



Engineering. Environmental. Answers.

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September 24, 2019

Ms. Wanda Gautney  
Purchasing Director  
Baldwin County Commission  
312 Courthouse Square, Suite 12  
Bay Minette, AL 36507

Ms. Gautney:

**Re: Recommendation of Award  
Landfill Gas-To-Energy Project  
Magnolia Sanitary Landfill  
Baldwin County Commission**

We have reviewed the proposals that were received August 19, 2019 for the referenced project. After review, we recommend that the BCC proceed with contract negotiations with **AEP Renewable Fuels, LLC (AEP)**. AEP has submitted a proposal under **Development Option 2 – Vendor Owned RNG plant**.

If you should have any questions or need any additional information, please feel free to give us call.

Sincerely,

**CDG Engineers & Associates, Inc.**

R. Daniel Wells, P.E.  
Principal Engineer

RW/mw

Enc.

ALBERTVILLE

ANDALUSIA

AUBURN

DOTHAN

GADSDEN

HOOVER

HUNTSVILLE

Comments and Recommendations  
On  
Proposal from AEP Renewable Fuels, LLC

**Letter of Transmittal and Development Option Proposed:**

- **Development Option 2 – Vendor Owned RNG plant.**
- RNG plant connected to Riviera pipeline.
- AEP to pay a flat rate of \$4.00 / MMBtu over the project life of 15 years.

**Vendor Information Notes:**

- AEP Renewable Fuels, LLC – lists date of incorporation of 10/09/2019.
  - Project financing will be accomplished with internal equity at 15-20% and bank financing.

**Compensation Notes:**

- AEP will pay to BCC for biogas flow a flat rate of \$4.00 / MMBtu over the project life of 15 years.
- No capital investment required by BCC for RNG plant and pipeline.
- Assumes that BCC will provide ongoing capital expense associated with NSPS and LFGCCS expansions in accordance with Title V Air Operating Permit system expansion requirements.
- AEP is proposing to contribute up to \$100,000 to densify the wellfield in order to increase LFG production.
- Purchase price of LFG:
  - **\$4.00 / MMBtu**
    - Paid monthly
    - Flat rate over the project life
  - Estimated annual Revenue to BCC (first year) **\$699,098.00**
  - 15-year Anticipated Revenue to BCC **\$11,088,000**
    - Footnote with wellfield densification **\$12,704,094**

**CDG Notes on Proposal:**

- Technology Providers:
  - DMT Clear Gas Solution (for):
    - H<sub>2</sub>S Removal.
    - CO<sub>2</sub> Removal Molecular Sieve.
    - Nitrogen Removal.
    - Chillers, Compressors.
  - Granite Fuel Engineering (for)
    - Siloxane Removal
- Requires a pipeline and Riviera interconnection at Highway 98 & County Road 49.
- AEP personnel running the Plant.
- Title V and NSPS Compliance Management – Gene Waller.

## Comments and Recommendations

On

Proposal No.1 from Energy Systems Group, LLC / Centerpoint Energy

### Letter of Transmittal and Development Option Proposed:

- **Development Option 1 – BCC Owned Renewable Natural Gas (RNG) Solution**

### Vendor Information Notes:

- Energy Systems Group (ESG) is a wholly owned subsidiary of Centerpoint Energy, Inc.
- ESG is proposing a Engineer/Procure/Construct (EPC) project structure.
- BCC will own and operate the Plant when commissioning is complete.

### Compensation Notes:

1. Paid by BCC to Vendor **\$12,495,000**
  - Assumes \$1 million for gas utility interconnection.
  - 3% APR for bond financing over 15 years.
2. Estimated Annual O&M Cost of the Plant **\$271,000**
  - Existing BCC staff will be used for O&M.
3. Plant Utility Costs **\$319,000**
  - 0.08 \$/kWh for electric site utility costs.
4. Estimated Annual Revenues to BCC **\$1,048,000**
  - \$1.5 / RIN average over the project life.

### CDG Notes on Proposal:

- Two (2) exceptions listed on Contract language related to:
  - Indemnification clause
  - Insurance clarification
- Revenues are listed as net of debt service and O&M costs with an assumed value for RINs
- Compensation is based on:
  - ESG/Centerpoint will monetize the commodity and d3 RIN on behalf of BCC
  - \$1.50 / RIN average value over the life of the Project
    - Need to obtain clarification on who sees the upside/downside of RIN and commodity market fluctuations.
- Technology Providers:
  - Pressure Swing Absorption (PSA) system for conditioning.

## Comments and Recommendations

On

Proposal from Cornerstone Environmental Group, LLC / Tetrattech

### Letter of Transmittal and Development Option Proposed:

- **Development Option 1 – BCC Owned BioCNG plant.**

### Vendor Information Notes:

- Cornerstone is a wholly owned subsidiary of TetraTech

### Compensation Notes:

1. Paid by BCC to Vendor **\$3,555,000**
2. Estimated Annual O&M Cost of the Plant **\$422,000**
3. Plant Utility Costs **(included in Item 2 above)**
4. Estimated Annual Revenues to BCC **\$1,306,000**

### CDG Notes on Proposal:

- Price to BCC **does not include:**
  - Compression required to provide supply to BioCNG skid,
  - Fueling Station Costs,
  - Vehicle Maintenance Facility upgrades required to service CNG vehicles,
  - CNG Fleet retrofits, or
  - Purchase of new CNG refuse fleet vehicles.
  - These costs would be necessary in order for the BCC to recognize the estimated annual revenues in the form of fuel cost savings.
- Estimated Annual Revenues (Compensation) is based on:
  - Assumed \$1,00/DGE fuel savings costs
    - Requires the conversion or purchase of CNG vehicles
  - \$0.50 / RIN current value
    - This is a historic low point in the market for RINs
- Technology Providers:
  - BioCNG 400 and 200 conditioning skids to produce RNG vehicle fuel
  - BioCNG chiller

- Other:
  - Does not include natural gas supply for blending if necessary
- Assumes existing onsite BCC personnel will operate the Plant
- BCC will obtain the Permits with permitting assistance by TetraTech
- Pg 23 assumptions noted:
  - BCC will deliver biogas to the BioCNG skid at 100 psig.
  - BCC will provide utilities to the site.
  - BCC will deliver a prepared site including skid pad.
  - BCC to provide site survey and geotechnical report.
- Title V and NSPS Compliance Management – Mark Torresani, PE

## Comments and Recommendations

On

Proposal No.1A from Energy Systems Group, LLC / Centerpoint Energy

### Letter of Transmittal and Development Option Proposed:

- **Development Option 1A – BCC Owned Compressed Natural Gas (CNG) Solution**

### Vendor Information Notes:

- Energy Systems Group (ESG) is a wholly owned subsidiary of Centerpoint Energy, Inc.
- ESG is proposing an Engineer/Procure/Construct (EPC) project structure.
- BCC will own and operate the Plant when commissioning is complete.

### Compensation Notes:

1. Paid by BCC to Vendor **\$8,820,000**
  - 3% APR for bond financing over 15 years
2. Estimated Annual O&M Cost of the Plant **\$254,000**
  - Existing BCC staff will be utilized for O&M
3. Plant Utility Costs **\$359,000**
  - 0.08 \$/kWh for electric site utility costs.
4. Estimated Annual Revenues to BCC **\$715,000**
  - \$1.5 / RIN average over the project life.

### CDG Notes on Proposal:

- Two (2) exceptions listed on Contract language related to:
  - Indemnification clause
  - Insurance clarification
- Revenues are listed as net of debt service and O&M costs with an assumed value for RINs
- Compensation is based on:
  - ESG/Centerpoint will monetize the d3 RIN on behalf of BCC
  - \$2.11 / DGE average value over the life of the Project
- Price paid by BCC to vendor **does not appear to include:**
  - Fueling Station Costs,
  - Vehicle Maintenance Facility upgrades required to service CNG vehicles,
  - CNG Fleet retrofits, or
  - Purchase of new CNG refuse fleet vehicles.

- These costs would be necessary in order for the BCC to recognize the estimated annual revenues in the form of fuel cost savings.
- Technology Providers:
  - Pressure Swing Absorption (PSA) system for conditioning
  - Assumes existing onsite BCC personnel will operate the Plant.
  - Does not address fueling system equipment.