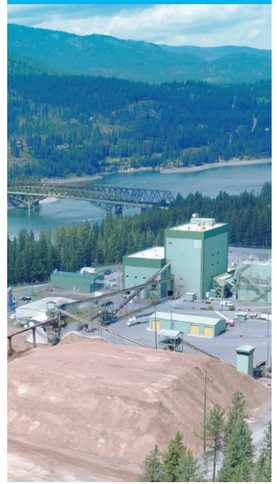
Quick Facts

- The plant generates up to 53 megawatts of electricity, enough to power over 37,000 homes.
- The installation of cleaning equipment removes greatly reduces visible emissions by removing 99% of smoke particulates.
- The visible plume from the stack is condensation of the hot flue gas contacting cold ambient air.
- The plant burns about 1,600 tons of wood waste per day when in full operation.

Avista's Biomass Generating Station contributes toward a climate-resilient and equitable future by effectively capturing and isolating thousands of tons of carbon annually.



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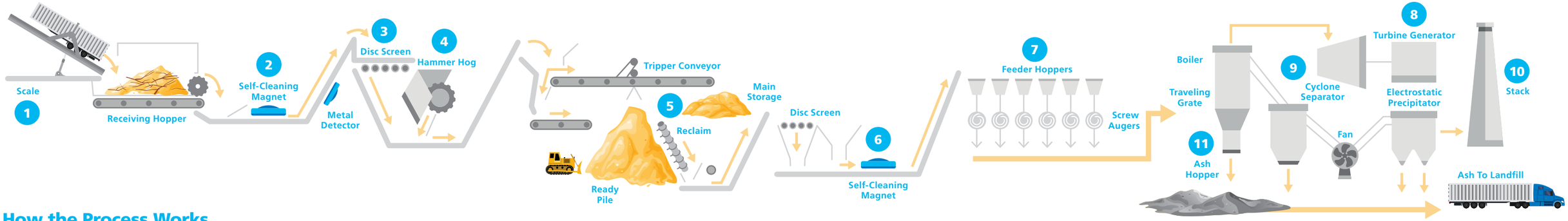
AVISTA®

Kettle Falls
converting wood waste to watts

Turning wood waste from sawmills and forest management operations into renewable, dependable energy has been the job of Avista's Kettle Falls Generating Station since 1983. Located in Kettle Falls, Washington, our biomass plant was the first utility-owned electric-generation plant of its kind constructed in the United States.

The Kettle Falls Generating Station has received numerous environmental awards, including previously being recognized as the Power Plant of the Year. Together with Avista's legacy hydropower projects and purchased wind power, the plant is just one example of the steps we are taking to meet our clean energy goals, now and into the future.

Avista is proud to have biomass electric generation as part of our diverse energy portfolio. The renewable energy from our Kettle Falls plant helps us continue to provide reliable, affordable energy while being good stewards of the environment.



How the Process Works

1. An average of 50 semi-truck loads of wood waste are unloaded each day the plant is in operation. Trucks are unloaded by tipping the 30-ton trailer to a 63 degree angle as the wood waste slides into a receiving bin.
2. The wood waste passes under a metal detector and a self-cleaning magnet to remove any iron, such as nails that may have been in a tree, on its way to the disc screen.
3. The disc screen separates the wood waste according to size.
4. Oversized wood material is ejected to a hammer hog where it is broken into small pieces.
5. A tripper conveyor moves the wood waste to the "ready" pile, where a bulldozer pushes it to the main storage area.
6. The wood waste passes through a second disc screen and magnet to remove any remaining iron fragments before it goes into the plant.
7. A conveyor system carries the wood waste to six feeder hoppers mounted on the boiler.
8. The wood waste is burned in a seven-story furnace/boiler lined with rows of closed-loop pipes filled with water to create steam. The steam drives a turbine which turns a generator to create electricity.
9. During the burning process, large particulates and char are removed by a clone separator and smaller particulates are removed by an electrostatic precipitator.
10. Clean emissions are dispersed through a 180-foot-high stack after the particles are removed.
11. Ash that collects on the boiler grate and other equipment is removed by a mechanical drag chain, and a screw conveyor routes it to dumpsters. The ash is later deposited at a solid-waste landfill operated by Avista.

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