

CIP EXPENSE DETAIL

DATE OF COUNCIL CONSIDERATION:
CONTACT DEPARTMENT(S):

10/20/11
Austin Water Utility

SUBJECT. Authorize award, negotiation, and execution of a purchase contract with UNISON SOLUTIONS, INC., Dubuque, IA, or one of the other qualified offerors to RFP No. SMH0124, for the purchase of a biogas conditioning system for the Hornsby Bend Biosolids Management Plant in an estimated amount not to exceed \$1,206,300.

CURRENT YEAR IMPACT:

Department:	Austin Water Utility
Project Name:	Hornsby Bend Biogas Energy Project
Fund/Department/Unit:	4570 2307 8118
Funding Source:	Commercial Paper
Current Appropriation:	6,303,698.00
Unencumbered Balance:	2,937,199.44
Amount of This Action:	(1,206,300.00)
Remaining Balance:	<u>1,730,899.44</u>

Total Amount of this Action	<u><u>1,206,300.00</u></u>
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ANALYSIS / ADDITIONAL INFORMATION: This contract is for the purchase of a biogas conditioning system necessary to support the operation of the newly acquired biogas-fired engine/generator being installed at Hornsby Bend Biosolids Management Plant (Hornsby Bend). The biogas conditioning system is used to remove impurities from the biogas before being introduced into the engine/generator. The new generator replaces two 400 kilowatt (kW) generators installed in the 1980s. The existing units were operated without biogas conditioning, which caused significant mechanical problems and eventually led to the failure of the units. These units are no longer functioning, serviceable, or repairable.

The biogas produced from the digesters is at a very low pressure, is saturated and contains hydrogen sulfide, siloxane and other trace contaminants. The biogas treatment system removes or otherwise reduces these contaminants prior to being used in the engine.

Use of biogas can result in significant economic and environmental benefits. Biogas has not been used at Hornsby Bend since the failure of the existing cogeneration system. Carbon emissions are directly reduced as both electricity and gas consumption at the site can be offset by the energy produced by the proposed system. Currently, biogas not used in the boilers is flared to the environment to help reduce the impact on the environment. No natural gas or supplemental fuel source for the boilers is present on-site.

This size of the new generator will be capable of consistently generating more energy than the estimated 500kW to 700 kW the Hornsby Bend facility uses, thereby offsetting the plant's energy use and generating a credit to the water utility.

Electricity produced from the new generator will be renewable as it uses biogas produced from the sludge treatment process and therefore requires no fossil fuels. The result will demonstrate distributed green power generation, reduce the facility's operating costs, and offset on-peak operation of the plant. Through this effort, Austin Water will be contributing to Austin Energy's effort to avoid building new power generation plants and will help the City meet a key goal of the Austin Climate Protection Plan, which is to power all City facilities with 100% green power by 2012.