



November 12th, 2008

Via E-Mail

Trina Vielhauer, Chief
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Tallahassee Renewable Energy Center
Biomass Integrated Gasification and Combined Cycle Unit
DEP File No. 0730109-001-AC

Dear Ms. Vielhauer:

Biomass Gas & Electric of Tallahassee, LLC (BG&E), received the draft air construction permit for the Tallahassee Renewable Energy Center, referenced above, on October 27, 2008, along with the written notice of intent to issue and technical evaluation and preliminary determination. We appreciate the Department of Environmental Protection's careful review of the application BG&E submitted on April 3, 2008, and the efforts of the Department in developing the draft permit and associated documents. The draft permit included certain conditions, however, that warrant further discussion and perhaps revision prior to issuance of the final permit. We have outlined our questions and suggestions below and would like to meet with you and Al Linero at your earliest convenience to discuss this matter further.

1. **Financial Assurance** – Because the financial assurance bond referenced in General Condition 9 under Section 2 is already required as a condition of BG&E's sublease from Florida State University, BG&E requests that Condition 9 be revised as follows:

Permittee has subleased the project site from Florida State University, which has leased the site from the State of Florida. That sublease agreement between the permittee and Florida State University was entered into on February 2, 2007, and is on file with the Department of Environmental Protection. Under the terms of the sublease agreement, permittee is obligated to post a payment bond in favor of the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida and the State of Florida Department of Environmental Protection prior to commencement of construction of the biomass energy production facility in the amount of two million dollars (\$2,000,000) to cover the cost of removal of all constructed facilities and equipment from the subleased premises as well as restoring the site to its original condition or conversion of the

biomass energy production facility to another type of alternative energy production facility.

2. **Biomass Handling and Storage** – The first paragraph under Section 3.A generally describing how biomass will be delivered to the site is accurate based on our current plans. Because it is possible that the biomass shipments may vary over time, BG&E would like to confirm that the general, descriptive language is not intended to establish limits or restrictions on fuel delivery. Also, the current plan is for biomass shipments to arrive every five to ten days, which should be corrected in this general description paragraph as well as in Section 4, Appendix E, second paragraph.

3. **Biomass Dryer** - Condition 3.A.1.e provides that the biomass dryer must use thermal heat transfer to dry biomass prior to gasification. It is possible that from time to time no drying would be needed based on the quality of a particular delivery of biomass. BG&E therefore requests that this condition be revised to clarify that drying is not always required: “The biomass dryer shall use thermal heat transfer (no additional combustion) to dry biomass, **if needed**, prior to gasification.

4. **Equipment Malfunctions** – Conditions 3.A.2 and 3.C.4 recite the Department’s rule regarding circumvention of pollution control equipment. As we are sure the Department appreciates, BG&E expects that the baghouses may occasionally malfunction, and therefore would be nonoperational for brief periods during bag replacements and repairs. BG&E therefore requests confirmation from the Department that the biomass handling, storage, and drying operations can continue to operate during these periods when the baghouses may be nonoperational due to malfunctions or repairs without violation of this permit condition.

5. **Municipal Solid Waste** – Because the term “municipal solid waste” is not defined in the permit or in the Department’s rules, and because there could be confusion in the future as to what is intended by this term, BG&E suggests that the permit cross-reference the definition of municipal solid waste found in the federal rules at 40 CFR 60.51b. This term is used in Conditions 3.A.6 and 3.B.6 and in Appendix E, paragraph 9.d.

6. **Capacities** – Based on the Department’s use of the terms “approximately” and “nominal,” BG&E assumes that the capacities identified in Conditions 3.A.3, 3.B.3, 3.B.4, 3.C.5, 3.C.6., 3.D.2, 3.F.1, 3.F.7, 3.H.1, and 3.H.3 (and associated emission unit descriptions) are not intended as not-to-exceed, restrictive limits. It may be helpful to clarify this in one or more permitting notes, indicating that if the capacities change over time or based on the final design, then updated information should be provided to the Department for its files or as part of the air operation permit application. As an example, the expected feed capacity to the gasifier is 735 tons per day of dry biomass feedstock, rather than 730 tons per day as identified in the permit condition. It may also be helpful to clarify that continuous compliance is not required, as might be indicated by the Department’s reference to a 24-hour average in Condition 3.H.3.

7. **Compliance Tests on Materials Handling Units** – Because there are a number of fugitive and point sources of emissions associated with “Emission Unit 1,” which includes all of the biomass handling, storage, and drying operations, BG&E requests that Conditions 3.A.8 and

3.A.9 clarify that the initial and annual compliance tests are to be conducted on the three baghouses identified in Condition 3.A.1.h (and any other baghouses that may be added under the system's final design) and the filter described in Condition 3.A.1.i.

8. **Material Storage** – Condition 3.B.7 identifies operational procedures to minimize spontaneous combustion for storage of woody biomass materials. BG&E intends to implement a system to ensure that spontaneous combustion does not occur and that ensures a “first in, first out” system of biomass usage. Because BG&E's methods vary from those identified in this condition, BG&E respectfully requests that the condition be revised to read as follows:

- a. Incoming unprocessed materials shall be stored in piles in a manner to ensure a first in, first out system;
- b. Storage sites shall be level and on firm ground;
- c. BG&E shall develop a storage system for the unprocessed biomass that ensures spontaneous combustion does not occur; a complete description of the system must be provided to the Department prior to commencing operation.

9. **Effective Date for Emission Limits** – Because emission limits should become applicable only after successful completion of initial compliance tests, BG&E requests clarification regarding the effective dates through permitting notes. In addition, Condition C.3.16 should be revised to clarify that only the opacity limit becomes applicable after the continuous opacity monitor has been certified. BG&E also requests that the Department revise this condition to be consistent with the testing requirements for other parameters by requiring the opacity monitor to be certified within 180 days after startup of the gasifier or within 60 days after achieving permitted capacity.

10. **“Other” Baghouses** - Condition 3.C.10 mentions “other” baghouses. To help clarify what is intended, it may be appropriate to refer to the two baghouses described in Condition 3.C.3.

11. **Absorption System** – Because the FSU research facility mentioned in Condition 3.E.1.c. has not been constructed and once constructed may not be operated at all times, BG&E requests that this condition clarify that this is an allowable activity but is not a requirement of the product gas cleanup system.

12. **Tars** – While it is not anticipated, it is possible that on a rare occasion it may be necessary to dispose of “tars” from the gas cleanup system offsite, and because disposal of the tars at an offsite location would not result in air emissions or air quality impacts, BG&E requests that Condition E.2. be revised to clarify that tars may be disposed of *offsite* if necessary.

13. **Mass Emission Limits** – BG&E recognizes that mass emission limits are appropriate to ensure that the total emissions from the CT/HRSG system are consistent with the information provided in the application (demonstrating minor source status), BG&E respectfully requests, however, that the short term pound-per-hour limits (referenced in Conditions 3.E.11 and 3.E.25.c) be replaced with annual ton-per-year limits for nitrogen oxides and carbon monoxide. Short-term emissions are limited through the concentration-based limits, and compliance with the annual limits will be demonstrated based on continuous emissions monitoring data to provide the Department with the necessary reasonable assurances.

14. **Use of CEMS for Compliance** – Because continuous emissions monitors (CEMS) will be used to demonstrate compliance with 30-day rolling average limits for nitrogen oxides and carbon monoxide emissions from the combustion turbines, BG&E requests that the monitors be used in lieu of annual stack tests for compliance purposes. The CEMS will demonstrate continuous compliance and stack tests would measure emissions only during a three-hour period, which would be inconsistent with the 30-day rolling average limits. BG&E also requests that the footnotes under Condition 3.F.11 clarify that monitoring data during periods of startup, shutdown, and malfunction will be excluded from compliance determinations for the 30-day rolling average emission limits although included for purpose of compliance with the annual emission limits. Additionally, because emissions during startup and shutdown are included for purposes of Subpart KKKK excess emission reports although not for purposes of compliance, BG&E requests that the Department clarify in footnote c that continuous compliance with the Subpart KKKK limit for nitrogen oxides is not required.

15. **Compliance with Sulfur Content Limit** – Footnote h of Condition 3.F.11 could be interpreted to imply Subpart KKKK imposes a continuous emissions monitoring requirement for sulfur dioxide. While Subpart KKKK does require regular monitoring of the sulfur content of the fuels used, it does not require continuous “emissions” monitoring. The citation provided in the footnote (40 CFR 60.4380) applies only to nitrogen oxides, not sulfur dioxide emissions. BG&E therefore requests that this footnote be revised to omit the reference to sulfur dioxide or clarify that “CEMS” are not required for sulfur dioxide.

16. **Cooling Tower Design** – The flow rates for the cooling towers that are constructed may vary from the design specification. BG&E requests that a permitting note be included under Condition G.1 to clarify that the flow rates may change and BG&E will provide the final flow rates to the Department as part of the initial air operation permit application.

17. **Feedstock Handling** – In Section 4, Appendix E, the draft permit provides in paragraph 3 on page E-1 that woody biomass feedstock shall be delivered to the site solely by train. While this is the plan for virtually all feedstock deliveries, it is possible that delivery by truck could occur on a temporary basis in emergency situations (e.g., lack of rail service). Please clarify in this condition that the feedstock shall be delivered by train or, in emergency situations on a temporary basis, by trucks. Similarly, paragraph 4 on that page should clarify that each railcar or truck of feedstock must be homogenous in nature.

18. **Detailed Records of Reject Materials** – BG&E requests that Paragraph 8 of Section 4, Appendix E be revised to delete the last sentence. This paragraph provides that rejected material will be disposed of following the Department’s regulations. It is unclear why it would be necessary to maintain records of the amount of rejected materials and all of the reasons for rejections. This is a burdensome and time-consuming requirement and not clearly tied to limits established in the air permit.

19. **Annual Testing** – The draft permit includes several conditions that would require annual testing for particulate matter, nitrogen oxides, carbon monoxide, and other parameters. (See, e.g., Conditions 3.C.19 and 3.F.21.) The Department’s Rule 62-297.310(7) (a) 4, F.A.C.,

requires annual testing only when the unit has the potential to emit 100 tons per year or more. To the extent that annual testing is not prescribed in Rule 62-297.310(7)(a)4, F.A.C., then BG&E requests that the permit be revised to require annual testing for a period of perhaps three to five years, then renewal testing should provide the Department with sufficient assurances that the emission limits are being achieved.

BG&E appreciates the Department's consideration of these comments and we look forward to discussing them further with you and Al Linero. I will be contacting you within the next few days to schedule a meeting. If you have any questions in the meantime, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink that reads "G. Farris". The signature is fluid and cursive, with a large initial "G" and a clear "Farris" at the end.

Glenn Farris
President & CEO

cc: Al Linero, FDEP
Ronni Moore, FDEP
Scott Osbourn, Golder Associates