Morehead State University may adapt its four coal boilers to burn sawdust - a cost-saving measure that could become a model used to encourage similar changes statewide.

The university asked the Tennessee Valley Authority and the Kentucky Energy Cabinet for grants totaling $25,000 to study whether the boilers can be modified and how much money would be saved, said Joe Planck, Morehead physical plant director. Yearly savings estimates range from $40,000 to $100,000.

Morehead expects a decision by October on whether the grant money will be awarded, Planck said.

Although it takes 2.8 tons of sawdust to equal the heat generated by one ton of coal, sawdust is much cheaper than coal, Planck said. Sawdust sells for about $6 a ton, meaning it would cost $16.80 to generate the heat produced by a ton of coal at $36.75 a ton.

By burning a mixture of coal and sawdust, the university could reduce its coal consumption by 2,000 to 4,000 tons a year, he said. The boilers now burn about 9,000 tons of coal each year, producing steam used to heat campus buildings. The university’s yearly coal bill is about $350,000.

Planck said he thought it would cost the university about $200,000 to modify the boilers to burn sawdust.

"We’re looking at it for the cost savings, using it in coordination with coal," Planck said. "Mixing sawdust would reduce our sulfur emissions and generate less ashes, giving us less of a problem with ash removal."

The mixture, Planck said, would probably be 80 percent coal and 20 percent sawdust. He said Morehead's boilers would not be able to produce enough heat from only sawdust during the winter.

Planck also said that if the university chose to modify its boilers, it would help area mills that now ship their sawdust to paper mills in Western Kentucky and Ohio. The university would probably set up a system to purchase sawdust from the lowest bidder among area businesses, he said.
John Stapleton, director of the alternative energy development division of the Kentucky Energy Cabinet, said that if the grants were approved, $15,000 would come from his office and $10,000 from TVA. The grant proposals have yet to be approved by review committees at the state and federal levels, he said.

Planck said Morehead would have to put up $5,000 to get the $25,000 grant. He said the study would cost about $20,000 and the balance of the money would be applied to the modification.

The Kentucky Energy Cabinet is helping the university apply for the grants, hoping Morehead could become a model experiment for modifying coal boilers to burn sawdust, Stapleton said.

"We're looking for something new and different," he said. "We think this project has some potential and we'd like to use it as a demonstration. We're hoping to get some operational data if it's built."