small-diameter-branch-wood-processing-by-global-energy

9/6/2024

608-238-6001 [TEL]

greg@globalmicroturbine.com [Email]

Global Energy LLC

Small Diameter Wood Processing by Global Energy

This webpage QR code

Structured Data

<script type= "application/ld+json">
{"@context":"http://schema.org",
"@graph":[
{
"@type" : "Organization",
"@id" : "https://globalmicroturbine.com/#organization",
"name" : "Global Energy LLC",
"url" : "https://globalmicroturbine.com",
"sameAs":
["",
""],
"telephone" : "608-238-6001",
"email" : "greg@globalmicroturbine.com",
"logo" : "https://globalmicroturbine.com/logo.png"
},
{
"@type":"WebSite",
"@id":"https://globalmicroturbine.com",
"url":"https://globalmicroturbine.com",
"name":"Small Diameter Wood Processing by Global Energy",
"description":"Explore the profitable and sustainable opportunity of small diameter wood processing. Learn how innovative technologies and market demand are transforming this underutilized resource into valuable products, driving both economic growth and forest health."
}
,{
"@type":"NewsArticle",
"mainEntityOfPage":{
"@type":"WebPage",
"@id":"https://globalmicroturbine.com/small-diameter-branch-wood-processing-by-global-energy.html"},
"headline":"Small Diameter Wood Processing by Global Energy",
"image":"https://globalmicroturbine.com/images/small-diameter-wood-processing-market-by-global-energy.png",
"datePublished":"2024-09-06T08:00:00+08:00",
"dateModified":"2024-09-06T09:20:00+08:00",
"author":{
"@type":"Organization",
"name":"Global Energy LLC",
"url":"https://globalmicroturbine.com"
},
"publisher":{
"@type":"Organization",
"name":"Global Energy LLC",
"logo":{
"@type":"ImageObject",
"url":"https://globalmicroturbine.com/logo.png"
}}}

]}</script>

Explore the profitable and sustainable opportunity of small diameter wood processing. Learn how innovative technologies and market demand are transforming this underutilized resource into valuable products, driving both economic growth and forest health.

PDF Version of the webpage (first pages)

9/6/2024

Hobby and Model Wood

When comparing smaller wood pieces, such as those not wider than 1 inch and not thicker than 1/2 inch, the price difference between hobby/model wood and standard dimensional wood becomes even more pronounced.

Hobby and Model Wood:
• Price: Hobby wood, such as basswood or balsa, typically costs between $2 to $5 for pieces that are 1/4 inch thick, 1 inch wide, and 2 to 4 feet long. These pieces are specifically milled for precision and are often used in model building and detailed crafts. For example, a piece of 1/4 inch x 1 inch x 36 inches balsa wood might cost around $4.50.
• Cost per Board Foot: This equates to a significantly higher price per board foot, often ranging from $20 to $40 per board foot due to the small size and quality of the wood.

Standard Dimensional Wood:
• Price: Standard dimensional wood in similar sizes (e.g., furring strips or smaller trim pieces) is much cheaper. For instance, a 1/2 inch x 1 inch x 8 feet pine furring strip might cost around $1.50 to $2.
• Cost per Board Foot: The cost per board foot for these pieces is substantially lower, typically in the range of $2 to $6 per board foot, depending on the grade and type of wood.

Summary:
Hobby wood costs much more per board foot due to its precision cutting, higher quality, and the market it serves, which demands finer materials for detailed work. In contrast, standard dimensional wood, even in smaller sizes, is mass-produced and intended for more general purposes, making it far more affordable by comparison. (Home Depot pricing.)

9/6/2024

Profit Model Small Diameter Branch to Small Dimensional Hobby Lumber

To assess the profit model for a business that processes small diameter branches left behind by timber companies into hobby wood, we need to evaluate several factors:

1. Raw Material Cost
   • Availability and Cost: Small diameter branches are typically seen as waste by timber companies, so acquiring them could be very low-cost or even free. However, there may be costs associated with collecting and transporting these branches to your processing facility.
   • Sustainability: Using waste materials could appeal to environmentally-conscious consumers, adding value to your product and potentially allowing you to charge a premium.

2. Processing Costs
   • Equipment: A small lumber mill with a 3-inch diameter saw blade or small band saw is relatively affordable compared to industrial-grade equipment. However, the upfront costs, maintenance, and energy consumption need to be factored into the overall expenses.
   • Labor: Skilled labor is required to operate the mill, ensure the quality of cuts, and possibly finish the wood pieces. Labor costs can be a significant part of the overall expense.
   • Yield: Not all branches will yield usable wood. The yield percentage will depend on the quality of the branches and the precision of the milling process. This impacts the amount of saleable product you can generate from each branch.

3. Product Pricing
   • Market Comparison: As discussed earlier, hobby wood is sold at a premium price per board foot, especially for small, precisely milled pieces. If you can produce wood that meets the quality expectations of hobbyists and model builders, you could charge a similar premium.
   • Differentiation: If your product is marketed as eco-friendly, sustainably sourced, or handmade, you might be able to charge even higher prices. Additionally, offering custom sizes or species could help differentiate your product and justify a higher price.

4. Market Demand
   • Target Market: Your primary market would include hobbyists, model builders, and potentially small-scale woodworkers who need high-quality, small-dimension wood pieces. Understanding the size of this market and its growth potential is crucial.
   • Distribution Channels: Selling directly to consumers online (e.g., via Etsy or a dedicated e-commerce site) could provide higher margins. You could also explore selling through specialty craft stores or directly to educational institutions.

5. Profit Margins
   • Revenue per Unit: Assuming you can sell the hobby wood at prices comparable to current market rates ($20-$50 per board foot), and your raw material costs are minimal, your gross margins could be quite high.
   • Volume: The profitability of this business will heavily depend on your ability to scale. Small batches could generate high margins, but the fixed costs of equipment and labor might require you to produce and sell in higher volumes to achieve significant profits.

6. Challenges and Risks
   • Quality Control: Consistently producing high-quality, small-dimension wood from branches can be challenging due to variability in raw materials.
   • Market Saturation: While the hobby wood market is niche, it is also competitive. Differentiating your product and

Value of Wood

To analyze the value of wood from tree trimming services and timber operations that is either left behind or chipped, we need to compare two potential profit models: converting the wood into chipwood for pulp, paper, or landscaping, and processing it into miniature hobby lumber.

1. Chipwood for Pulp, Paper, or Landscaping

Value and Market:
• Pulp and Paper Industry: Wood chips are a primary raw material for the pulp and paper industry. The value of chipwood fluctuates depending on market demand, quality, and species. On average, wood chips might sell for $30 to $50 per ton, depending on the region and the current market conditions. This is a low-margin, high-volume business.
• Gardening and Landscaping: Wood chips are also used as mulch or ground cover in gardening and landscaping. The retail price of bagged mulch can be quite high, but at the production level, the bulk value is much lower, typically ranging from $15 to $25 per cubic yard. The key advantage here is the ease of processing—chipping is a straightforward, low-cost operation.

Profit Margins:
• Low Profit Margins: The profit margins for chipwood are generally low because the end product is sold in bulk at low prices. It's a commodity product, and the market is highly competitive, with little room for differentiation. Large-scale operations can still be profitable due to economies of scale, but small operations might struggle to achieve significant margins.

Challenges:
• Market Saturation: The market for wood chips in pulp, paper, and landscaping is well-established, meaning that new entrants face stiff competition.
• Environmental Concerns: There is growing awareness of the environmental impact of wood chip production, especially in terms of energy use and carbon emissions. This could potentially reduce demand in the future or impose additional costs.

2. Miniature Hobby Lumber

Value and Market:
• High-Value Market: As previously discussed, hobby lumber is a high-value product, often selling for $20 to $50 per board foot. The market is niche, but it commands high prices due to the precision and quality required.
• Differentiation and Niche Appeal: This market allows for significant product differentiation, such as eco-friendly sourcing, specific wood species, or custom dimensions. The appeal to hobbyists, woodworkers, and model builders means that the market is willing to pay a premium for high-quality, small-dimension wood.

Profit Margins:
• High Profit Margins: While the processing of small branches into hobby wood involves more labor and equipment costs compared to chipping, the potential profit margins are much higher due to the premium pricing of the end product. Even with lower volumes, the higher price per unit can make this a more profitable venture.

Challenges:
• Quality Control and Yield: The process requires precision, and not all wood may be suitable for conversion into hobby lumber. Waste and inefficiencies in production could reduce profit margins.
• Market Size: The hobby wood market is smaller and more specialized, meaning that scaling up could be more

Looking for Partners to Develop this Market

Infinity Turbine and Global Energy are developing a micro-sawmill for the lucrative hobby and small wood market.

This includes a tabletop sawmill for branch diameter of less than 6 inches (2-5 inches average) and a low-cost vacuum bagging technology for commercial vacuum drying results.

Purpose: process small diameter wood, including softwoods, hardwoods, bamboo, composites and solid plastics into small dimensional wood for hobby and home markets.

Sources: Tree trimmers, sawmill slabs, timber harvesting off cuts, municipal tree trimming, and what would otherwise be sent to the chipper.

Pre-processing: Small diameter branches and be chop sawed or chunked very quickly (24 inch length or less).

Products: Miniature sawmill, resaw, edger, surfacing, and vacuum bag quick drying.

If you have an interest in manufacturing equipment for this huge market, or would like to license our concepts or technology, please email us with the link below.

9/6/2024

9/6/2024