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Power plant's future may rely on biomass

By Daniel Cailler

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The best way to upgrade Columbia's city power plant to meet future federal regulations will be better understood after a study of two of its three boilers.

The Columbia City Council last night unanimously approved a contract with engineering firm Sega Inc. for a study of the power plant boilers, which now burn mostly coal to produce energy. The funding, which has been appropriated from the electric production budget, is not to exceed $48,800.

The study will assess the feasibility of modifying the boilers to increase the amount of biomass they burn — such as wood, plants or waste — and reduce dependence on coal, addressing pending federal regulations and Missouri Renewable Portfolio Standards.

"We're looking at how far we can go," said Mike Schmitz, interim director for Columbia Water and Light.

Schmitz said the boilers respond well when burning 10 percent to 15 percent wood and that the study would see how they might respond with other materials and a higher percentage of biomass.

Schmitz made it clear that Columbia needs to anticipate regulatory changes. But the debate among council members and staff centered on how to go about it. The main issue was whether it would be wiser to modify the existing boilers to increase biomass consumption, as the study calls for, or to consider replacing them to shoot for an eventual 100 percent biomass consumption.

Dick Parker of the city's Environment and Energy Commission said he wanted to see all three boilers considered. "I'd be concerned if there were changes made that would prevent eventually going to 100 percent," he said.

Schmitz said a full conversion is a totally different approach. "I'm not saying we wouldn't end up there," he said. "It's a much more expensive process."

Schmitz said that on the extreme end of costs would be a new plant at about $300 million, but he added that there are less expensive options — in the $100 million range — requiring modifications to the existing boilers.

Schmitz said he does not know what any modifications recommended by Sega might cost.

Third Ward Councilman Karl Skala said the question is "whether it's worth the investment to get the data back" from Sega and whether boiler upgrades "would interfere with something we're going to have to do inevitably."

City Manager Bill Watkins seemed to favor the idea of a boiler upgrade. "It would allow us to raise our biomass relatively quickly at a relatively inexpensive price," he said.

The council agreed that following through with the study was the best option.

"It seems prudent to me to get the information that can bear on the decision," Skala said. "This may be some good information in terms of how we can … fall within the context of the restrictions and regulations that come down."

The council also authorized an agreement with Burns & McDonnell Engineering Co. for construction of the next bioreactor disposal cell at the city landfill's biogas plant. The plant, which has been producing renewable energy since June 2008, generates 1.5 percent of the city's electricity. With the new disposal cell, that number could jump to 2.5 percent over the next several years, pushing Columbia closer to its 2012 goal of having 5 percent of electric retail sales coming from renewable sources.

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