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
The 1970’s
Energy Crisis

- 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:

- 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

- 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

- 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

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

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

- 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

- 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
Warm Students are Happy Students
Happy Students Graduate