Biogas Project Profile

Warrior Project

Dodge City, KS, 67801

Owner: City of Dodge City
Developer: City of Dodge City
Contact: Ray Slattery, Director, Engineering Services
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Date Construction Started: 7/31/2017
Date Tank Started Being Filled: 6/1/1982
Date Project was Fully Operational: 2/15/2018

The City's South water resource recovery facility has been in operation since 1982. In the mid-1990's the anaerobic lagoons were covered and any raw biogas produced was captured and flared. Proposals were requested to utilize the gas in 2014. In March 2016, two years after first requesting proposals for biogas reuse, the City of Dodge City selected the following team; PEC of Wichita, Kansas for design the facility, UCI of Wichita, Ks to construct the project, Guild Associates of Dublin, OH to supply the equipment and the local office of Jacobs Engineering Group to operate the Warrior Biogas Project. The raw gas is cleaned to pipeline quality and injected into a Northern Natural Gas Pipeline.

What makes this project special? The revenue generated from the sale of renewable natural gas will help pay down existing debt, go towards deferred maintenance of infrastructure and help fund future capital improvement projects. As well as being another way for Dodge City to utilize resources in an effort to further our stewardship of the environment.

Organizations involved: *Dodge City, KS*, PEC of Wichita, KS, UCI of Wichita, KS, Guild Associates, Inc. of Dublin, OH, Jacobs*
**ABC Member*

Inputs and Outputs

Feedstocks:	Municipal Waste Water - 2 MG/day Beef Processing Facility - up to 3.7 MG/day of process, wash down, and locker room/kitchen waste water.

Products created:	Currently the biogas is being sold to OCI that is using it to produce methanol. This methanol is being shipped to the Netherlands. We do not know the volume of methanol produced.
Digestate management:	Any by-products from the anaerobic lagoons remain in the lagoons. The capacity of the lagoons is such that they only need to be cleaned once every 20-25 years. Then the material is land applied as liquid fertilizer.
Biogas generation:	The anaerobic lagoons produce an average of 1.6 million cubic feet of raw gas a day. For the last two months, the Warrior Project has had an average daily production of over 1150 MMBTU/day. This equates to over 10,000 GGE/day.

Finances, Beneficiaries, and Expansion	
Project financing:	The City of Dodge City was able to secure a loan from the State of Kansas for the construction of the project. Ancillary costs were paid by the city.
Customer(s):	As mentioned, OCI, a private company, buys the biogas.
Long term plans:	Continue to operate the plant in a profitable manner for the foreseeable future. Currently, there are no plans to expand.













