University looks to biomass to cut energy bills

By Chris Horn

USC is seeking approval from the state Budget and Control Board in March to build a biomass gasification plant for campus heating that would largely eliminate the University’s need for expensive natural gas.

The Joint Bond Review Committee recently approved the project, which would result in electricity and natural gas savings of nearly $2 million annually for the Columbia campus. Those savings would be used to pay back the cost of the plant in 14 years.

The University’s Buildings and Ground Committee OK’d the project, pending Budget and Control Board approval and permitting from the state Department of Health and Environmental Control. Johnson Controls, the University’s energy conservation consultant, suggested the idea for the biomass plant as a way to curb the University’s rising energy costs. In the past two months, natural gas prices have risen by 20 percent for USC.

“You see a lot of these plants up north, but as natural gas costs rise, I think we’ll start seeing more of them in the south,” said Rick Kelly, USC’s vice president for business and finance. “The good thing for us is that wood chips are readily available and a renewable energy source. Their cost is also very stable.”

The biomass gasification process heats wood chips to about 1800 degrees, which releases gases that are combusted to generate steam. The process is cleaner than natural gas, emitting far fewer particulates and greenhouse gases. The plant would be built on University property bordered by South Main, Sumter, and Whaley streets near the College of Engineering and Information Technology, which might incorporate a classroom into the facility.

The plant would meet about 85 percent of the campus’ steam needs and would allow aging, fossil fuel-fired boilers to come offline. If the plant is approved by state regulatory authorities, construction could begin by summer with a 12 to 18 month completion schedule.