

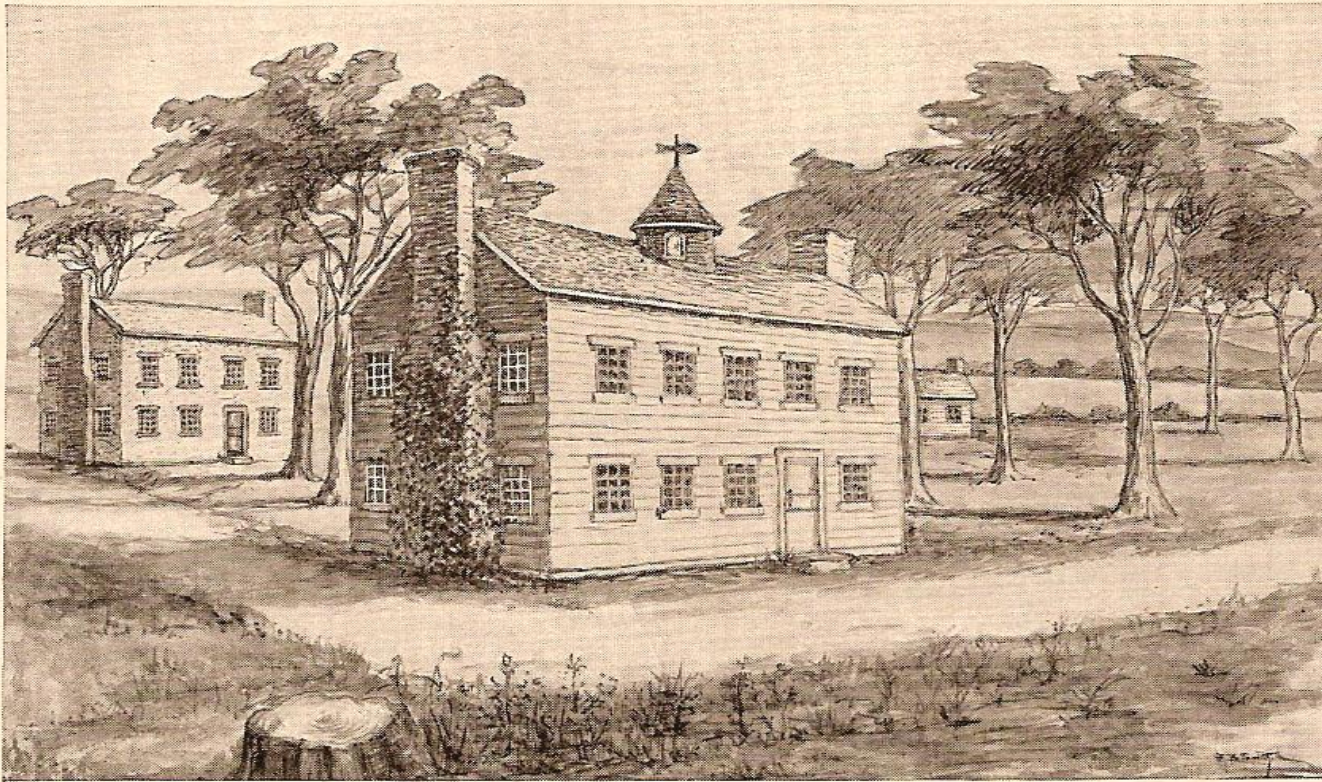
# Wood Residue for Energy

“A New Promise”

Thermo Energy Production  
Maryville College

# Maryville College 1819

## Wood Heat



The Seminary and "the Frame College."



# Maryville College

## Anderson Hall

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# The 1970's Energy Crisis

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- High Oil Consumption
- U.S. Oil Production in Decline
- Heavy use of Foreign Oil
- Arab-Israeli Conflict
- OPEC Curtailment of Exports



# The 1970's Energy Crisis

Lead to:

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- Anxiety Toward the Supply of Natural Resources
- Fear of the Dependence on Foreign Oil
- Gas Prices Rose Drastically
- Alternative Energy Source Exploration
  - Solar
  - Wind
  - Geothermal
  - Biomass
  - Many Others



# Maryville College

The 70's and 80's

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- Decline in Enrollment
- Crumbling Infrastructure
- Increased Cost of Operation Due to Fuel Cost Increase of Over 400%
- 1977 Wood Residue for Energy: An Economic Analysis Prepared by TVA
- 1982 Wood Fired Steam Plant Starts Operation



# Maryville College

## Wood Fired Steam Plant

### Installation and Operational Analysis 1983

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- Boiler & Wood Handling Facilities \$847,000
- Replace Steam Lines \$800,000
- Total Investment \$1,647,000
  
- Annual Operating Cost Savings \$193,600
- 7.5 Year Simple Payback
- Life Expectancy 30 Years

# Wood Residue Suppliers

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■ Anderson Truss Company	1500Tons
■ Frerich Sawmill Inc.	3000Tons



# Anderson Truss Company

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- Construction and Sales of Roof and Floor Truss
- Wood Residue By Product:
  - Wood Chip Fuel
- Supply 1500 Tons
- Cost \$20 per Ton













CRESSWAD

WOODGRINDERS

S E R I E S

EF-60











ANDERSON TRUSS CO.

1-800-826-6806

Alcoa, TN (865) 983-9485

USDOT 356058





ANDERSON TRUSS CO.

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FL7D



ANDERSON TRUSS CO.  
1-800-826-6806  
Alcoa, TN 35951 903-949  
USDOT 356058

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# Frerich Sawmill

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- Manufacturing Log Homes, RR Crossties, Construction Beams, Hardwood Lumber
- Wood Residue By Products:
  - Bark Mulch
  - Sawdust Bedding
  - Wood Shavings Bedding
  - Wood Chip Fuel
- Supply 3000 Tons
- Cost \$35 per Ton









































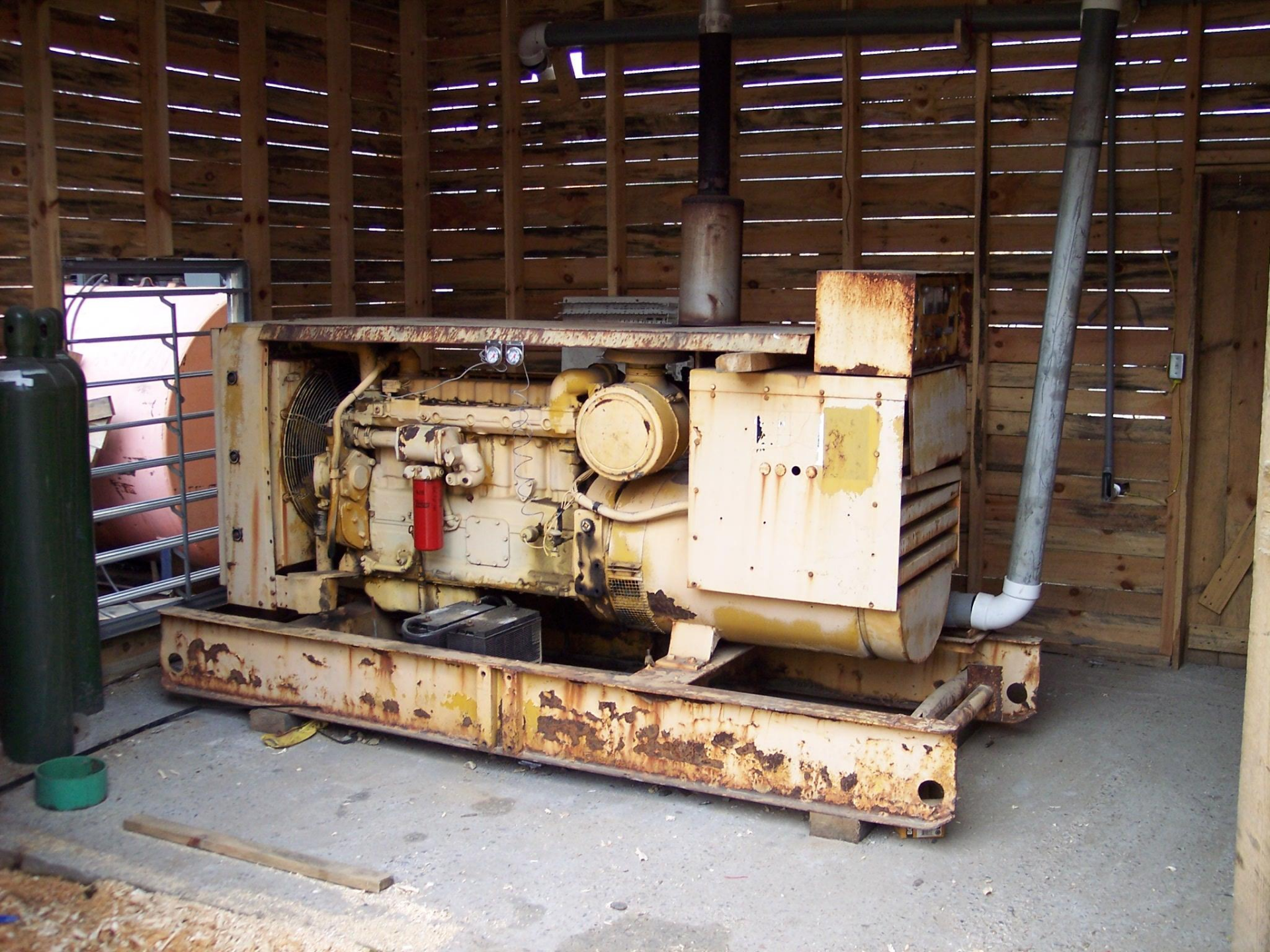














# Maryville College Steam Plant

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- Supplying 20 Buildings With Steam
- Serving 675,969 Square Feet
- Annual Consumption Approximately 4500 Tons of Wood Residue
- Operating from October 1 to May 1
- 60 psi Operating Pressure













**DANGER**  
STOP CONVEYOR  
— BEFORE —  
CLEANING OR LUBRICATING





**DANGER**  
STOP CONVEYOR  
— BEFORE —  
CLEANING OR LUBRICATING



**DANGER**  
STOP CARVEYER  
— RETURN —  
CLEANING IN 1000







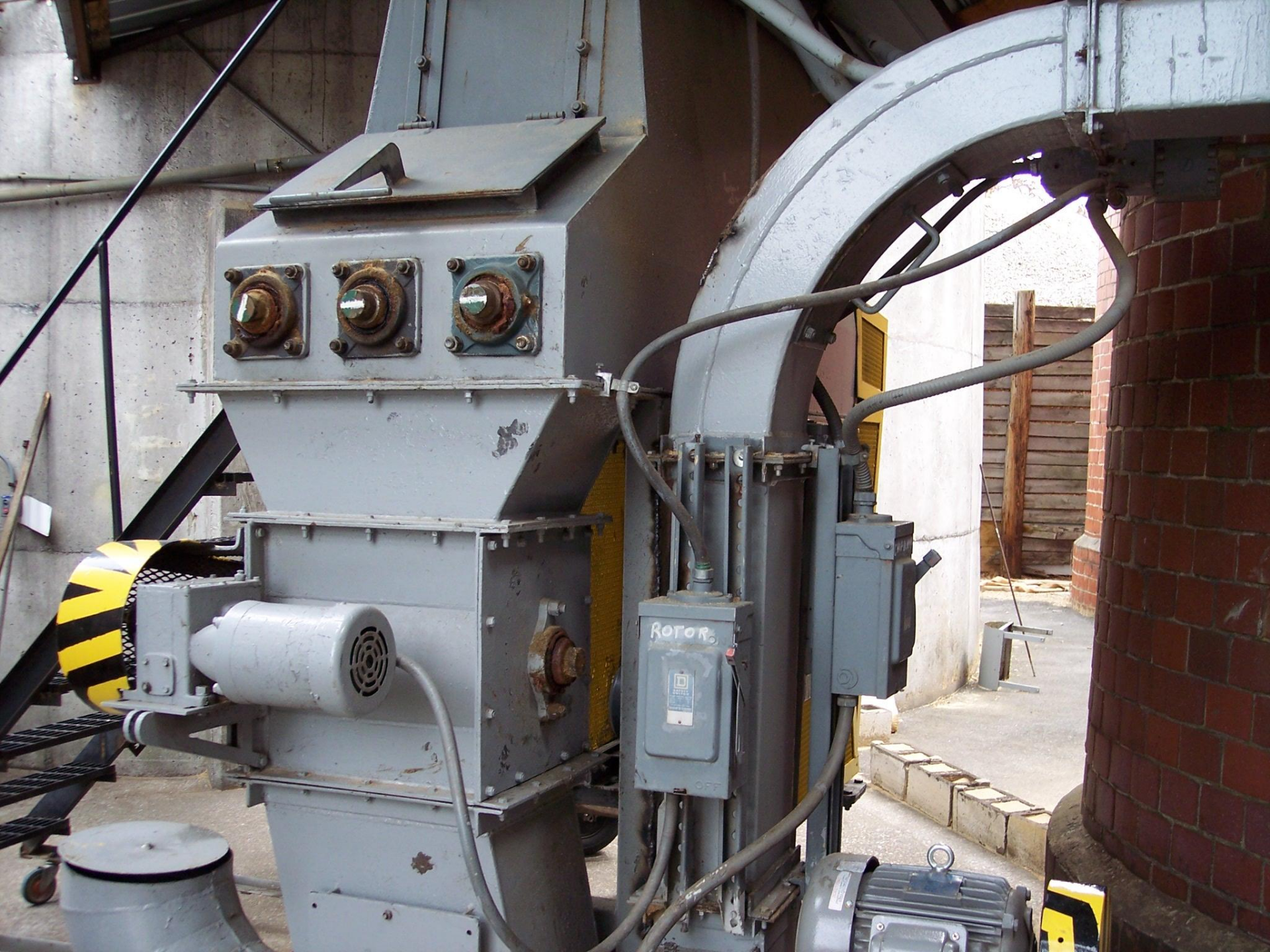






































# Warm Students are Happy Students

## Happy Students Graduate

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