>	<p><b>Type of Energy Facility:</b> <i>Heat</i></p> <p><b>Year Installed:</b> <i>1980</i></p> <p><b>Season of Use:</b> <i>operations curtailed</i></p> <p><b>Facility Output:</b> <i>Heat</i></p> <p><b>District Heat:</b> <i>No</i></p>
<p><b>Facility Size; Output per Hour:</b> <i>140MM BTUs</i></p> <p><b>Size of fuel Used:</b> <i>Small uniform</i></p> <p><b>Percent of Fuel used by TYPE:</b> <i>100% sawdust, shavings, mill residue</i></p> <p><b>Fuel Supply Source:</b> <i>100% Mill operations</i></p> <p><b>Annual volume used:</b> <i>currently 0</i></p> <p><b>Fuel Supply Radius:</b> <i>0</i></p>	
<p><b>Comments:</b> Mill operations curtailed in September 2006.</p>	

Andersen Corporation  
100 Fourth Ave N  
Bayport MN 55003

**Type of Energy Facility:** *Steam*

Contact: Kirk Hogheva  
Manager, Energy and Environmental

**Year Installed:** *1913/2007*

**Season of Use:** *Continuous*

**Facility Output:** *Steam*

**District Heat:** *No*

**Facility Size; Output per Hour:** *80,000 MM BTUs*

**Size of fuel Used:** *Small uniform*

**Percent of Fuel used by TYPE:** *100 % sawdust, shavings, mill residue*

**Fuel Supply Source:** *100% Mill waste from operations.*      **Comment:**

**Annual volume used:** *5001-50,000 green tons*

**Fuel Supply Radius:** *0*

Bagley Hardwood Products  
1004 Central St West  
PO Box C  
Bagley MN 56621

**Type of Energy Facility:** *Steam*

**Year Installed:** *1997*

**Season of Use:** *Continuous*

**Facility Output:** *Heat and Steam*

**District Heat:** *No*

Contact Peggy Fultz  
Office Manager

**Facility Size; Output per Hour:** *9.5MM BTU's ; 840 lbs*

**Size of fuel Used:** *Coarse undefined size*

**Percent of Fuel used by TYPE:** *100% sawdust, shavings and Mill residue*

**Fuel Supply Source:** *100% Mill operations*

**Comments:** *Kiln dried wood shavings available in summer months.*

**\*Annual volume used:** *5001-50,000 green tons*

**Fuel Supply Radius:** *0 miles*

Bergen's Greenhouses  
801 Willow Street West  
Detroit Lakes MN 56501

**Type of Energy Facility:** *Hot Water*

**Year Installed:** *1984*

**Season of Use:** *Seasonal*

**Facility Output:** *Hot water*

**District Heat:** *No*

[www.Bergensgreenhouses.com](http://www.Bergensgreenhouses.com)

**Facility Size; Output per Hour:** *No information*

**Size of fuel Used:** *Coarse undefined size*

**Percent of Fuel used by TYPE:** *100% sawdust, shavings, slabs and other mill residue.*

**Fuel Supply Source:** *100% purchased of obtained free.*

**Comments:** *Wood heat has been very beneficial for the company.*

**Annual volume used:** *5,001 -50,000 green tons*

**Fuel Supply Radius:** *200 miles, mill residue*

<p>Boise Cascade, LLC 400 3<sup>rd</sup> Av East International Falls MN 56649</p> <p>Contact: Steve Earley Region Woodlands Manager</p> <p>Mill location; 400 2<sup>nd</sup> Av</p> <p><b>Facility Size; Output per Hour:</b> 185,000 lbs <b>Size of fuel Used:</b> Small uniform size <b>Percent of Fuel used by TYPE:</b> 100% sawdust, shavings and other mill residue <b>Fuel Supply Source:</b> 90% mill residue, 10% purchased or obtain free from outside supplier <b>Annual volume used:</b> &gt;201,001 green tons <b>Fuel Supply Radius:</b> 60 miles – mill residue</p>	<p><b>Type of Energy Facility:</b> Steam, electricity <b>Year Installed:</b> 1985 <b>Season of Use:</b> Continuous <b>Facility Output:</b> Combined heat and power (CHP) <b>District Heat:</b> No</p> <p><b>Comments:</b></p>
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<p>Cass Forest Products PO Box 1008 Cass Lake MN 56633</p> <p>Contact: Dave Getz Owner</p> <p><b>Facility Size; Output per Hour:</b> 3.2 MM BTUs <b>Size of fuel Used:</b> Small Uniform <b>Percent of Fuel used by TYPE:</b> 100% Sawdust, shavings, other mill residue <b>Fuel Supply Source:</b> 100% own operations <b>Annual volume used:</b> 501-5,0000 Green tons <b>Fuel Supply Radius:</b> 1 Mile</p>	<p><b>Type of Energy Facility:</b> Steam <b>Year Installed:</b> 2005 <b>Season of Use:</b> Continuous <b>Facility Output:</b> Steam &amp; Hot water <b>District Heat:</b> No</p> <p><b>Comments:</b></p>
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<p>Creative Sawmilling &amp; Products LLC 313 Lawson Dr Bovey MN 55709</p> <p>Contact: Jerry Suppala</p> <p><b>Facility Size; Output per Hour:</b> No information <b>Size of fuel Used:</b> Coarse undefined <b>Percent of Fuel used by TYPE:</b> 75% Sawdust, shavings, mill residue; 25% Roundwood <b>Fuel Supply Source:</b> 75% waste from operations; 25% Chips purchased or obtained free of charge <b>Annual volume used:</b> &lt;500 green tons <b>Fuel Supply Radius:</b> 10 miles</p>	<p><b>Type of Energy Facility:</b> Hot Water <b>Year Installed:</b> 1991 <b>Season of Use:</b> Seasonal <b>Facility Output:</b> Heat <b>District Heat:</b> No</p> <p><b>Comment:</b></p>
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<p>Environmental Wood Supply LLC          1350 Landmark Tower, #345          St. Peter St          St. Paul MN 55102</p> <p>Contact: Michael Burns          Jeff Guillmette, Wood procurement          Facility location: 125 Shepard Road W, St.          Paul MN 55125</p> <p><b>Facility Size; Output per Hour:</b> 25 MgWatts, 310,000 lbs  <b>Size of fuel Used:</b> Small undefined  <b>Percent of Fuel used by TYPE:</b> 70% roundwood urban residue, 20% chips forest harvest, 5% clean construction debris  <b>Fuel Supply Source:</b> 20% forest harvest; 80% purchased or obtained free of charge.  <b>Annual volume used:</b> &gt;200,001 green tons  <b>Fuel Supply Radius:</b> 100 miles</p>	<p><b>Type of Energy Facility:</b> Steam  <b>Year Installed:</b> 2003  <b>Season of Use:</b> Continuous  <b>Facility Output:</b> CHP  <b>District Heat:</b> Yes</p> <p><b>Comment:</b> supplier for St. Paul District Energy</p>
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<p>Ferche Millwork          400 Division Street N          Rice MN 56367</p> <p>Contact: Gerald Grider</p> <p><b>Facility Size; Output per Hour:</b> 1. 509,304 lbs 2. 764,010 lbs  <b>Size of fuel Used:</b> Small uniform size  <b>Percent of Fuel used by TYPE:</b> 100% Sawdust, shavings, mill residue  <b>Fuel Supply Source:</b> 100% Mill residue from mill operations  <b>Annual volume used:</b> 501-5000 green tons  <b>Fuel Supply Radius:</b> 0</p>	<p><b>Type of Energy Facility:</b> Steam  <b>Year Installed:</b> 1987  <b>Season of Use:</b> Continuous  <b>Facility Output:</b> Steam  <b>District Heat:</b> No</p> <p><b>Comment:</b> Two facilities, company sells much more than it consumes for animal bedding and residue markets</p>
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<p>Fibrominn          900 Industry Dr          Benson MN 56215</p> <p>Contact: Greg Langmo</p> <p><b>Facility Size; Output per Hour:</b> 55 Megawatts  <b>Size of fuel Used:</b> Small uniform size  <b>Percent of Fuel used by TYPE:</b> 25% Sawdust, shavings, mill residue; 25% roundwood; 25%; 25% mill residue; 25% other sources  <b>Fuel Supply Source:</b> No information provided  <b>Annual volume used:</b> 50,001-200,000 green tons  <b>Fuel Supply Radius:</b> None designated</p>	<p><b>Type of Energy Facility:</b> Steam  <b>Year Installed:</b> 2007  <b>Season of Use:</b> Continuous  <b>Facility Output:</b> Electricity  <b>District Heat:</b> No</p> <p><b>Comments:</b></p>
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<p>Foldcraft Company 615 Centennial Dr Kenyon MN 55946</p> <p>Contact: Doug David Facility Manager</p>	<p><b>Type of Energy Facility:</b> <i>Steam&amp; radiant heat</i></p> <p><b>Year Installed:</b> <i>no information</i></p> <p><b>Season of Use:</b> <i>Continuous</i></p> <p><b>Facility Output:</b> <i>Heat and steam</i></p> <p><b>District Heat:</b> <i>No</i></p>
<p><b>Facility Size; Output per Hour:</b> <i>4.46MM ;bs</i></p> <p><b>Size of fuel Used:</b> <i>Coarse undefined and small uniforms size</i></p> <p><b>Percent of Fuel used by TYPE:</b> <i>95% sawdust, shavings form operations, 5% Chips from mill residue.</i></p> <p><b>Fuel Supply Source:</b> <i>100% from process operations</i></p> <p><b>Annual volume used:</b> <i>5001-50,000 green tons</i></p> <p><b>Fuel Supply Radius:</b> <i>0</i></p>	
<p><b>Comments:</b></p>	

<p>Georgia-Pacific Wood Products LLC 1220 W Railroad St Duluth MN 55802</p> <p>Contact Brian Lochner Wood Procurement Manager</p>	<p><b>Type of Energy Facility:</b> <i>Steam</i></p> <p><b>Year Installed:</b> <i>1972</i></p> <p><b>Season of Use:</b> <i>Continuous</i></p> <p><b>Facility Output:</b> <i>Steam</i></p> <p><b>District Heat:</b> <i>No</i></p>
<p><b>Facility Size; Output per Hour:</b> <i>25,000 lbs</i></p> <p><b>Size of fuel Used:</b> <i>Small uniform size</i></p> <p><b>Percent of Fuel used by TYPE:</b> <i>100% sawdust, shavings, mill residue</i></p> <p><b>Fuel Supply Source:</b> <i>100% waste residue from operations</i></p> <p><b>Annual volume used:</b> <i>5001-50,000 green tons</i></p> <p><b>Fuel Supply Radius:</b> <i>0</i></p>	
<p><b>Comments:</b></p>	

<p>Hill Wood Products PO Box 398 Cook MN 55723</p> <p>Contact: Steve Hill</p> <p>Facility location: Mtn Iron</p>	<p><b>Type of Energy Facility:</b> <i>Suspension burner</i></p> <p><b>Year Installed:</b> <i>1986</i></p> <p><b>Season of Use:</b> <i>Continuous</i></p> <p><b>Facility Output:</b> <i>Heat</i></p> <p><b>District Heat:</b> <i>No</i></p>
<p><b>Facility Size; Output per Hour:</b> <i>350MM BTUs</i></p> <p><b>Size of fuel Used:</b> <i>Small uniform</i></p> <p><b>Percent of Fuel used by TYPE:</b> <i>40% dry sawdust; 60% oat hulls</i></p> <p><b>Fuel Supply Source:</b> <i>5% waste residue for own process; 95% purchased</i></p> <p><b>Annual volume used:</b> <i>&gt;200,001 green tins</i></p> <p><b>Fuel Supply Radius:</b> <i>200 miles</i></p>	

Hill Wood Products 9483 Ashawa Road Cook MN 55722	<b>Type of Energy Facility:</b> <i>Suspension burner</i> <b>Year Installed:</b> <i>1965</i> <b>Season of Use:</b> <i>Continuous</i> <b>Facility Output:</b> <i>Heat &amp; Steam</i> <b>District Heat:</b> <i>No</i>
Contact Steve Hill Facility #2 Ashawa Road	
<b>Facility Size; Output per Hour:</b> <i>13,900 BTUs ,600 lbs</i>	
<b>Size of fuel Used:</b> <i>Small uniform size</i>	
<b>Percent of Fuel used by TYPE:</b> <i>100% sawdust, shavings, mill residue</i>	
<b>Fuel Supply Source:</b> <i>20% waste own operations; 80% purchased</i>	
<b>Annual volume used:</b> <i>&gt;200,001 green tons</i>	
<b>Fuel Supply Radius:</b> <i>200 miles</i>	

Hull's Sawmill 3173 E Alger Rd Two Harbors MN 56616	<b>Type of Energy Facility:</b> <i>Hot water</i> <b>Year Installed:</b> <i>2003</i> <b>Season of Use:</b> <i>Continuous</i> <b>Facility Output:</b> <i>Hot water</i> <b>District Heat:</b> <i>No</i>
Contact: Gregory Hull	
<b>Facility Size; Output per Hour:</b> <i>No information provided</i>	
<b>Size of fuel Used:</b> <i>Coarse undefined</i>	
<b>Percent of Fuel used by TYPE:</b> <i>75% Sawdust, shavings, mill residue; 25% roundwood, split</i>	
<b>Fuel Supply Source:</b> <i>100% waste residue for own operations</i> <b>Comments:</b>	
<b>Annual volume used:</b> <i>&lt;500 green tons</i>	
<b>Fuel Supply Radius:</b> <i>30 miles</i>	

Isabella Community Center 9521 Lankinen Road, PO Box 5 Isabella MN 55607	<b>Type of Energy Facility:</b> <i>Hot water</i> <b>Year Installed:</b> <i>1985</i> <b>Season of Use:</b> <i>Seasonal</i> <b>Facility Output:</b> <i>Heat</i> <b>District Heat:</b> <i>No</i>
Contact: Patricia Thums	
<b>Facility Size; Output per Hour:</b> <i>No information provided</i>	
<b>Size of fuel Used:</b> <i>Small Uniform 8 inch</i>	
<b>Percent of Fuel used by TYPE:</b> <i>100% Roundwood, split wood</i>	
<b>Fuel Supply Source:</b> <i>100% Forest Harvest</i> <b>Comments:</b>	
<b>Annual volume used:</b> <i>&lt;500 green tons</i>	
<b>Fuel Supply Radius:</b> <i>20 miles</i>	



<p>Fon du Lac Resource Management          Division          1720 Big Lake Road          Cloquet MN 55720</p> <p>Contact: Steve Usu          Reservation Forester</p> <p><b>Facility Size; Output per Hour:</b> 200,000 BTUs , 20 Kw  <b>Size of fuel Used:</b> Coarse undefined size  <b>Percent of Fuel used by TYPE:</b> 100% Chips – Harvest operations  <b>Fuel Supply Source:</b> 100% Forest harvest ops  <b>Annual volume used:</b> &lt; 500 green tons  <b>Fuel Supply Radius:</b> 20 miles</p>	<p><b>Type of Energy Facility:</b> Gasification  <b>Year Installed:</b> 2008  <b>Season of Use:</b> Seasonal  <b>Facility Output:</b> Heat &amp; Electricity  <b>District Heat:</b> No</p>
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<p>Hedstrom Lumber          1504 Gunflint Trail          Grand Marais MN 55604</p> <p>Contact : Howard Hedstrom</p> <p><b>Facility Size; Output per Hour:</b> 15,000 lbs.  <b>Size of fuel Used:</b> Coarse undefined size  <b>Percent of Fuel used by TYPE:</b> 100% Sawdust and bark  <b>Fuel Supply Source:</b> 100% waste residue from mill operations  <b>Annual volume used:</b> 5,001 –50,000 green tons  <b>Fuel Supply Radius:</b> 150 mile harvest radius</p>	<p><b>Type of Energy Facility:</b> Steam  <b>Year Installed:</b> 1970  <b>Season of Use:</b> Continuous  <b>Facility Output:</b> Steam  <b>District Heat:</b> No</p> <p><b>Comments:</b></p>
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<p>Itasca Community College          1851 East Hwy 169          Grand Rapids MN 55744</p> <p>Contact: Mike Kee</p> <p><b>Facility Size; Output per Hour:</b> 956,544 BTUs  <b>Size of fuel Used:</b> Coarse undefined size  <b>Percent of Fuel used by TYPE:</b> 100% Chips from mill residue  <b>Fuel Supply Source:</b> 100% purchased or obtained free of charge  <b>Annual volume used:</b> None used in 2007  <b>Fuel Supply Radius:</b> 100 miles</p>	<p><b>Type of Energy Facility:</b> Steam  <b>Year Installed:</b> 1989  <b>Season of Use:</b> Seasonal  <b>Facility Output:</b> Steam  <b>District Heat:</b> No</p> <p><b>Comments:</b> Difficulty in obtaining chips for the boiler.</p>
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<p>Itasca County Community YMCA  400 River Road  Grand Rapids MN 55744</p> <p>Contact: Amy Morrisette</p>	<p><b>Type of Energy Facility:</b> <i>Hot water</i>  <b>Year Installed:</b> <i>1986-87</i>  <b>Season of Use:</b> <i>continuous</i>  <b>Facility Output:</b> <i>Heat – Hot water</i>  <b>District Heat:</b> <i>No</i></p> <p><b>Facility Size; Output per Hour:</b> <i>No information</i>  <b>Size of fuel Used:</b> <i>Small uniform size</i>  <b>Percent of Fuel used by TYPE:</b> <i>100% pellets or Briquettes</i>  <b>Fuel Supply Source:</b> <i>100%purchased - outside</i>      <b>Comments:</b>  <i>supply</i>  <b>Annual volume used:</b> <i>501-5000 green tons</i>  <b>Fuel Supply Radius:</b> <i>No information</i></p>
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<p>Jarden Home Brands  1800 Cloquet Av  Cloquet MN 55720</p> <p>Contact: Peter Grames  Plant engineer</p>	<p><b>Type of Energy Facility:</b> <i>Steam</i>  <b>Year Installed:</b> <i>1932; modified 1940</i>  <b>Season of Use:</b> <i>Continuous</i>  <b>Facility Output:</b> <i>Steam</i>  <b>District Heat:</b> <i>No</i></p> <p><b>Facility Size; Output per Hour:</b> <i>8MM BTU per boiler X 4 boilers</i>  <b>Size of fuel Used:</b> <i>Coarse undefined size, chips and hogged fuel</i>  <b>Percent of Fuel used by TYPE:</b> <i>5% Sawdust, shavings; 60% chips from forest harvest ops; 35% chips from mill residue</i>  <b>Fuel Supply Source:</b> <i>40% waste residue from own ops; 60% purchased or obtained free</i>      <b>Comments</b>  <b>Annual volume used:</b> <i>5001-50,000 green tons</i>  <b>Fuel Supply Radius:</b> <i>50 mile radius harvest operations</i></p>
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<p>Len Busch Roses  4045 Hwy 101 North  Plymouth MN 55446</p> <p>Contact: Pat Etzel  Director of Physical Plant</p>	<p><b>Type of Energy Facility:</b> <i>Steam</i>  <b>Year Installed:</b> <i>1977 &amp; 2006</i>  <b>Season of Use:</b> <i>Continuous</i>  <b>Facility Output:</b> <i>Steam</i>  <b>District Heat:</b> <i>No</i></p> <p><b>Facility Size; Output per Hour:</b> <i>24,398 lbs</i>  <b>Size of fuel Used:</b> <i>Small Uniform size</i>  <b>Percent of Fuel used by TYPE:</b> <i>20% sawdust, shavings, mill residue; 80% roundwood, split wood, urban residue</i>  <b>Fuel Supply Source:</b> <i>100% purchased or obtained free of charge.</i>      <b>Comments:</b>  <b>Annual volume used:</b> <i>5001-50,000 green tons</i>  <b>Fuel Supply Radius:</b> <i>15 miles</i></p>
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<p>Minnesota Power – Hibbard Plant  100 North Central Av  Hibbard Energy Center  Duluth MN 55802</p> <p>Contact : Mike Polzin  30 W Superior St  Duluth MN 55802</p> <p><b>Facility Size; Output per Hour:</b> 450,000 lbs; 2 – 25 MgW turbines  <b>Size of fuel Used:</b> Coarse undefined size  <b>Percent of Fuel used by TYPE:</b> 10% Forest harvest ops, 60% Chips-mill residue, 30% chipped RR ties  <b>Fuel Supply Source:</b> 10% forest harvest ops, 09% purchased or obtained free of charge  <b>Annual volume used:</b> &gt;200,001 green tons  <b>Fuel Supply Radius:</b> 75 miles forest harvest ops, 120 miles – mill residue</p>	<p><b>Type of Energy Facility:</b> Steam  <b>Year Installed:</b> 1987  <b>Season of Use:</b> continuous  <b>Facility Output:</b> Electricity &amp; Steam  <b>District Heat:</b> No</p> <p><b>Comments:</b> Power for New Page mill</p>
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<p>Minnesota Power Rapids Energy Center  Grand Rapids MN 56744</p> <p>Contact : Mike Polzin  30 W Superior St  Duluth MN 55802</p> <p><b>Facility Size; Output per Hour:</b> 350,000 lbs  <b>Size of fuel Used:</b> Coarse undefined size  <b>Percent of Fuel used by TYPE:</b> 40% Forest harvest ops, 60% Chips-mill residue  <b>Fuel Supply Source:</b> 40% forest harvest ops, 09% purchased or obtained free of charge  <b>Annual volume used:</b> &gt;200,001 green tons  <b>Fuel Supply Radius:</b> 100 miles forest harvest ops, 80 miles – mill residue</p>	<p><b>Type of Energy Facility:</b> Steam  <b>Year Installed:</b> 1980  <b>Season of Use:</b> continuous  <b>Facility Output:</b> Electricity &amp; Steam  <b>District Heat:</b> No</p> <p><b>Comments:</b> Power and steam for UPM mill</p>
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<p>Ponderosa Sawmill  48055 Tamarck River Road  Sandstone MN 55072</p> <p>Contact: Randy Michel</p> <p><b>Facility Size; Output per Hour:</b> 100,000 Btus  <b>Size of fuel Used:</b> Coarse undefined size  <b>Percent of Fuel used by TYPE:</b> 75% slabs, 25% roundwood  <b>Fuel Supply Source:</b> 75% processing waste, 12% Harvest ops, 13% purchased or obtained free  <b>Annual volume used:</b> &lt;500 green tons  <b>Fuel Supply Radius:</b> 1 mile harvest and on site</p>	<p><b>Type of Energy Facility:</b> Hot water  <b>Year Installed:</b> 2002  <b>Season of Use:</b> Continuous  <b>Facility Output:</b> Heat &amp; Hot water  <b>District Heat:</b> No</p> <p><b>Comments:</b></p>
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Potlatch Forest Products Corp.  
50518 Cty Road 45  
Bemidji MN 56607

Contact: Peter Aube

**Type of Energy Facility:** *Steam*  
**Year Installed:** *1990 / 2007*  
**Season of Use:** *Continuous*  
**Facility Output:** *Steam*  
**District Heat:** *No*

**Facility Size; Output per Hour:** *60,000 lbs for 2 boilers*

**Size of fuel Used:** *Small uniform size*

**Percent of Fuel used by TYPE:** *100% sawdust, shavings, other mill residue*

**Fuel Supply Source:** *100% mill operations*

**Comments:**

**Annual volume used:** *5001 –50,000 green tons*

**Fuel Supply Radius:** *on site*

Rajala Mill Company  
Box 231  
Bigfork MN 56628

Contact: Jack Rajala

**Type of Energy Facility:** *Steam*  
**Year Installed:** *1969*  
**Season of Use:** *Continuous*  
**Facility Output:** *Steam*  
**District Heat:** *No*

**Facility Size; Output per Hour:** *1000 lbs*

**Size of fuel Used:** *Small uniform size*

**Percent of Fuel used by TYPE:** *100% sawdust, shavings, mill residue*

**Fuel Supply Source:** *100% own operations*

**Comments**

**Annual volume used:** *501-5000 green tons*

**Fuel Supply Radius:** *On site*

Rasley's Blueberry Bowl  
44919 Golf Course Road / PO Box 37  
Deer River MN 56636

Contact: Thomas Rasley

**Type of Energy Facility:** *Hot water*  
**Year Installed:** *1986*  
**Season of Use:** *Continuous*  
**Facility Output:** *Heat*  
**District Heat:** *No*

**Facility Size; Output per Hour::** *No information*

**Size of fuel Used:** *Coarse undefined size*

**Percent of Fuel used by TYPE:** *100% Roundwood or split wood*

**Fuel Supply Source:** *100% purchased from  
outside supplier*

**Comments:**

**Annual volume used:** *<500 green tons*

**Fuel Supply Radius:** *20 miles*

SAPPI Fine Paper  
20 North 22<sup>nd</sup> St  
Cloquet MN 55720

Contact: Ross Korpela

**Type of Energy Facility:** *Steam*  
**Year Installed:**  
**Season of Use:** *Continuous*  
**Facility Output:** *Heat & Steam*  
**District Heat:** *No*

**Facility Size; Output per Hour::** *No information*

**Size of fuel Used:** *Coarse undefined size*

**Percent of Fuel used by TYPE:** *3% Roundwood; 90 Chips – forest harvest; 7% Chips mill residue.*

**Fuel Supply Source:** *66% waste process-mill residue; 34 % purchased or obtained free*

**Comments:**

**Annual volume used:** *>200,001 green tons*

**Fuel Supply Radius:** *150 forest harvest; 0 mill residue*

St. Gabriel's Hospital  
815 2<sup>nd</sup> St SE  
Little Falls MN 56345

Contact: Kevin O'Neil  
Facility Services Director

**Type of Energy Facility:** *Steam*  
**Year Installed:** *1985*  
**Season of Use:** *Seasonal*  
**Facility Output:** *Steam*  
**District Heat:** *No*

**Facility Size; Output per Hour::** *10,000 lbs*

**Size of fuel Used:** *Coarse undefined size <2"*

**Percent of Fuel used by TYPE:** *100% Chips- Mill residue*

**Fuel Supply Source:** *100% purchased from mill* **Comments:**

**Annual volume used:** *501-5000 green tons*

**Fuel Supply Radius:** *60 miles – Mill residue*

Valley Forest Wood Products  
48985 State Hwy 38  
Marcell MN 56657  
Contact: Amos Wolf  
Logistics Manager

**Type of Energy Facility:** *Gasification*  
**Year Installed:** *no information*  
**Season of Use:** *Continuous*  
**Facility Output:** *Heat*  
**District Heat:** *No*

**Facility Size; Output per Hour::** *1000 lbs*

**Size of fuel Used:** *Small uniform*

**Percent of Fuel used by TYPE:** *60% Sawdust, shavings and other mill residue, 40% round or split wood*

**Fuel Supply Source:** *20% own operations, 10% forest harvest ops, 70% purchased or obtained free* **Comments:**

**Annual volume used:** *50,001-200,000 green tons*

**Fuel Supply Radius:** *90 miles radius forest harvest ops, 70% purchased or free of charged.*

Verso Paper  
100 East Sartell St  
Sartell MN 56377

Contact: Eric Dyckhuis

**Type of Energy Facility:** *Steam*  
**Year Installed:** *1982*  
**Season of Use:** *Continuous*  
**Facility Output:** *Electricity & Steam*  
**District Heat:** *No*

**Facility Size; Output per Hour:** *300,000 lbs Steam*

**Size of fuel Used:** *Coarse undefined size*

**Percent of Fuel used by TYPE:** *10% Chips from forest harvest ops, 960% Chips from mill residue*

**Fuel Supply Source:** *10% Forest Harvest ops, 90% from own mill operations*

**Annual volume used:** *50,001-200,000 green tons*

**Fuel Supply Radius:** *up to 100 miles harvest ops;*

**Comments:** *the mill expects to increase the amount of wood residue utilized in the future to relieve the use of coal.*

Wick's Wood Products  
85 W Broadway  
Akeley MN 56433

Contact Donald Wicks

**Type of Energy Facility:** *Steam*  
**Year Installed:** *No information*  
**Season of Use:** *Continuous*  
**Facility Output:** *Steam*  
**District Heat:** *No*

**Facility Size; Output per Hour:** *No information*

**Size of fuel Used:** *Small uniform size*

**Percent of Fuel used by TYPE:** *80% sawdust and other mill residue, 20% Chips – mill residue*

**Fuel Supply Source:** *90% own process waste, 10% purchased or obtained free of charge*

**Annual volume used:** *No information*

**Fuel Supply Radius:** *On site*

**Comments:**

Woodcraft Industries  
525 Lincoln Av SE  
St Cloud MN 56304  
Contact: Dave Forst  
Materials Manager

**Type of Energy Facility:** *Hot water, Steam, radiant heat*  
**Year Installed:** *1970*  
**Season of Use:** *Continuous*  
**Facility Output:** *Steam*  
**District Heat:** *No*

**Facility Size; Output per Hour:** *5000lbs*

**Size of fuel Used:** *Coarse undefined size*

**Percent of Fuel used by TYPE:** *100% sawdust, shavings form mill residue*

**Fuel Supply Source:** *100% waste from own operations*

**Annual volume used:** *>200,001 green tons*

**Fuel Supply Radius:** *300 miles*

**Comments:** *Company operates three mills in the country.*

## Schools

Goodridge School ISD # 561  
Osmund Av, PO Box 195  
Goodridge MN 56725  
Contact: Ronald Kotrba  
Maintenance Dept.

**Type of Energy Facility:** *Steam*  
**Year Installed:** *1982/83*  
**Season of Use:** *Seasonal*  
**Facility Output:** *Steam*  
**District Heat:** *No*

**Facility Size; Output per Hour:** *1.104 MM BTUs*

**Size of fuel Used:** *3/8 inch wood pellet*

**Percent of Fuel used by TYPE:** *100% wood pellet*

**Fuel Supply Source:** *100% forest harvest ops*      **Comments:**

**Annual volume used:** *85 dry tons*

**Fuel Supply Radius:** *50 miles harvest ops*

Mahnomen Public Schools ISD # 432  
209 1st St. S. PO Box 319  
Mahnomen MN 56557  
Contact: Josh Bendickson  
Head of Maintenance

**Type of Energy Facility:** *Steam*  
**Year Installed:** *1985*  
**Season of Use:** *Seasonal*  
**Facility Output:** *Steam*  
**District Heat:** *No*

**Facility Size; Output per Hour:** *8625 lbs*

**Size of fuel Used:** *Small uniform size*

**Percent of Fuel used by TYPE:** *100% chips from forest harvest ops*

**Fuel Supply Source:** *100% forest harvest ops*      **Comments:**

**Annual volume used:** *1000 green tons*

**Fuel Supply Radius:** *100 miles harvest site*

Northome School ISD # 363  
11071 Hwy 1  
Northome MN 56661  
Contact: Jerry Struss  
Superintendent

**Type of Energy Facility:** *Hot water*  
**Year Installed:** *1981*  
**Season of Use:** *Continuous*  
**Facility Output:** *Heat*  
**District Heat:** *No*

**Facility Size; Output per Hour:** *1,351,240 BTUs*

**Size of fuel Used:** *Small uniform size*

**Percent of Fuel used by TYPE:** *100% pelletized wood*

**Fuel Supply Source:** *100% purchased from outside source.*      **Comments:**

**Annual volume used:** *272 dry tons*

**Fuel Supply Radius:** *Local manufacturer*

<p>Pine River – Backus Schools          PO Box 619810 1st St North and 401          Merry Av          Pine River MN 56474          Contact: Karl Flin Buildings &amp; Grounds          Director</p>	<p><b>Type of Energy Facility:</b> <i>Hot water, steam and radiant heat</i>  <b>Year Installed:</b> <i>1991</i>  <b>Season of Use:</b> <i>Seasonal</i>  <b>Facility Output:</b> <i>Steam &amp; hot water</i>  <b>District Heat:</b> <i>No</i></p>
<p><b>Facility Size; Output per Hour:</b> <i>251,900 lbs #1; 361,000 lbs #2.</i>  <b>Size of fuel Used:</b> <i>Coarse undefined size</i>  <b>Percent of Fuel used by TYPE:</b> <i>100% Chips from mill residue</i>  <b>Fuel Supply Source:</b> <i>100 % forest harvest ops</i>      <b>Comments</b>  <b>Annual volume used:</b> <i>380 dry tons</i>  <b>Fuel Supply Radius:</b> <i>0,5 miles from mill</i></p>	

<p>Swanville Public Schools ISD #486          PO Box 98          Swanville MN 56382          Contact: Gene Horthan          Superintendent</p>	<p><b>Type of Energy Facility:</b> <i>Steam</i>  <b>Year Installed:</b> <i>1981 modified 2005</i>  <b>Season of Use:</b> <i>Seasonal</i>  <b>Facility Output:</b> <i>Heat</i>  <b>District Heat:</b> <i>No</i></p>
<p><b>Facility Size; Output per Hour:</b> <i>100,000 BTUs</i>  <b>Size of fuel Used:</b> <i>Small uniform size</i>  <b>Percent of Fuel used by TYPE:</b> <i>100% pelletized wood</i>  <b>Fuel Supply Source:</b> <i>100% purchased or obtained free of charge</i>      <b>Comments:</b>  <b>Annual volume used</b> <i>350 Dry tons</i>  <b>Fuel Supply Radius:</b> <i>50-100 miles</i></p>	

<p>Warroad Schools ISD# 690          510 Cedar Av          Warroad MN 56763          Contact: Albert Hasbargen          Facilities Supervisor</p>	<p><b>Type of Energy Facility:</b> <i>Hot water</i>  <b>Year Installed:</b> <i>1984</i>  <b>Season of Use:</b> <i>Seasonal</i>  <b>Facility Output:</b> <i>Hot water</i>  <b>District Heat:</b> <i>No</i></p>
<p><b>Facility Size; Output per Hour</b> <i>7MM BTUs</i>  <b>Size of fuel Used:</b> <i>Small uniform size</i>  <b>Percent of Fuel used by TYPE:</b> <i>100% chips from mill residue</i>  <b>Fuel Supply Source:</b> <i>100% purchased from outside supplier</i>      <b>Comments:</b>  <b>Annual volume used:</b> <i>700 green tons</i>  <b>Fuel Supply Radius:</b> <i>100 miles mill</i></p>	



