



Department Source: City Utilities - Water and Light

To: City Council

From: City Manager & Staff

Council Meeting Date: June 18, 2018

Re: Professional Engineering Service Agreement with Ecoengineers

Executive Summary

Staff has prepared for Council consideration an ordinance authorizing the City Manager to execute a Professional Engineering Services agreement with Ecoengineers (TPR Enterprises, LLC) for a feasibility study analyzing the potential for the City to upgrade its landfill gas to produce renewable natural gas (RNG) to be sold as transportation fuel. The cost for these services is not to exceed \$18,950

Discussion

The City's Market Participant, The Energy Authority (TEA), has suggested that a new revenue opportunity could be realized by upgrading the City's landfill gas facility to produce renewable natural gas (RNG) to be sold as transportation fuel instead of being used as fuel for energy production. TEA has recommend that the City work with Ecoengineers (TPR Enterprises, LLC) to perform a feasibility study analyzing the potential for the City to upgrade its landfill gas to produce RNG. As part of this study, Ecoengineers will perform the following tasks:

1. Summarize the current biogas quantities generated by the landfill and estimate the amount of renewable natural gas (RNG) that could be produced from the facility.
2. Contact Ameren and Panhandle Eastern Pipeline to determine connection details, estimated connection fee, maximum allowable operating pressure (MAOP) of the receiving pipeline, and gas quality requirements.
3. Outline the primary equipment necessary to upgrade the biogas to produce pipeline quality RNG to meet the utility's gas specifications. Provide a preliminary process flow diagram.
4. Identify the disposal options for the waste products (raw biogas condensate and tail gas) generated from the biogas upgrading facility.
5. Contact biogas upgrading technology vendors for an equipment budget estimate to upgrade the biogas to RNG.
6. Prepare a preliminary engineer's opinion of probable capital cost for the biogas upgrading project.
7. Prepare a preliminary engineer's opinion of probable annual operation and maintenance (O&M) costs.
8. Project potential revenues from the sale of RNG and associated environmental credits to prepare a detailed economic model and a pro forma to make 10-year financial projections for the project.



9. Prepare a financial analysis of the project including return on investment (ROI) analysis, estimated payback period, and annual net profit estimates by year for the project.
10. Outline a preliminary schedule for the biogas upgrading project including design, equipment procurement, construction, and regulatory milestones.
11. Outline recommended next steps for Columbia to consider to move the project forward.
12. Provide background information on the Renewable Fuel Standard (RFS) and other state low carbon fuel programs. Discuss potential risks with the programs and risk mitigation measures.
13. Prepare a draft Biogas Feasibility Study report and submit to Columbia for review and comment.
14. Address questions and comments and submit a final Biogas Feasibility Study report.

The cost for these services is not to exceed \$18,950 and will be charged to an Electric Production Nonrecurring Contractual account for which funds have already been appropriated.

Fiscal Impact

Short-Term Impact: \$18,950.
 Long-Term Impact: None

Strategic & Comprehensive Plan Impact

Strategic Plan Impacts:

Primary Impact: Infrastructure, Secondary Impact: Operational Excellence, Tertiary Impact: Not Applicable

Comprehensive Plan Impacts:

Primary Impact: Environmental Management, Secondary Impact: Infrastructure, Tertiary Impact: Tertiary

Legislative History

Date	Action
None	None

Suggested Council Action

Authorize the City Manager to execute a Professional Engineering Services agreement with Ecoengineers (TPR Enterprises, LLC) for a feasibility study analyzing the potential for the City to upgrade its landfill gas to produce renewable natural gas (RNG) to be sold as transportation fuel.