



1. Fuel In-Feed

Locally sourced wood waste (including recycled clean wood construction and municipal tree trimmings) is loaded into the fuel bin and

2. Gasifier

Fuel enters the gasifier and goes through several stages including drying, Pyrolysis (chemical change brought about by heat), and gasification. The wood is converted into synthetic "syngas" that can be used like natural gas.

3. Oxidizer

The syngas is conveyed into the oxidizer where it is combusted, with the resulting flue gas directed through a boiler.

4. Boiler

Hot water from the boiler is transported by an underground pipe to provide heat and hot water for Dockside buildings. The cold water then returns to the boiler to start the heating process

5. ESP

After exiting the boiler, the flue gas is cleaned in an electrostatic precipitator (ESP) that filters out virtually all of the remaining particulate matter.

Figure 3: Biomass Gasification Process Flow Diagram (Source: Themis Power Corporation, n.d.)