

# NARA Micronized Wood Depot Fact Sheet

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## What is a Micronized Wood Depot?

At a micronized wood depot, woody biomass is mechanically reduced through chipping and grinding to produce a fine wood flour. Chips, 4 inches (101.6mm) in diameter, enter the depot and wood flour, 0.01 mm, leaves the facility. Micronized wood depots are typically located near the feedstock source, and supply liquids depots or conversion facilities for processing into sugars and biofuels.

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## Critical Solids Depot Requirements



### Biomass Cost

The costs associated with handling and processing raw forest residuals and C&D waste. Costs vary based on accessibility of feedstock and proximity to processing site. However, based on NARA economic analysis, biomass costs can be upwards of one-third of the operating expenditure for a wood to biofuels plant. Estimated biomass availability in the NARA region (WA, OR, ID & MT) range from 0 to over 400,000 Bone Dry Tons (BDT) available annually.



### Labor Cost

Average county-level wages estimates. County level data in the NARA region shows a variation of average labor costs ranging from \$32,029 to \$52,000. The more complicated the processing, the greater the labor costs.



### Electricity Rates

The cost per kilowatt hour. In the NARA region, county-level electricity rates vary from 3 to 6 cents a kilowatt hour. Many of the processing steps are energy intensive, thus electricity rates can impact annual operating expenses.



### Other Infrastructure

This includes existing utilities; fermentation and separation tanks; pretreatment vats; storage, blending and distribution infrastructure. NARA examined both operating and moth-balled facilities with existing infrastructure to identify potential siting locations for biofuels facilities. Utilizing existing infrastructure can be an important way to reduce capital expenditures.

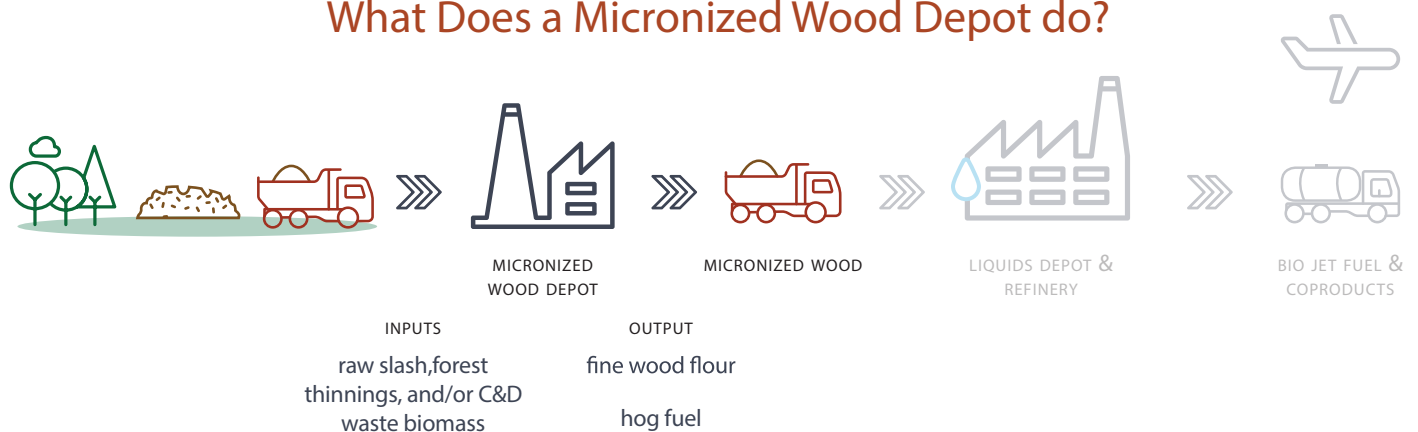
# Micronized Wood Depot Siting

At a micronized wood depot, the biomass feedstock is mechanically broken down by hammer and ball mills. By grinding the chips into a fine flour, the pretreatment stage is eliminated. The resulting wood flour can go straight to hydrolysis, where the lignocellulosic biomass is converted into fermentable sugars. A micronized wood depot is located in close proximity to the feedstock, which could be raw forest residuals or C&D waste.

The selection criteria for a micronized wood depot siting are:

- Available feedstock
- Highway access
- Railway access
- Electricity rate

## What Does a Micronized Wood Depot do?



## The Micronized Wood Depot's Role in the "Wood to Wing" Process

