



# Atlantic Power Corporation



## Allendale and Dorchester Biomass

Charlie Pierce  
Wood Procurement Manager



# History

- **Started as EDF and came online in November of 2013**
- **EDF sold the plants to Atlantic Power in August 2019**
- **I Squared bought Atlantic Power in the Spring of 2021 – still operates as Atlantic Power – went from publicly traded to being private now**



# Atlantic Power

- **Owns 20 power plants**
- **8 natural gas plants**
- **3 Hydro Plants**
- **8 Biomass Plants**
- **1 Coal Plant**
- **Plants are in Canada (6) and the United States (14)**
- **Produces a total of 1,672 MW per hour**



# Allendale/Dorchester Biomass

- **We have a 30 year PPA (Power Purchase Agreement) with Santee Cooper**
- **The PPA expires in 2043 - 22 years remain on it**
- **Each plant is a 20 MW plant**
- **We produce 21.5 MW per hour gross and 19.5 MW per hour net**
- **We power ourselves**
- **We run 24/7**
- **We are down for 2 outages a year. 1 week in the Spring and 1 week in the fall.**
- **Each plant sells approximately 468 Mwh/day**



## Allendale/Dorchester Biomass

- **The number of employees are approximately 18 at each plant**
- **The Plant Manager, Maintenance Manager, Wood Procurement Manager and EHS Manager are shared between both plants**
- **Each plant uses approximately 780 tons per day – 5,400 tons per week - 270,000 tons per year of wood fuel**
- **This is a combination of chips, grindings, bark, pallets and sawdust**
- **We also look for opportunity wood such as storm wood**



## Wood Yard

- **We like to keep around 22,000 - 25,000 tons of inventory on the yard – about a month of inventory**
- **The yard will hold a capacity of 28,000 – 30,000 tons which will run 35 -40 days**
- **The moisture content is 45% - 50% as received and we burn it at 38% - 40%**
- **The blend that we like is around 30% - 40% Chips, 50% grind/bark, 10% dust and clean pallets**
- **We try to buy 220 loads / week**
- **I have approximately 20 suppliers per plant that I depend on**



# Receiving Process

- **The truck dumps into the receiving hopper**
- **The wood goes across a magnet**
- **Travels across the disc screen**
- **Goes to the stack out or the wood hog**
- **It is then rolled and mixed and moved to the wood pile**
- **We eat from oldest material - first in first out method**
- **It is then moved to the reclaimer and up to boiler**



# Wood Ash

- **We generate 10-15 loads of Ash per week at each plant**
- **The Ash goes to farmers and cement companies**





# The Future

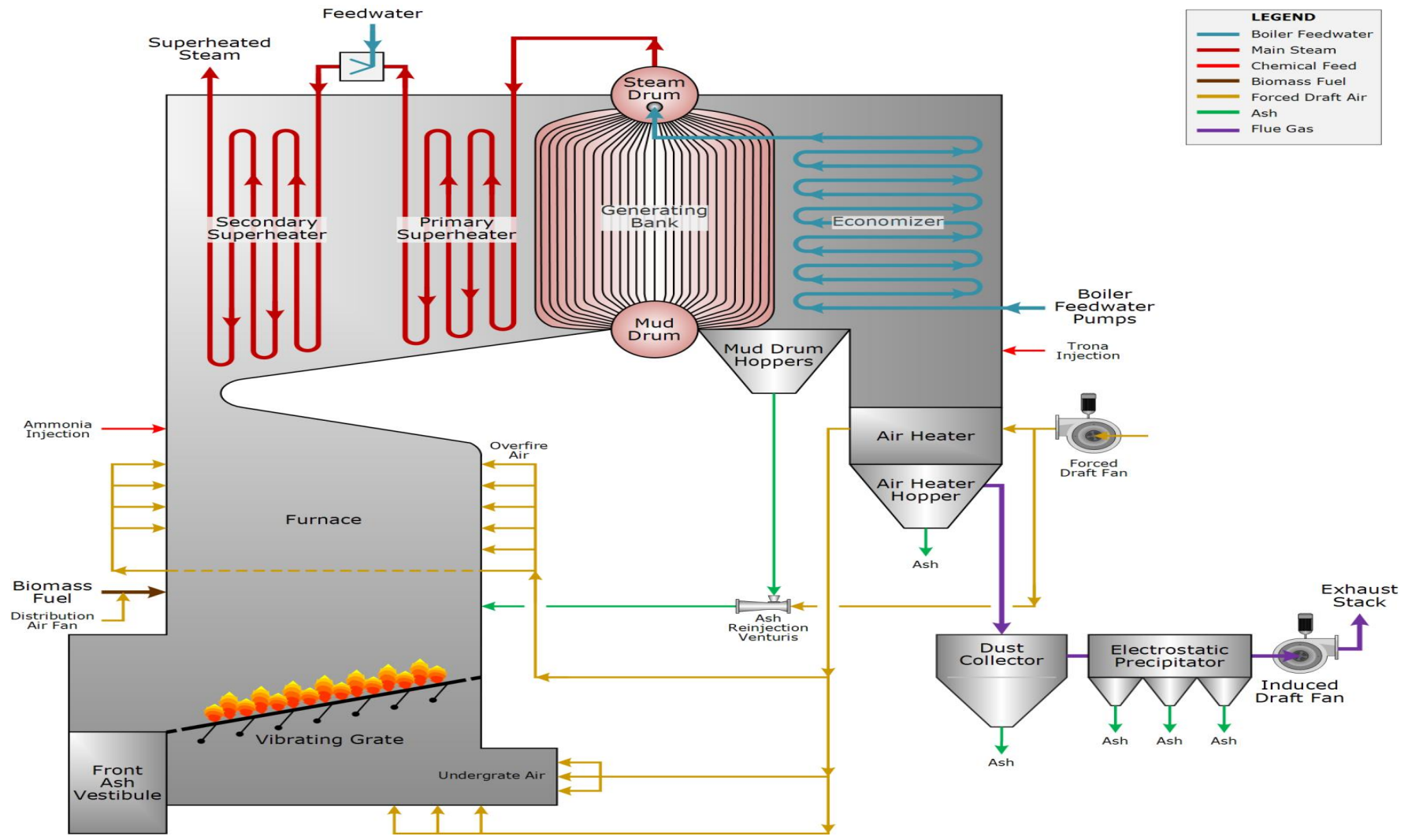
- **Wood basket is still strong**
- **Buy most of fuel within 35 miles of each plant**
- **Biggest obstacles besides weather is trucks**
- **Rising fuel costs/insurance and lack of drivers**
- **Break downs and not being able to get parts/equipment**



# Biomass Boiler

- **Stoker boiler**
- **Steam turbine generator**
- **193,000 lbs of steam/hour and between 960 – 1,000 degrees**

# Biomass Boiler



LEGEND	
<span style="color: blue;">—</span>	Boiler Feedwater
<span style="color: red;">—</span>	Main Steam
<span style="color: orange;">—</span>	Chemical Feed
<span style="color: brown;">—</span>	Biomass Fuel
<span style="color: yellow;">—</span>	Forced Draft Air
<span style="color: green;">—</span>	Ash
<span style="color: purple;">—</span>	Flue Gas