

Androscoggin Valley Hospital



- Project completion: March 2014
- Boiler Size: 250hp/8.5mmbtu steam
- Displaces: 128,500 gallons of #2 fuel oil per year
- Annual savings: \$350,000
- Project cost: \$2.8 million dollars

Androscoggin Valley Hospital, has a new \$2.8 million biomass boiler project. Three years in the planning, the hospital broke ground on construction of a 3,200 square foot boiler building on the west side of the existing service/loading area. Stephen McMann, AVH director of facilities, said the building contains both a main boiler room housing the biomass boiler and a concrete storage bin to allow all the wood chips to be stored inside. AVH is operating a 250hp or 8.5mmbtu/hr., biomass boiler. It provides steam at an operating pressure of 80psi.

The hospital burned 135,000 gallons of No. 2 fuel oil annually before the biomass boiler installation. Now AVH only uses 6,500 gallons. The biomass plant will save the hospital an estimated \$350,000 annually in heating costs, which means the plant will pay for itself in eight years. The hospital will retain its old oil boilers to provide back up for emergency use.

The biomass plant is burning about 2,300 tons of hardwood chips annually. As a health care facility, AVH paid careful attention to emissions. McMann said using hardwood chips instead of whole tree chips reduces ash and particles. In addition, the plant is equipped with a particulate collection device known as an electrostatic precipitator to remove particles from the flue gas. The plant exceeds federal Environmental Protection Administration requirements for particulate control.

All of the heat generated will be used by the hospital. Some of the process steam generated will be used in the kitchen and to sterilize equipment in the operating room. The 250-horsepower boiler requires about two truckloads a week of wood chips.

SMRT of Portland, Maine designed the biomass project. Langford & Low, also of Portland, was the construction manager on the project.

