

NELSON MULLINS RILEY & SCARBOROUGH LLP ATTORNEYS AND COUNSELORS AT LAW

4140 Parklake Avenue GlenLake One | Second Floor Raleigh, NC 27612 T 919.329.3800 F 919.329.3799 nelsonmullins.com

Joseph W. Eason T 919.329.3807 F 919.329.3140 joe.eason@nelsonmullins.com

August 30, 2018

North Carolina Utilities Commission c/o: Ms. Martha Lynn Jarvis, Chief Clerk 430 North Salisbury Street Dobbs Building Raleigh, NC 27603-5918

GOPY

Re:

G-9, Sub 728

Dear Ms. Jarvis:

Attached for filing in the above-referenced matter is an Application of GESS International North Carolina, Inc. ("GESS"), for participation in the pilot program relating to Alternative Gas as described in Appendix F of Piedmont Natural Gas Company, Inc.("Piedmont"), as approved by the Commission in its Order dated June 19, 2018, in Docket No. G-9, Sub 698 (the "Application").

Attached to the Application are the confidential applications of GESS, through affiliates, that have been submitted to Piedmont for obtaining final Receipt Agreements for the Alternative Gas that GESS proposes to deliver. These applications are confidential in nature and contain proprietary trade secrets under N.C. Gen. Stat. § 132-2.1, and accordingly are being filed under seal as attachments to the original Application. A public redacted version of the Application, without those exhibits, has also been filed with the Commission.

In addition to the foregoing, GESS is contemporaneously filing a Request for Declaratory Rulings in the Commission's docket SP 13243, Sub 0. Reference is made to that separate filing here for the information of the Commission.

Thank you for your assistance.

Very truly yours

Joseph W. Easor

JWE:nw

#### STATE OF NORTH CAROLINA UTILITIES COMMISSION RALEIGH DOCKET NO. G-9, SUB 728

#### BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of	)	
Application of GESS International North	)	APPLICATION OF GESS
Carolina, Inc., for Approval to Participate in	n)	INTERNATIONAL INC.
Pilot Program in Docket No. G-9, Sub 698,	)	NORTH CAROLINA, INC.
And for Approval of Receipt Agreements	)	

Pursuant to North Carolina Utilities Commission ("Commission") Rule R1-5 and the Commission's Order Approving Appendix F and Establishing Pilot Program in Docket No. G-9, Sub 698 issued on June 19, 2018 (the "Appendix F Order"), GESS International North Carolina, Inc. ("GESS" or the "Applicant") hereby applies for approval to participate in the pilot program created by the Appendix F Order ("Application"). GESS has applied for Receipt Agreements, and anticipates making a supplemental filing for conditional approval of the Receipt Agreements made with Piedmont Natural Gas Company, Inc. ("Piedmont") once received. GESS respectfully requests that the Commission approve the participation of GESS and its proposed portfolio of facilities in the pilot program, and in support of this Application, GESS submits the following to the Commission.

#### <u>APPLICANT</u>

- 1. GESS is a North Carolina domestic corporation with its principal place of business in Raleigh, North Carolina.
- 2. Correspondence in connection with this Application should be sent as follows:

GESS International North Carolina, Inc. c/o Mr. Shaun Lee 3700 National Drive, Suite 100 Raleigh, NC 27612 (805) 334-6777 shaun.lee@gessinternational.com

with a copy to Counsel for the Applicant as follows:

Joseph W. Eason NELSON MULLINS RILEY & SCARBOROUGH LLP 4140 ParkLake Avenue. Suite 200 Raleigh, NC 27612 (919) 329-3807 joe.eason@nelsonmullins.com

The Applicant and its Counsel agree to electronic service.

- 3. Applicant, through affiliates, has applied for Receipt Agreements with Piedmont. Copies of its applications filed with Piedmont have been appended to this Application on a confidential basis as Exhibits 6 to 10, as they contain proprietary information that constitute "trade secrets" under N.C. Gen. Stat. § 132-2.1.
- 4. Subject to the Commission's approval of this Application and the final Receipt Agreements obtained from Piedmont, and the disposition of GESS's concurrently filed Request for Declaratory Rulings as to "public utility" status and other issues, GESS plans to deliver Alternative Gas, as defined in the Appendix F Order, p.1, note 1, for use or sale by the out-take customers identified below following the construction, testing and commercial operation of a portfolio of five (5) proposed anaerobic digester plants in five (5) different counties of the State. When GESS's counter-party to an Alternative Biogas Purchase Agreement is a regulated utility or other qualifying purchaser, GESS also plans to sell the associated Environmental Attributes to the purchaser of its Alternative Gas.

#### **BACKGROUND**

- 5. Improvements in anaerobic digesters and related scrubber technologies provide a unique opportunity for North Carolina to become a leader in the development of an advanced biogas system. GESS proposes a portfolio of digester plants to be built using the latest biogas technologies, including the closed forms of Biogest® Digestor Systems, together with associated on-site facilities for the scrubbing, collection, production, and pressurization of Alternative Gas as the gaseous digestate by-product, and the collection, production and distribution of the remaining digestate by-product as an organic fertilizer. Such a system will provide a viable and sustainable model for the production of a renewable energy resource, i.e., Alternative Gas, using a blend of what today are regarded as waste products resulting from pork production and the farming of certain row-crops, with 60% - 70% of the feed-stock being swine manure. The waste-to-energy utilization of the by-products of farms in the State will provide a more environmentally sound technique for reducing odors and related risks associated with the disposal of swine manure, provide economically viable sources for the production of a renewable energy resource as one output of the digestion process, and also allow for the local creation, sale and use of a second valuable digestate output, a nutrient-rich, field-ready, organic fertilizer.
- 6. On December 6, 2016, Piedmont filed a petition in Docket No. G-9, Sub 698 requesting approval of a proposed Appendix F, Statement of Alternative Gas Requirements. After receiving comments from intervenors, the Commission issued an Order Requiring Collaborative Meetings, Reports, and Additional Information on May 4, 2017. Piedmont also filed for approval of two receipt interconnect agreements,

one in Docket No. G-9, Sub 699, and the other in Docket No. G-9, Sub 701, both of which were approved by the Commission with conditions on May 10, 2018. On October 26, 2017, Piedmont filed a revised Appendix F, amended to reflect discussions during the collaborative process. On October 31, 2017, the Public Staff filed the final report provided for in the Commission's May 4, 2017 Order.

The Commission issued its Appendix F Order on June 19, 2018, in 7. Docket No. G-9, Sub 698. That Order made specific revisions to Appendix F and created a pilot program for a period of three (3) years during which Piedmont will report to the Commission "regarding the impact of Alternative Gas on its system operations and, ultimately its customers." Order, p. 5. The Commission also ordered that "the [two conditionally approved Alternative Gas] projects shall be allowed to participate in the pilot program and the additional Alternative Gas Suppliers shall be allowed to participate in the pilot program upon a showing to the Commission that any such project will aid in the information and data sought to be gathered through the pilot program." Order, p. 17. The Commission expressly addressed additional applications for inclusion in the pilot program, stating that "Piedmont and/or other Alternative Gas suppliers may apply to the Commission to participate in the pilot program; however, it must be demonstrated to the Commission that such additions will be useful in gathering information and data sought by Commission." Order, p. 5. By its Order in Docket G-9, Sub 726, entered on August 27, 2018, the Commission also conditionally approved a third participant in the pilot program.

8. Participation in the Piedmont Alternative Gas pilot project implemented by this Commission is a precondition to the timely construction and operation of the portfolio of plants that GESS proposes to finance, build and operate. The use of a portfolio of plants is fundamental to the GESS proposal as it substantially reduces operational and financial risks, allowing GESS to maintain operations and revenues in the event one or more plants is not operating during a specific interval, or fails during an interval to produce Alternative Gas suitable for delivery to the Piedmont pipeline system. More importantly for the approvals sought in this docket however, GESS's proposed use of standardized designs, footprints, and equipment allows for each of the plants in the portfolio to become operable in less than a year, and to achieve full commercial production within approximately eighteen (18) months from the commencement of construction. Due to the relatively short development timeline, allowing participation of the plant portfolio proposed by GESS, collectively, will provide a much larger, geographically diverse, and more broadly-sourced data set and related information associated with the characteristics and uses of locallyproduced and utilized Alternative Gas. Allowing the participation of the portfolio of GESS plants proposed herein will thereby significantly enhance the value of the data, information and statistics collected during the time-period of the pilot program, while also providing additional investments, locally-based jobs, and significant environmental and other social benefits needed in rural North Carolina.

#### SUMMARY OF PROPOSED PLANT PORTFOLIO

9. GESS's proposed biogas facilities in North Carolina will be located in Bladen County, Brunswick County, Columbus County, Robeson County, and Union

County. All five facilities will utilize 500,000 MMbtu anaerobic digesters obtained from Biogest® Digestor Systems, together with a scrubber system that removes up to 99% of impurities, producing a biogas which meets or exceeds Piedmont's standards for purity and temperature. Each system will be installed using a standard, consistent footprint for construction and installation developed based on numerous systems already installed and in service worldwide. Based on the use of the standardized equipment and designs, GESS expects to construct each project, from commencement of construction to full biogas production, in approximately eighteen (18) months or less. Moreover, the proposed plants will **not** be physically interconnected to the gas pipelines of Piedmont or any other operator of a pipeline. Instead, each plant will have facilities that allow for the pressurization of the gaseous output for injection into pressurized tank trailers, and for the pumping of the remaining digestate output into another form of tank trailers, such that both outputs can be safely stored and transported (a limited distance) in tank trailers that are already in use on a daily basis on the public roads of this State. Through its affiliates, GESS has obtained twenty-year lease agreements for the projects in Robeson County and Union County, and fifteen-year leaseholds in the other three Counties. Assuming construction can commence by or before the second quarter of 2019, GESS forecasts that all of the projects in the portfolio will be able to achieve full production of Alternative Gas during the third quarter of 2020.

10. With respect to "in-bound" feed stock, GESS or one of its affiliates will handle and manage all manure pick-up and delivery to the facilities of GESS from the waste sources. Specifically, GESS will be overseeing the gathering, storage, transportation,

weighing of trucks and loads, and bio-security activities, including wheel washing systems and tanker spraying systems at each site (including capture and handling of wash-wastes). The "green" biomass will be delivered by participating farmers using a separate entrance to the facilities of GESS, for deposit into a holding area. GESS personnel will be responsible for moving "green" biomass from the holding area to each digester. The separation of the delivery of feedstocks is intended to reduce the risk of unintended contamination of the crop residuals or the equipment used to deliver and handle those residuals.

- 11. GESS, through its affiliates, plans to own and operate equipment associated with and including an anaerobic digester and scrubbers at each of the plants. Once at full production, each plant is projected to produce sufficient Alternative Gas to fill two (2) gaseous tanker trucks per day, containing roughly 1300 Mcf of scrubbed, cleaned, and pressurized predominantly swine-based biogas that will be injected into Piedmont pipelines at injection sites designated for each plant. The injections of Alternative Gas must achieve the pressure, clarity, and temperature specified by Piedmont and as allowed by this Commission under Piedmont's approved Appendix F.
- 12. GESS currently anticipates that, once in production, certain sites will be producing Alternative Gas that will be transported to a single, common injection site on the Piedmont pipeline system. The remainder of the GESS plants will each inject into a site designated by Piedmont solely for use by that plant. Piedmont has designated injection points on its lines within its pipeline system such that GESS will have corresponding injection sites located within ten (10) miles of all but one of the GESS project sites, with

at least one injection site serving up to three GESS plants. The pressurized tankers used by GESS typically will travel less than ten (10) miles per trip while carrying the pressurized gas, except for the plant in Robeson County, for which the loaded trip is approximately 25 miles.

- 13. Project-specific information as to each of the five (5) digester system plants in the proposed GESS portfolio is set out in the sub-paragraphs below, including for each plant the site location and an associated exhibit, the estimated local-area investment, the number of projected post-construction jobs required for on-going operations, and the supporting Alternative Gas Purchaser(s).
  - a. Plant: Bladen County Green Energy Biogas Park Location: Bladenboro (see Exhibit 1)
    Investment: Approximately \$29.4 million
    Locally-Based Jobs: 19 Full-Time
    AG Purchaser(s): Element Markets
  - b. Plant: Brunswick County Green Energy Biogas Park Location: Winnabow (see Exhibit 2)
    Locally-Based Jobs: 16 Full-Time
    Investment: Approximately \$30.5 million
    AG Purchasers: Element Markets
  - c. Plant: Columbus County Green Energy Biogas Park Location: Clarendon (see Exhibit 3)
    Investment: Approximately \$29.4 million
    Locally-Based Jobs: 19 Full-Time
    AG Purchaser(s): Element Markets
  - d. Project: Robeson County Green Energy Biogas Park #1
     Location: Orrum (see Exhibit 4)
     Investment: Approximately \$29.3 million
     Locally-Based Jobs: 19 Full-Time
     AG Purchaser(s): Element Markets
  - e. Project: Union County Green Energy Biogas Park

Location: Monroe (see Exhibit 5)

Investment: Approximately \$29.4 million

Locally-Based Jobs: 18 Full-Time

AG Purchaser(s): Duke Energy Carolinas LLC and Element

Markets

Moreover, GESS is working towards adding two additional sites to its portfolio, in Wilson County and Nash County, respectively, using the same design and construction process. Duke Energy Carolina LLC and Element Markets are expected purchasers from the Wilson County plant, and Element Markets is the expected purchaser from the Nash County plant. These two plants would have the same projected output, and similar investment and operating characteristics, as each of the five plants listed above. GESS anticipates supplementing this Application to provide additional information regarding the proposed plants in Wilson and Nash County, once finalized, in the near future.

Duke Energy Carolinas, LLC, "for itself and as agent for and on behalf of Duke Energy Progress, LLC", has indicated its purchases of Alternative Gas are likely to be used to generate electric power in connection with meeting the State's Renewable Energy Portfolio Standards. Element Markets, one of the largest biogas trading groups in the industry, buys biogas in bulk and resells into mostly out-of-state markets based on differences in prices and market conditions. Because other electric suppliers within this State have indicated an interest in purchasing Alternative Gas from GESS once construction of the plants commences, Element Markets has indicated a willingness to release and/or assign rights to out-take production to locally-based users of gas, subject to such conditions regarding future approval of those transfers deemed prudent by this Commission.

- 15. GESS anticipates a total investment for the five (5) plants in its portfolio of \$148 million in construction and equipment, utilizing the most advanced swine-waste-to-gas technology commercially available today. Each plant is projected to annually purchase approximately 170,000 tons of brown biomass (swine manure) from nearby farmers, allowing participating farmers to produce additional revenue from manure sales, while also offering those farmers an avenue for disposal of swine waste in a more environmentally desirable method than currently available. In addition, each plant is also expected to spend up to \$2.5 million annually to purchase green biomass, which includes corn and other row-crop residuals that produce no revenue for those growers today.
- 16. The Appendix F Order provided for the participation of only two specific projects in the pilot program. Order, p. 17. An application of at least one other proposed addition to the pilot program has been approved in another Commission docket, as referenced above. The timing for achieving operational production from the facilities of those other participants appears to be longer than the timeline for achieving production that is projected for the plants proposed by GESS.
- 17. The Appendix F Order reiterated that participants in the pilot program, as a condition to approval of Receipt Agreements with Piedmont, must agree to conditions, including that such agreements remain subject to any revisions to Appendix F that may be made by the Commission, as well as any applicable amendments to the Commission's Rules and Regulations. Order, pp. 2-3. GESS consents to conditional approvals of its confidential Receipt Agreements for its proposed plants (which will be submitted in a supplemental filing), subject to the same conditions, and intends for each of the plants to

be operated to meet the Commission's present standards for delivery of Alternative Gas and for participation in the pilot program, and as those standards evolve.

18. GESS has informed Piedmont of its intent to file this Application and has been informed that Piedmont has no objection to such filing or the participation of GESS in the pilot program.

#### REQUEST FOR APPROVAL TO ENTER PILOT PROGRAM

- 19. GESS respectfully requests the Commission's approval for the GESS portfolio of plants to participate in the Piedmont pilot program. The GESS plants will be useful in gathering information and data sought by the Commission and increase the likelihood of more rapidly achieving the goals of the State's Renewable Energy and Energy Efficiency Portfolio Standards. The plants in the GESS portfolio are distinct and different from those approved for the plant developers identified in the Commission's Appendix F Order, as well as the project subsequently conditionally approved by the Commission for participation, particularly with regard to their geographic distribution, and the pace at which plants can be constructed and begin deliveries of Alternative Gas.
- 20. The portfolio of plants proposed by GESS will be useful in gathering information and data sought by the Commission for several reasons.
- 21. First, the Alternative Gas produced from the GESS portfolio will be injected at specifically designated sites for delivery to the out-take customers at different points along the Piedmont pipeline system. It is anticipated that Alternative Gas will represent only a modest percentage of the gas ultimately delivered to any specific customer, as the Alternative Gas is likely to be diluted with fossil-based fuel within the various pipelines.

This will permit collection of a larger volume of data related to the more limited risks reasonably expected to be incurred by Piedmont's delivery of blends of fossil-based gas and Alternative Gas from different sources and locations, and allow the collection of a larger volume of such data to begin sooner.

- 22. Furthermore, the distributed interjection points for the Alternative Gas to be delivered by the plants in the GESS portfolio typically will be located on smaller gas lines, where the level of dilution is not expected to be as great, before delivery via larger pipelines to the out-take customers. The different gas mixture and flow of the GESS portfolio will provide information and data on potential impacts to pipelines and related infrastructure along the entire flow-stream. Moreover, because of the proposed use of tank trailers to create a "virtual pipeline", there is the potential for future modification of the injection points to provide assistance, in cooperation with Piedmont, to obtain comparative data and information from a range of existing pipelines in reasonable proximity to a GESS plant. Moreover, due to the use by GESS of a more flexible delivery system (tank trailers), and the ability of Piedmont to identify other nearby sites as future interjection points, Piedmont will be able to make modifications as needed "to ensure that no customers are adversely impacted as Alternative Gas receipt points are added." See Order, p. 11.
- 23. Second, the Alternative Gas generated by GESS utilizes swine waste and crop-waste residuals of farmers, not wastes sourced from industrial-scale food processing facilities. Two of the approved participants' projects already convert animal wastes, or a combination of animal wastes from a single source and industrial-scale food processing facility wastes, to Alternative Gas. Allowing a portfolio of plants that use an alternative,

agricultural feedstock blend as proposed by GESS will provide information and data from multiple sources that are not currently expected to be captured by the approved participants.

- 24. Finally, GESS already has expended substantial time and resources in locating its proposed sites, has substantially agreed-upon terms for its Alternative Biogas Purchase Agreements, and has conducted extensive contract negotiations with Piedmont regarding Receipt Agreements, applications for which are attached on a confidential basis. Based on the relatively rapid pace from commencement of construction to actual production of Alternative Gas, the earlier dates of delivery from the GESS portfolio means the Commission and Piedmont are likely to obtain more sources of Alternative Gas that are operational and gather information earlier during the three (3) year pilot program, providing a more robust set of data for the pilot program.
- 25. For these reasons, the proposed portfolio of GESS plants is likely to generate useful data and information that is qualitatively and quantitatively distinct from the data set arising from the three approved plan participants.

#### OTHER POLICY CONSIDERATIONS

- 26. In addition to the usefulness of the GESS projects in gathering information and data sought by the Commission in the pilot program, several public policy reasons also support approval of the participation of GESS's plants.
- 27. First, utility purchasers who are committed to buying the Alternative Gas produced from the GESS portfolio support the participation of GESS because they plan to purchase GESS-produced biogas in order to meet and comply with the State's Renewable Energy and Energy Efficiency Portfolio Standards, N.C. Gen. Stat.

- § 62-133.8. This will promote the policy of the State to encourage generation of renewable electric energy. This is particularly important in light of the multi-year delays that have occurred in meeting those requirements with respect to swine waste.
- 28. Second, the projects proposed by GESS will provide substantial capital investments and locally-based jobs in each of the five proposed plant locations. The plants in the GESS portfolio are sited primarily in rural areas of different counties, all of which are in great need of economic development to increase the local tax base and provide jobs. Moreover, because of the potential creation of new agricultural revenue streams for the provision of "feed stock" from both brown and green agricultural waste products, the economic benefits resulting from the use of such feed stocks will be more broadly shared by multiple suppliers across these different communities.
- 29. Finally, GESS has invested considerable time, energy and resources in each of the plants in its portfolio in anticipation of commencing construction and the delivery of Alternative Gas. The participating farmers located near the proposed plants who will provide feed stocks for the GESS portfolio are seeking alternative means of disposal of swine waste. The environmental benefits likely to flow from adopting the new disposal method provided by the GESS plants will also inure to the benefit of their neighbors and local community. Moreover, delays in the construction of the plants would not only be a financial detriment to GESS, but also to subcontractors, vendors and other businesses in North Carolina who are likely to benefit from the substantial investments that GESS intends to undertake. As the

Commission stated in its May 4, 2017 Order in Docket No. G-9, Sub 698 and restated in the Appendix F Order, at p.4, if use of the natural gas distribution system "can be done while holding natural gas customers harmless, then every effort should be made to accommodate interconnections with Alternative Gas providers."

#### **CONCLUSION**

For all of these reasons, GESS respectfully requests that the Commission find and conclude that the participation in the pilot program of the five (5) plants in the GESS portfolio will be useful in gathering information and data sought by the Commission. And, upon a subsequent determination that the Receipt Agreements to be provided on a supplemental basis are reasonable and should be approved, approve the participation of the GESS portfolio in the Piedmont pilot program, subject to those conditions that the Commission deems just and reasonable.

Respectfully submitted, this the 30th day of August, 2018.

NELSON MULLINS RILEY & SCARBOROUGH LLP

Joseph W. Eason

4140 ParkLake Avenue, Suite 200

Raleigh, NC 27612

Telephone: (919) 329-3807 joe.eason@nelsonmullins.com

Attorneys for GESS International North Carolina, Inc.

#### VERIFICATION

Shaun Lee, first being duly sworn, deposes and says that he is the President of GESS International North Carolina, Inc.; that he has read the foregoing document and that the same is true of his personal knowledge, except as to any matters and things therein stated on information and belief, and as to those, he believes them to be true; and that he is authorized to sign this verification on behalf of GESS International North Carolina, Inc.

This 2 Caay of August, 2018.

Shown la

North Carolina

Wake County

Laurie J, Holt
NOTARY PUBLIC
Wake County
North Carolina
emmission Expires: 27 /29 /2014

Sworn to and subscribed before me

This 28 day of August 2018

Notary Public

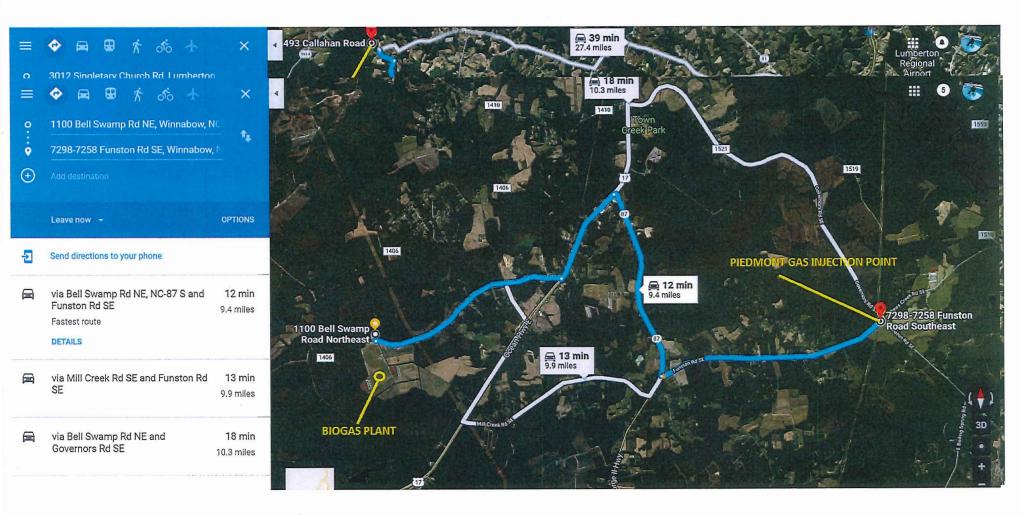
Print Notary Public Name

My Commission Expires: July 29, 2019

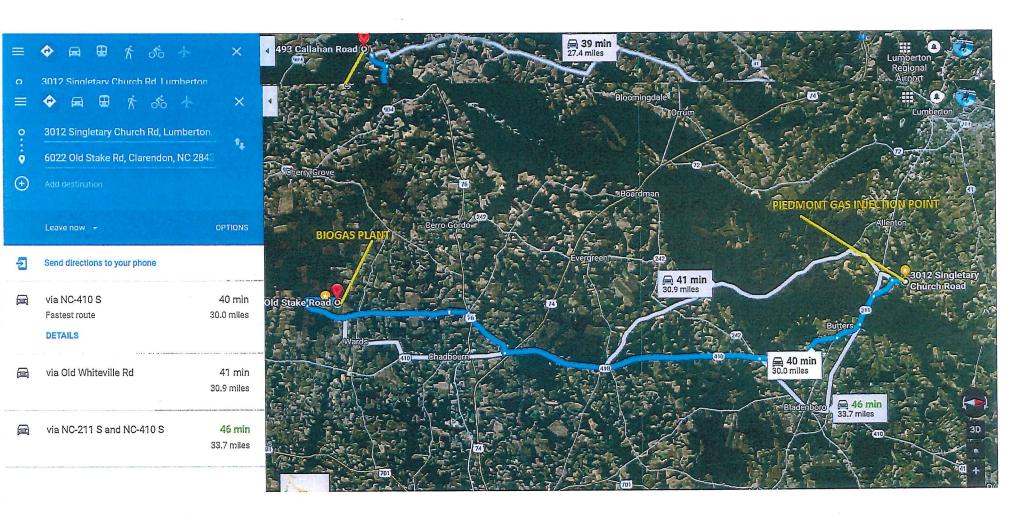
### EXHIBIT 1 BLADEN COUNTY



### EXHIBIT 2 BRUNSWICK COUNTY



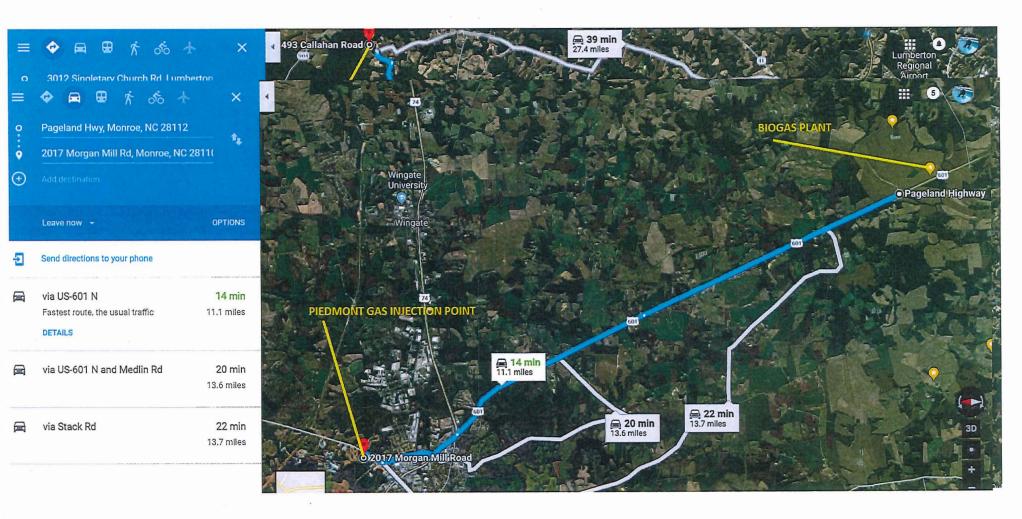
# EXHIBIT 3 COLUMBUS COUNTY



## EXHIBIT 4 ROBESON COUNTY



## EXHIBIT 5 UNION COUNTY



### EXHIBITS 6-10 OMITTED REDACTED