



# ECI Co-generation Facility

Somerset County, Maryland

James M. Harkins, Director

Maryland Environmental Service



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# Location





# Facility Background

- October 1985, Maryland began construction of the eastern correctional institution complex (ECI).
- A primary objective was to build an institutional complex with a self-contained, reliable power generating facility.
- In anticipation of escalating fuel oil prices, the power generation facility was designed to burn woodchips as the primary fuel and no. 2 fuel oil as a secondary fuel supply.

# Wood Boilers



# Turbine Generators



# Cooling Towers



# Diesel Generators



# Diesel Generator Panelboard



# Wood Silo and Plant View



# Wood Chip Storage



# Electrical Substation Transformer



# Main Control Room



# Operating Data

- Total annual steam generated = 280,000,000 pounds
- Total annual wood chips utilized = 50,000 tons
- Overall boiler availability = 90% (time on line divided by total hours per year)
- Total annual electricity generated = 12,600,000 kilowatts
- Total annual electricity purchased (Connectiv) = 5,000,000 kilowatts
- Daily wastewater utilized for cooling water = 110,000 gallons

# For More Information

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- Would you like to know more about this session?
- James M. Harkins, Director
- Maryland Environmental Service
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Don't forget to fill out and drop off your session evaluations!



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