

Biomass Fuel Overview

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What does DHR burn?

- Clean, woody biomass (free of painted or treated wood)
- Saw Mills, urban, agricultural or forestry sources
- 3-inch nominal size with <5% by weight exceeding 7x2x1 inches
- <30% of volume delivered must be 0.124 inches or smaller
- Delivered reasonably free of incombustibles (stones, metal, etc.)
- Meets Minimum Sustainability Standards for forest-produced biomass



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How does GRU acquire its fuel?

- BioResource Management (BRM) – Local Fuel Procurement contractor responsible for:
 - All fuel purchases
 - Ongoing supply development
 - Delivery schedules
 - Fuel receipt
 - Quality control
 - Compliance with sustainable management practices
- Purchased on a delivered basis (mileage fee)
- Within a 75 mile radius of plant

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Fuel Sources



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Types of Fuel

- Clean, woody biomass
- Procurement guidelines to manage risk (operational, reliability)

Fuel Type	Fuel Mix
Logging debris	60-80%
Urban wood	15-30%
Mill residues	3-5%

Fuel Type	Per Supplier
Logging debris	≤ 40% total volume
Urban wood	≤ 20% total volume
Mill residues	≤ 80% total volume

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Fuel Cost

- At the time of plant purchase, fuel was \$41.65/MWh (with variable O&M)
- Currently \$30.99/MWh
- Performance testing → lower operating levels → longer generating periods → steady fuel stream → lower fuel prices

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Forestry Standards

Fuel procurement standards for forest produced biomass with goals to:

- Promote forest health
- Long-term forest productivity – reforestation with harvesting
- Protect forest resources from wildfire, pests & diseases
- Safeguard critical water, soil and habitat resources
- Preserve biological diversity

Questions?