JOINT REPORT TO THE ENVIRONMENTAL REVIEW COMMISSION AND THE JOINT LEGISLATIVE UTILITY REVIEW COMMITTEE ON THE IMPLEMENTATION OF THE SWINE FARM METHANE CAPTURE PILOT PROGRAM

INTRODUCTION

On August 31, 2007, the Governor signed into law Senate Bill 1465 (Session Law 2007-523), which, among other things, established the Swine Farm Methane Capture Pilot Program (Pilot Program). This legislation authorizes the Utilities Commission (Commission) and the Department of Environment and Natural Resources (Department) to select up to 50 swine farms to participate in the Pilot Program. If selected, a farm will fully or partially cover or otherwise modify its waste lagoon(s), capture the methane produced, and use the captured methane to generate electricity. Electric public utilities are required "to purchase all electricity generated by the use of captured methane as a fuel by pilot program participants for seven years." Section 4(d) of S.L. 2007-523 provides further that:

> The [North Carolina Utilities] Commission shall set a suggested purchase price that would allow program participants to recover reasonably and prudently incurred capital and operating costs and that would minimize the impact of the pilot program on ratepayers. … In no event, shall the suggested purchase price … exceed eighteen cents (18¢) per kilowatt hour.

Section 4(g) requires the Department and the Commission to jointly file this report on the implementation of the Pilot Program annually with the Environmental Review Commission and the Joint Legislative Utility Review Committee. Section 4(g) requires that the report include a program evaluation based on an assessment of the costs and benefits of the program and any specific findings and recommendations, including any legislative proposals, that the Department and the Commission determine to be appropriate.

On February 5, 2008, representatives of the Governor's office, the Commission and the Department met to discuss how to proceed with the Methane Capture Pilot Program. It was agreed that the Department , through the Division of Soil and Water Conservation, would initiate a registration process for interested participants and that the Commission would initiate a proceeding to determine a suggested purchase price for electricity purchased by electric public utilities pursuant to the Pilot Program.

SUGGESTED ELECTRICITY PURCHASE PRICE

On February 15, 2008, the Commission initiated a proceeding in Docket No. E-100, Sub 115 to determine a suggested purchase price for electricity purchased by electric public utilities pursuant to the Pilot Program. The Commission established a procedural schedule for the filing of intervention petitions, expert direct and rebuttal testimony and exhibits, verified by accompanying affidavits, and briefs and proposed orders. The Commission required Progress Energy Carolinas, Inc. (Progress Energy), Duke Energy Carolinas, LLC (Duke Energy), and Dominion North Carolina Power (Dominion) to publish newspaper notices regarding the proceeding to inform other interested parties of the opportunity to participate. In addition to the three electric utilities, the North Carolina Farm Bureau Federation, the North Carolina Pork Council, Inc, the Carolina Utility Customers Association, Inc., Microgy, Inc., Environmental Defense Fund (EDF) and the North Carolina Chapter of the Sierra Club (Sierra Club) participated in the proceeding.

Based on the record in the proceeding, the Commission issued an order on August 7, 2008, in which it found that:

1. The sizes and types of swine farms operating in North Carolina vary widely.

2. A variety of technologies may be used to capture methane from swine farm waste systems and to produce electricity.

3. Given the great variation in potential Pilot Program participants and the technologies employed by each, the estimated power purchase price that would allow Pilot Program participants to recover reasonably and prudently incurred capital and operating costs ranges from 7.9 cents/kWh to 34 cents/kWh, with larger farms, in general, able to capture methane and produce electricity at a lower per-kWh cost than smaller farms.

4. Numerous grants and additional sources of income are available to North Carolina swine farm operators to defray the costs of Pilot Program participation.

5. It is not possible to establish a single purchase price that will allow all Pilot Program participants to recover their reasonably and prudently incurred capital and operating costs while not allowing any Pilot Program participant to recover more than its reasonably and prudently incurred capital and operating costs.

The Commission's August 7, 2008 order further stated:

1. Renewable energy certificates (RECs) associated with electricity produced from swine waste methane by Pilot Program participants may be used to satisfy the swine waste set-aside requirement of North Carolina's Renewable Energy and Energy Efficiency Portfolio Standard (REPS), G.S. 62-133.8(e).

2. The appropriate "suggested purchase price," the starting price for negotiations between electric public utilities and individual swine farms participating in the Pilot Program to purchase the electric power generated from swine waste methane and the associated RECs that would allow Pilot Program participants to recover reasonably and prudently incurred capital and operating costs and that would minimize the impact of the Pilot Program on ratepayers, is 18 cents/kWh.

3. In setting the suggested purchase price at 18 cents/kWh, the Commission does not intend that all power purchase agreements between electric public utilities and Pilot Program participants be at this rate. Section 4(d) of S.L. 2007-523 requires that the price of power purchased under the Pilot Program be based on the participating farm's actual costs, not to exceed 18 cents/kWh, in order to "minimize the impact of the pilot program on ratepayers." Thus, the suggested purchase price is only a starting price for negotiations between the electric public utility and the Pilot Program participant. The power purchase price shall allow the Pilot Program participant to recover its reasonably and prudently incurred capital and operating costs within seven years, but shall not exceed 18 cents/kWh.

4. An electric public utility is allowed to recover all costs paid to Pilot Program participants through its annual fuel charge adjustment rider. Like all costs sought to be recovered through this rider, the costs paid to Pilot Program participants are subject to review for reasonableness and prudency. In fact, the right to review any agreement between an electric public utility and a Pilot Program participant is explicitly provided in Section 4(d). The recovery of any costs paid in excess of that which would allow Pilot Program participants to recover reasonably and prudently incurred capital and operating costs is subject to disallowance in determining the appropriate fuel charge adjustment rider. Participants, therefore, shall fully document their estimated and actual costs as well as grants and additional sources of revenue and make that information available to the electric public utility to justify cost recovery. The record in this docket clearly indicates that there are many sources of funds available to defray participants' costs, and they shall be expected to make every effort to avail themselves of such funds.

5. Because an electric public utility will likely be required under the Pilot Program to pay participants a price in excess of the utility's avoided costs, the utility shall receive, as part of the purchase price, both the power generated from the swine waste methane and the RECs associated with the renewable energy. Pursuant to Section 4(d) of S.L. 2007-523 and Commission Rule R8-55, the costs of the Pilot Program, including the cost of RECs, are recovered as costs of fuel pursuant to G.S. 62-133.2 and are not included in the incremental cost caps adopted in G.S. 62-133.8(h)(4).

6. The Commission rejected arguments made by EDF and Sierra Club that the Commission should establish a suggested purchase price of 18 cents/kWh contingent upon full compliance by Pilot Program participants with the environmental performance standards set forth in Section 1 of S.L. 2007-523. The Commission concluded that it has no authority to impose additional environmental requirements on Pilot Program participants. A Pilot Program participant is required to comply with its permit issued by the Department . Only if the environmental performance standards set forth in Section 1 of S.L. 2007-523 are made applicable to a Pilot Program participant by Department will the participant be obligated to comply. The Pilot Program participant's costs shall include the costs of complying with all applicable environmental regulations.

7. Electric public utilities shall negotiate cost-based power purchase agreements with swine farm operators selected to participate in the Pilot Program. Each Pilot Program participant shall provide the electric public utility with its anticipated capital and operating costs, as well as the amount of any funding that it anticipates receiving that would defray any portion of those costs. The Pilot Program participant and the electric public utility shall renegotiate the power purchase agreement if actual reasonably and prudently incurred capital and operating costs, additional grants or sources of funds, or actual electric generation indicates that a different price is appropriate.

8. Pilot Program participants shall register their electric generating facilities as required by Commission Rule R8-66. Under that rule, registration is required of renewable energy facilities whose output or associated RECs will be claimed for REPS compliance by any North Carolina electric power supplier.

PILOT PROGRAM REGISTRATION

The Methane Capture Pilot Program began receiving applications for the program on March 10, 2008. Swine farm owners or operators wishing to participate were asked to complete a simple, online application in order to be considered for the program. To date, a total of 218 swine production facilities have registered for the program. Of the total registered, 185 operations are owned by Murphy Brown or Murphy Family Ventures and the remaining 33 farms are owned by contract growers.

Only farms served by electric public utilities (i.e., Progress Energy, Duke Energy and Dominion) are eligible to participate in the Pilot Program. Electric membership corporations (EMCs) and municipal utilities do not meet the definition of an electric public utility. As a result, farms served by EMCs or municipal utilities are not eligible to participate in the Pilot Program. There were 170 such farms registered for participation in the Pilot Program.

On August 29, 2008, 46 registered farms were notified of their eligibility to participate in the Pilot Program. The primary criteria for determining eligibility was that they be served by an electric public utility, as previously described.

Prior to sending letters of eligibility, Progress Energy, Duke Energy and Dominion were notified and asked to provide contact information to be included in correspondence to eligible producers. Eligible producers were provided with this contact information and were instructed that in order to move forward with program participation, they should initiate negotiations with their electric public utility. Producers were further instructed that, prior to entering into an agreement with their electric utility, they must notify the Department of their intent to enter into an agreement and provide information about the technology to be installed.

An industry directory for on-farm biogas recovery systems was included with the correspondence to help farm owners and others interested in on-farm biogas recovery systems to identify appropriate consultants and project developers. In addition, producers were invited to a workshop held on September 18th, 2008, in Clinton, NC on the topic of capturing swine manure methane. Workshop agenda items included partial lagoon covers, interconnection and net metering issues, nutrient management impacts of anaerobic digestion and a visit to Butler Farms in Lillington, NC to view a covered lagoon.

RESULTS AND RECOMMENDATIONS

Subsequent to the establishment of the Pilot Program, North Carolina enacted S.L. 2007-397, which established the REPS for the State. This legislation requires all electric power suppliers in North Carolina to meet an ever-increasing portion of their retail electricity sales with a combination of renewable-based generation and energy efficiency, starting in 2012. By 2021, 12.5% of the electricity sales of electric public utilities must come from renewable generation sources and energy efficiency. Municipal utilities and EMCs must meet slightly lower targets. The REPS compliance schedule requires that 0.07% of the total electric power sold to retail electric consumers in 2012 be generated from swine waste. This requirement increases to 0.20% by 2018.

While there has been considerable interest in opportunities for generation of electricity from swine manure, the Department has not received notification from any eligible producers regarding their intent to enter into such an agreement with their electric public utility. In light of North Carolina's REPS adoption in 2007, including the set-aside for energy derived from swine waste resources, it is unclear whether the Pilot Program is a necessary mechanism to facilitate adoption of this technology. To allow producers adequate time to consider whether to participate in the Pilot Program, the legislature should consider extending the deadline for commencement of energy generation from September 1, 2010 to at least 2012. In addition, the General Assembly should consider whether the Pilot Program should be modified to allow producers served by municipal utilities and EMCs to participate.