Making progress: Alton's new waste treatment facility will focus on sustainability; revenue

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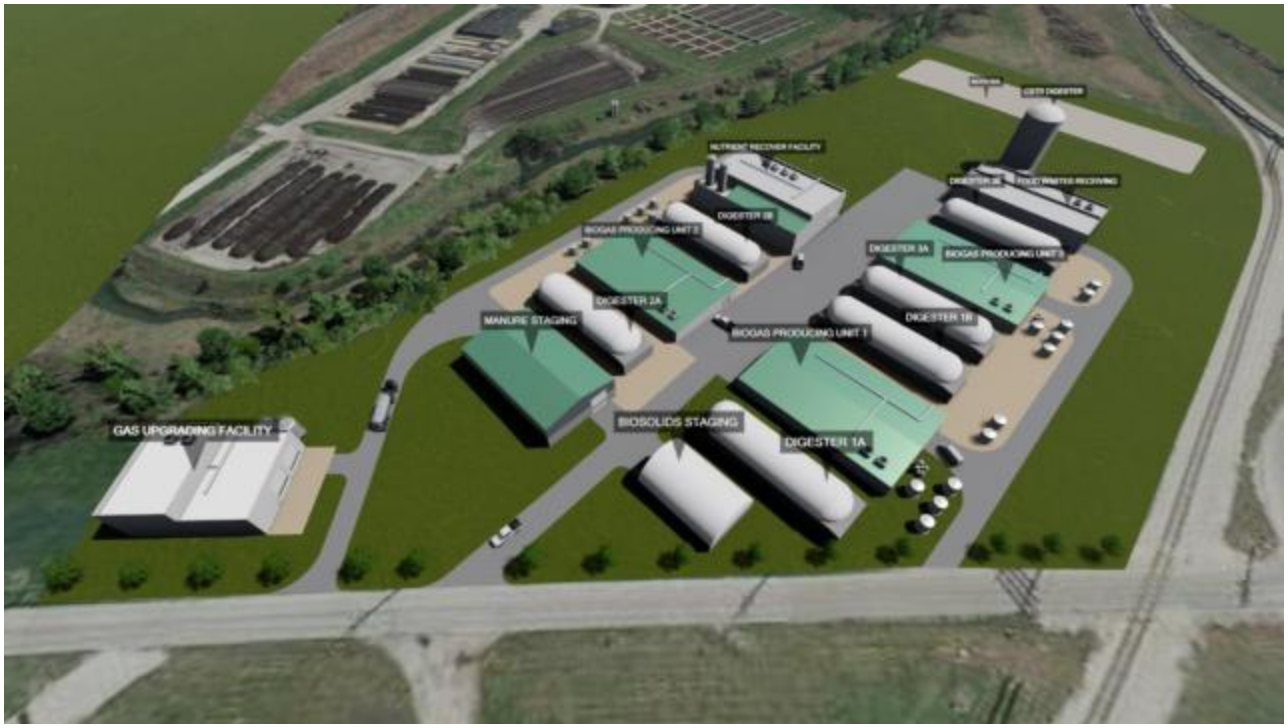

ALTON - Alton Wastewater Treatment Plant Supervisor Steve Gibson delivered a presentation during the Wednesday April 12, 2017, meeting of the Alton City Council, which may change the future of Alton entirely.

Currently, Alton is in need of a new waste treatment facility for its waste. Alton Mayor Brant Walker said the city has been aware of it for the past two and a half years and has been working with Gibson to find a solution. Currently, the new gas plant is undergoing a feasibility study, which Gibson said should be completed by the end of April. Preliminary results, however, have sparked the excitement of both Gibson and Walker.

"We wanted something green and sustainable to generate revenue for the city," Walker said. "The feasibility study should be complete in about two weeks, but the majority of it is done, and it is looking very positive."

Walker said as much as 85 percent of waste in a landfill does not need to be there. He said the city's new plant would work to produce natural gas and methane, which would be returned to the power grid for heating. He also said it may produce an abundance of retail-grade fertilizer as well as phosphates, which could be sold on the market as well.

"Nobody wants a landfill in their backyard," Walker said. "We can take most of it out to our treatment plant, and it becomes something usable again. It's a neat concept people can use."

Currently, the city's plant's digesters are in dire need of replacement. According to the presentation delivered by Gibson, the city will have to haul as much as 23.8 tons of biosolids each day if the digester fails, which comes at an annual cost of $275,000-$400,000. There is also a potential environmental liability from methane leakage, which can be quantified by as much as $10,000 a day - leaving "doing nothing" as an unsuitable option.

The presentation, which was created by Des Moines, Iowa-based Ecoengineers suggests making capital projects generate revenues when possible. Besides the tangible market value of the converted waste products, Alton could also benefit from federal and state credits tied to renewable energy creation. Ecoengineers estimated the potential revenue of the plant at as much as $11.7 million for the city.

That hypothetical revenue was broken into a pie chart by the company, with as much as $8.6 million coming from "environmental attributes," $1.3 million from ammonia sulfate struvite, $884,585 from renewable natural gas, $684,100 from tipping fees and $354,090 from dewatered solids. The estimated potential net operating profit was as much as $7.16 million, the presentation shows.

Next steps will require a finished feasibility study before the following will take place:

- 3-6 months: Feedstock analysis, lab analysis, pilot testing and preliminary design
- 6-12 months: Final design
- 18-24 months: Construction
- 60 days: Start-up
- 2.5-4 years: Revenue generation

The total capital cost of the project may be as much as $33.5 million, according to the presentation. However, the presentation states a comparable private project would provide payback in five to six years, and $133 million is the projected 20-year cash flow after debt service is taken into account.

The potential economic impact of the investment case study done by Ecoengineers is $18 million in investments, $4 million in revenue, $2.7 million increase in tax receipts over project life, $158 million in total economic output over project life, 188 jobs created during construction phase and nine permanent positions.