QUESTIONS AND ANSWERS

LEGISLATIVE RESEARCH COMMISSION (LRC)
ENERGY POLICY ISSUES

COMMITTEE MEETING

January 18, 2012

Mr. Michael H. Yount, Senior Vice President and Chief Utility Operations Officer for Piedmont Natural Gas

Senator Goolsby: Regarding CNG, I know that I see buses in Charlotte and other places running around, maybe even in Wilmington, also, I believe, with the CNG. Do you all have facilities set up to provide that to people to compressed natural gas?

Mr. Yount: Senator Goolsby, we currently, I believe, have five of our operating centers that are equipped to dispense CNG to the public. We also have about 180 of our 900 vehicles that are running on natural gas and by 2013 we should be up to about 300 of 900. I would add, we have got about five additional locations where we are going to be adding compressed natural gas fueling facilities. Typically what we do is we put them on the fence line so that we can fuel our vehicles inside the fence and the public can access. It's like fueling your gasoline tank. You swipe your credit card, plug in and fill your vehicle.

Senator Goolsby: If I was doing my calculation right, if gasoline is going to $3.50 per gallon and you said there was about a 5% to 15% conversion, $5 vs. $15 is about where we were on that. We will be looking at fuel costs per gallon; I know at today's rate and a lot of other stuff, if we converted over immediately could do it. And I know that is theoretical; It would be about $1.16/gallon?

Mr. Yount: That may be a little low. Let me tell you some of the other factors that play into that. Each state and its regulatory agencies are generally the ones responsible for setting the price that we can sell that natural gas for. So it doesn't just include the costs of gas but also the cost of infrastructure to deliver the natural gas. So, it will vary from state to state. I have seen, depending on the location, currently in what we call an equivalent gallon price, anywhere from $1.25 to $1.80 or $1.90 natural gas comparing with $3.20, $3.50, $3.90 for premium/regular depending on what you are comparing it to at today's prices. So it is a pretty significant difference. Bear in mind the cost to convert a vehicle is significant.

Senator Goolsby: In fact, Mr. Chairman, if I may, as we were sitting here talking, I actually used my iPhone and searched the web to find what conversion kits were and it looked like between $1,000 and $2,000 a vehicle, is that within accurate range?

Mr. Yount: No, it is quite a bit more than that, I think the assistant secretary talked about the price difference on the Honda Civic be $10,000. Some of that

depends a little bit on how it's optioned. If you are careful with your options, you can probably get that down into the $7,500 premium range. Most vehicles that you would have converted would become what's called a dual fuel vehicle. That is they can run on gasoline or natural gas, so, if you are running on natural gas and you can't access a fueling station, you simple switch it to gasoline and continue your journey. Our experience with our large pickup trucks is typically in the $10-$15,000 range for doing those conversions. As with everything else with increased volume, prices come down. The big difference occurs when the manufacturers get in the game and we are hearing a lot of noise from Ford, GM, and Dodge about building vans and pickups from the factory that are already set to run on natural gas and we are hopeful that will occur and the prices will continue to drop.

Senator Rabon: When we were talking about the pipeline business, you are in the distribution business?

Mr. Yount: And transmission.

Senator Rabon: Okay, your pipelines come in from other states. Do your pipelines go into other states other than South Carolina and Tennessee? In other words, can North Carolina be in the exporting business through your pipeline?

Mr. Yount: Let me see if I can clarify. The map that the assistant secretary Williams showed was a major transmission pipeline map and I believe what those were, were interstate pipelines, that is, pipelines that cross state lines and are regulated by the federal energy regulatory commission. Our transmission lines are not interstate lines, they are intrastate lines, that is, they exist wholly within the state of North Carolina or South Carolina or Tennessee and as such they are regulated by the local state commission. So, they are still transmission lines that is why they did not show up on his map. They are intrastate rather than interstate.

Senator Rabon: When we were talking about natural gas being clean and efficient and you mentioned a litany of comparisons, there was no comparison to nuclear electricity. How do we compare when we look at that?

Mr. Yount: That particular slide was showing CO2 emissions and typically with nuclear you have zero CO2 emissions associated with the generation of the power. Mining of uranium and other things, there are some, but in terms of CO2, nuclear is very clean compared to fossil fuels.

Senator Rabon: I thought that when we looked at the second slide, but I wasn't sure.

Mr. Yount: Yes, that was intended to compare fossil fuels.

Senator Rabon: Thank you, but my question was the cost.

Mr. Yount: You know we probably should get our power company representatives in here to talk about that. They are the experts at that but the fact that we have Progress converting coal to natural gas and we have a number of utilities that are finding it very challenging to site nuclear facilities these days,

nuclear is expensive to get going. Once you get it going, it is clean from a CO2 perspective but it is hard to do these days.

Senator Walters: Natural gas for vehicles mileage efficiency, how is it compared to gasoline. We talked about the pricing but mileage efficiency?

Mr. Yount: The specific energy content of natural gas compared to gasoline, there is less specific energy associated with natural gas than gasoline. So, if you did a heads up comparison, an engine that was built to run on gasoline and you simply converted it to natural gas, you typically will see a 20% to 25% reduction in fuel mileage associated with that conversion. However, if you build the engine dedicated for natural gas and the primary thing that gets done is the compression ratio of the engine can be put much, much higher because natural gas has a much higher effective octane than gasoline does. You get the vast majority of that back. So, once again, we are into a bit of the chicken and the egg on how do you build the vehicle, is there enough market there to build a dedicated vehicle, can people feel comfortable enough that they don't need a dual fuel vehicle that can just rely on gasoline so that we can optimize that natural gas engine and take full advantage of the fuel. All those things have to be worked out over time.

Senator Blake: Does the plant down in Hamlet, NC, receive energy from Progress Energy, or is it supplied with natural gas?

Mr. Yount: I am fairly familiar with their generation facilities that we supply natural gas to. There is a large facility in Richmond that we supply natural gas to. It has been expanded a number of times over the years. A period at the end of the sentence again, when we get through with our expansion for Progress Energy at Sutton and Wayne, that transmission pipeline number goes from a little over 2,700 to a little over 2,900, almost 3,000 and we will add about 35,000 horsepower compression pumps, if you will, to move that natural gas along the system, which positions us even better to move natural gas across the whole state and particularly into the east.

Senator Rabon: Natural gas automobile engines, do they ignite on compression and heat or is there a spark.

Mr. Yount. Spark

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