



Littleton/Englewood Wastewater Treatment Plant

# BIOGAS USE APPLICATIONS



# Biogas Project elevates the Cities sustainability image



Biogas Use Applications Study

Briefing to individual Study Sessions

Review at joint Study Sessions

Review at individual Study Sessions

Approval of design phase services

Q1  
2017

Q2  
2017

Q3  
2017

Q4  
2017

Discussion Today:  
Recommended Financing Approach

# Financing approach drives procurement and design approach

## Financing Approaches



Cities co-fund  
(cash finance)



Other Financing  
Instruments  
(Municipal Lease)



- Common financing tool
- No upfront capital \$
- Annual lease payments
- Risk managed
- Termination w/o penalty



# Financing approach drives procurement and design approach

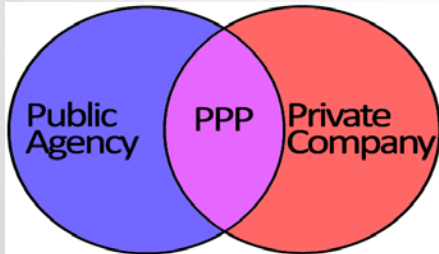
## Financing Approaches



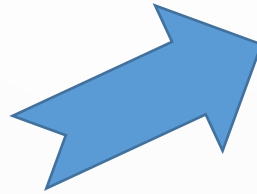
Cities co-fund  
(cash finance)



Other Financing  
Instruments



Third party  
financing



City of Englewood  
Procurement Division

City of Littleton City of Englewood

Rev1 Date: \_\_\_\_\_

**REQUEST FOR INFORMATION**

Services  
For  
Littleton/Englewood Wastewater Treatment Plant  
Biogas to Renewable Natural Gas Project

**BIOGAS TREATMENT SYSTEM  
Public-Private Partnership**

## 5 Letters of Interest Received:

- Market and project risks
- Partnership approach
- Financing options

# Financing and procurement feedback from respondents






Big Ox Energy  
wholly owned subsidiary of  
Environmental Energy Capital  
Biogas Treatment System  
Request For Information Enclosed



REQUEST FOR INFORMATION # 17-028

**BIOGAS TREATMENT SYSTEM  
Public-Private Partnership**



December 15, 2017






**Giving City of Englewood  
Fueling Success through RNG**








**Littleton/Englewood Wastewater Treatment Plant  
Biogas Treatment System  
Request for Information Enclosed**








Submitted by:  
Jeffrey Craig, CEO  
Renewable Natural Gas Company LLC  
123 W Main St, Ligonier PA 15658  
December 15, 2017



**Littleton/Englewood Wastewater Treatment  
Plant Biogas Treatment System Request for  
Information Enclosed**





# Respondents input on project risk

## Risks Identified:

### 1. Market risk

- RIN pricing and credits
- RNG market demand



All respondents said “*RNG market viability strong today and will be sustained into the future*”

### 2. Project risk

- Technology selection
- Constructability
- Regulatory



Managed through experienced team and clear definition

### 3. Operations risk

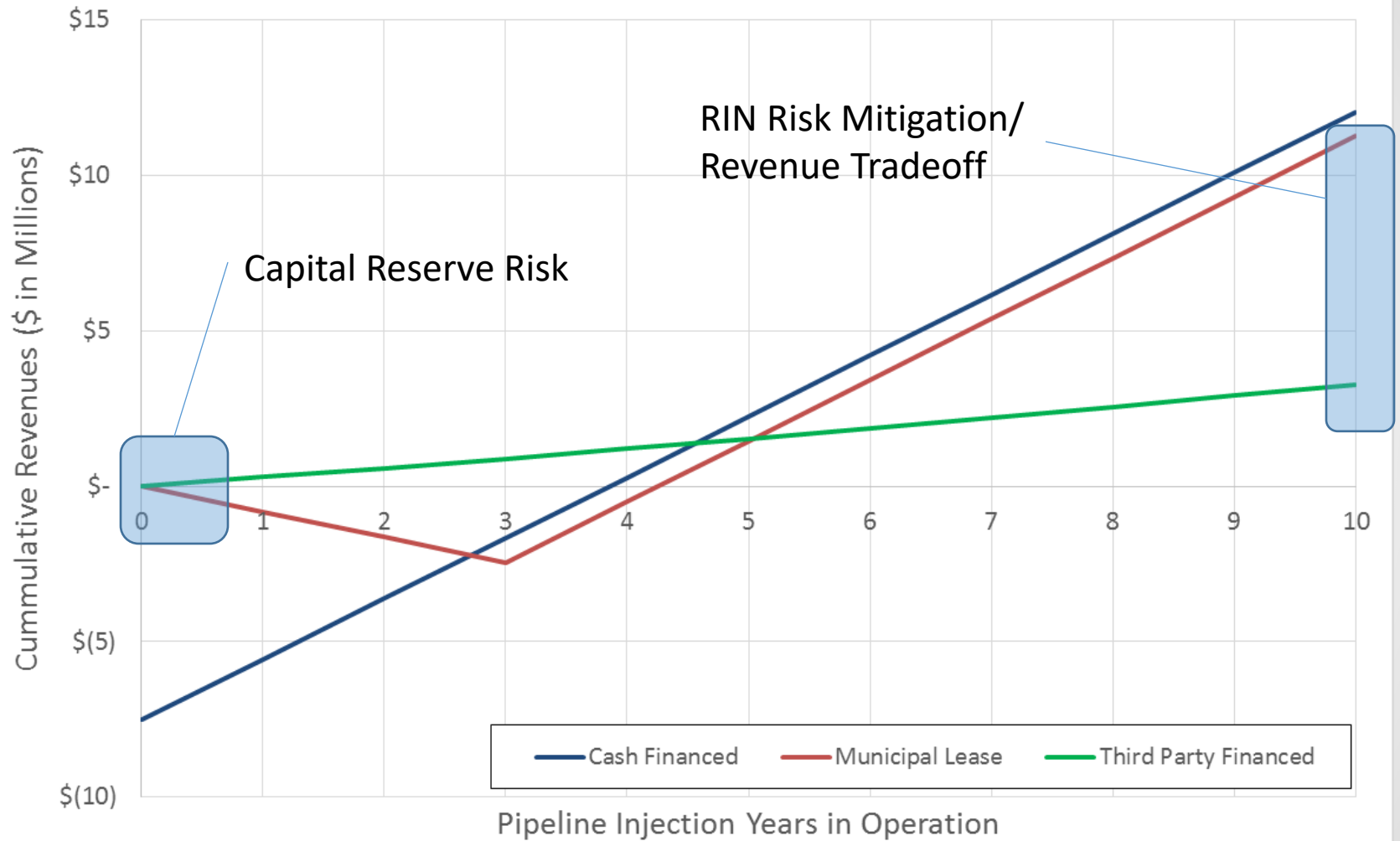
- Changing infrastructure
- Digester gas supply



Longer-term agreement desired. No penalties identified for lower gas production.



## Cash Flow Forecast Based on Financing Sensitivity



# Cash financing provides best risk/value proposition



1. Capital Reserve Risk not a major factor
  - Both City's have adequate Capital Reserves to fund Project
2. Third Party Financing Mitigates RIN Risk, but comes at significant cost
  - ~\$9 million of lost revenue over 10 years
  - 10 year minimum agreement length
  - Time to Market is best defense against RIN Risk
3. Municipal Lease provides risk mitigation at low cost, if utilized
  - Neither City likely to invoke their use
4. Cash Funding Recommended by Supervisory Committee and Both Cities Finance Directors
  - Fastest to Market
  - Highest Revenue Generation
  - RIN Market is endorsed by private Industry
  - Capital Reserves Available



# Project commissioning by mid 2019



## Project Schedule - Council

1. Present recommended financing approach: January 2018
2. Approval of agreements and appropriations: Q3 - 2018
  - Reserve Impact forecast
  - RIN Broker
  - Xcel gas quality and purchase agreement
  - Digester gas cleaning equipment
  - Construction Contractor



# Questions?

