

## COUNCIL ACTION FORM

**SUBJECT: SECONDARY FEED SYSTEM FOR PRE-PROCESSED BOILER FUEL AT RESOURCE RECOVERY PLANT**

### **BACKGROUND:**

The City's Resource Recovery Plant annually processes 50,000 tons of municipal solid waste (MSW), recovering approximately 72% of all materials received. As the MSW travels through the processing system, several rotary disc screens intended to remove sand, glass, dirt, and grit also sort out smaller burnable material. In an effort to reclaim as much refuse derived fuel (RDF) as possible and reduce the amount of waste that is landfilled, staff identified a location for a secondary feed system to bypass traditional processing. This system would feed pre-processed, boiler-ready fuel directly from a truck into the underground pipeline that leads to the storage facility in the power plant's coal yard. Some examples of locally generated materials that could be inserted are sawdust or wood chips, shelled corn, and crumb rubber.

In the past, these smaller preprocessed materials were sent directly to the Boone County Landfill, since if they were processed through the plant, they would mechanically be sorted out and ultimately still be transferred to the landfill. This additional feed system will allow Resource Recovery personnel to unload and transfer boiler-ready fuel with a 100% recovery rate to the Power Plant for combustion; thereby reducing both the amount of coal consumed and the amount of material sent to the landfill.

Council previously approved a Solid Waste Alternative Program (SWAP) Grant of \$24,950 from the Iowa Department of Natural Resources for this project as a forgivable loan. This means that when the terms of the contract are met, the funds will not need to be repaid. The current budget provides \$23,056 for this project and an additional \$13,000 has been identified in savings from Fixed Equipment Repair by deferring maintenance on a PSI blower motor, bringing total available funding to \$61,006.

Brown Engineering of Des Moines has completed plans and specifications for this project for a cost of \$12,900. Their engineering estimate of the base cost for this project is \$47,500. The plans have included two possible additional alternatives. Alternative #1, estimated at an additional \$16,500, would provide for the installation of an electric motor driven auger. The motorized auger would assist in maintaining a more consistent and even flow of the material being fed into the system. Alternative #2, estimated at an additional \$30,000, would provide for the integration of this new system into the current PLC (programmable logic controller) operating system. The new equipment is fully functional with local controls at the hopper if this option is not viable.

**ALTERNATIVES:**

1. Approve plans and specifications for the Secondary Feed System for Pre-Processed Boiler Fuel at the Resource Recovery Plant by establishing March 20, 2012, as the date of letting and March 27, 2012, as the date for report of bids.
2. Reject the project

**MANAGER'S RECOMMENDED ACTION:**

The installation of a secondary feed system will reclaim more refuse derived fuel (RDF) and reduce the amount of waste sent to the landfill. Staff has identified a location within the plant for a secondary feed system to bypass traditional processing. This system will feed pre-processed, boiler-ready fuel directly from a truck to the underground pipeline and into the storage facility in the coal yard. Funding for this project will come from a forgivable DNR loan and from savings identified within the existing budget.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby approving plans and specifications for the Secondary Feed System for Pre-Processed Boiler Fuel at the Resource Recovery Plant by establishing March 20, 2012, as the date of letting and March 27, 2012 as the date for report of bids.