



JOINT LEGISLATIVE COMMISSION ON ENERGY POLICY

January 7, 2014

Room 544 of the Legislative Office Building

The Joint Legislative Commission on Energy Policy met on Tuesday, January 7, 2014 at 1:00 PM. The meeting was held in Room 544 of the Legislative Office Building. Representative Mike Hager presided.

Members present were: Senator Bob Rucho, Chair, Representative Mike Hager, Chair, Senator Andrew Brock, Senator Gene McLaurin, Senator E.S. (Buck) Newton, Senator Ronald Rabin, Senator Trudy Wade, Representative James L. Boles, Representative Rick Catlin, Representative Ken Goodman, Representative Jacqueline Schaffer, and Representative Mike Stone. Dr. Jeff Warren, Senate Senior Policy Advisor; Andy Munn, House Senior Policy Advisor; Ms. Jennifer McGinnis, Commission Analyst; Ms. Jennifer Mundt, Mr. Peter Ledford, Mr. Jeff Cherry, Commission Counsel; Lindsey Dowling and William Verbiest, Commission Clerks; and Sergeants-At-Arms Reggie Sills, Jesse Hayes, Ed Kesler, and Canton Lewis. Attachment #1 and Attachment #2.

On December 17, 2013, notice was sent to members and interested parties via e-mail. A copy of the notice is included in the attachments to these minutes as Attachment #3. Copies of the agenda for the meeting and visitor registration sheets are included in the attachments to these minutes as Attachment #4 and Attachment #5.

Call to order and introductory remarks

Representative Hager called the meeting to order at 1:05 PM and welcomed members, staff, and visitors in attendance. Representative Hager started off with opening remarks from Senator Rucho and by introducing the Sergeants-At-Arms. Representative Hager then recognized and thanked the members of the North Carolina Utilities Commission who were in attendance, Commissioners Don Bailey, Bryan Beatty, Jerry Dockham, James Patterson, Susan Rabon, and Chairman Edward Finley. Representative Hager reviewed the topics on the agenda, there were no questions.

Duke Energy overview and emerging issues

Representative Hager recognized Mr. Paul Newton, President of Duke Energy. Mr. Newton thanked the Chairs and members of the Commission for inviting him to present. A copy of Mr. Newton's remarks is included in the attachments to these minutes as Attachment #6. Mr. Newton referred members to the PowerPoint handout in their packet. A copy of Mr. Newton's



presentation is included in the attachments to these minutes as Attachment #7. Once Mr. Norris was finished, Representative Hager asked if there were any questions. The following questions were asked:

Catlin

- Asked regarding EMP and other issues for grid protection, has Duke Energy seen equipment, at a reasonable cost that is better than what Duke has now? Mr. Newton replied that Duke Energy is constantly looking at what is new and is always open minded and shopping for opportunities to spend wisely.

Goodman

- Asked about Qualifying Facilities (QF), how difficult is the permit process? Do you have to buy the energy from the QF? Mr. Newton replied that Duke Energy has to buy energy if a QF is built in Duke Energy's territory. It is very easy to get in the queue. Developers might come to a candidate and ask to lease land, and then they go to Duke Energy with a proposal after obtaining a certificate from the Utilities Commission.
- Asked if he can get a permit and can guarantee a profit, would he have little risk if he can get the math done? Mr. Newton replied that he is correct. Under the rules if your project is 5 megawatts or less, then there is a standard tariff in which Duke Energy has to pay you a 15-year fixed rate and you'll be guaranteed a fixed payment.
- Asked if on a 15-year lease, that rate remains constant if energy costs goes down are you still required to pay the same rate over the terms of the lease? Mr. Newton replied yes.

Brock

- Asked how North Carolina rates compare to other states on rates? Mr. Newton referred to the fifth slide in the PowerPoint presentation, showing the rate difference. Duke Energy is significantly below the United States average in electricity cost in all customer classes. See Attachment #7 attached to meeting minutes.
- Stated looking at QF's, if we legislatively put a disadvantage for our rate payers and businesses that we are not competing with other states, its worldwide and that makes us look less attractive for companies to stay and move to North Carolina. Mr. Newton agreed and said studies show when looking at countries and jurisdictions that have gone all in on renewables, for example Germany, Spain, Ontario, and California, they have had a net loss of manufacturing jobs, no gain.



Rucho

- Asked if Mr. Newton could explain what constitutes based load and how do you fuel it? Secondly, how does a renewable energy source work with based load? Mr. Newton responded that based load is what runs 24/7 all the time, example nuclear. You want nuclear to run all the time, never turn it on and off because the fuel costs are cheap. An intermediate resource could be coal and natural gas, whichever is more cost effective, Duke Energy will use. Renewables comes into play, looking at a bell curve, solar looks like an EKG; it is never a steady state. Duke Energy is ramping peaking or intermediate units up and down to smooth the energy process out for customers. That is why Germany's carbon emissions are going up; they built coal plants to back stop the renewable energy that is intermittent. It doesn't typically affect your based load; it has a layer of intermediate units between it and renewables. As of yet, Duke Energy has not had to increase or decrease based load associated with renewables on the system.
- Asked if the based load has to have a reliable source of energy for you to operate? Mr. Newton said yes.
- Asked, when building based load generation equipment, they have to rely on a consistent source of fuel. So were spending all the money to get to the based load and anything that is on the renewable side which potentially spikes and valleys is beyond what you would normally have to have as far as based load, correct? The capital cost is based load and that is what you have to provide so that North Carolina can continue a source of energy, but the renewable source is something you cannot rely on and is above and beyond what you would normally have for a based load? Mr. Newton replied that Senator Rucho is correct. Renewable energy is there when it decides to provide it to you, every form of energy that Duke Energy produces is there when they turn it on when customers need it.

Hager

- Asked a question about net metering, there are three components of the total cost to the customer; the generation piece, transmission piece, and all other costs (i.e. customer service), on the generation piece at Cliffside 5 produced at 1.8 percent per kilowatt hour. When paying the generator the full retail amount do you still have all other costs embedded to get the widget to the customer? Mr. Newton replied with an example that the typical customer would pay \$100.00 per month, of that fee; \$75.00 is a fixed cost incorporating the generation, transmission, and customer service. The falsity in net metering is with a solar panel client selling a kilowatt of power back to company, they are receiving the full \$100.00 back, not the energy piece of \$25.00. The solar client is not paying anything to maintain that grid to keep it operable even though they are still using it. A solar panel will not work on a house unless the grid is up and running. A solar panel needs the grid 24/7 pulling electrons on and off the grid.



- Asked if energy consumers have to bear the cost not being paid by the solar client? Mr. Newton said they are.

Senate Bill 3

Representative Hager recognized Ms. Heather Fennell, Commission Counsel. Ms. Fennell presented an overview of the Senate Bill 3 legislation. Ms. Fennell directed members to her PowerPoint presentation in their packets. A copy of her presentation is attached to these minutes as Attachment #8. Representative Hager opened the floor and the following questions were asked:

Newton

- Asked if Duke Energy/Progress IOU's how does that work with Electricities? Is it similar or different? Ms. Fennell replied that it is different; this is focused on the regulated utilities because they have a better idea of what Duke Energy and Dominion are doing. With Electricities, they're recovering their cost through individual Electricities; they purchase some of it through North Carolina Eastern Municipal Power Agency (NCEMPA). Was not sure how they're setting their rates based on that.
- Asked where do the avoided costs fit in with the description of the different riders? Ms. Fennell responded that the avoided cost is what is paid by the utility to the renewable energy, it is not separately recovered, that would be part of what they're paying as part of their base rate, there may be some of it recovered in the Renewable Energy Portfolio Standard (REPS).

Hager

- Asked if there is an end date when the rider stops? Ms. Fennell said there is no end date to the 2021 number; it will be 12.5% thereafter.
- Asked if swine and poultry waste, are we recovering the cost of any viable projects right now? Ms. Fennell says we are not and Mr. Dan Conrad will explain more. There is something in Senate Bill 3 called the "off ramp," basically if the utilities were unable to meet the requirements of the REPS, the Utilities Commission could determine that it could not be met and would allow them to not comply. Currently we have no swine or poultry in waste right now.

Representative Hager recognized Mr. Dan Conrad, Staff Attorney, North Carolina Utilities Commission. Mr. Conrad thanked the Commission for inviting him to speak and presented on renewable energy in the regulatory process. Mr. Conrad referred members to his PowerPoint presentation in their handouts. A copy of his presentation is attached to the meeting minutes as Attachment #9. Representative Hager opened the floor and the following questions and comments were made:



Rabin

- Asked to come up with a chart that takes the 13 states without REPS and compare them to others that have REPS while looking at energy rates. If that does not exist, to show cost added on and if it is effective. Mr. Conrad referred Senator Rabin to look at the DSIRE database for these charts.

Representative Hager recognized Mr. Chris Ayers, Executive Director of Public Staff at The North Carolina Utilities Commission. Mr. Ayers made himself available for questions/follow up on renewable energy in the regulatory process. Representative Hager opened the floor and the following questions were asked:

Newton

- Asked how avoided costs work? How does it affect the retail customer, higher or lower rate? Mr. Ayers replied that avoided costs are the cost that a utility avoids incurring by purchasing that power in capacity from another source. In North Carolina, the Utilities Commission sets avoided costs every 2 years and utilities come in and present their case. The Utilities Commission looks at the cost for capacity and energy production for a unit that would come online at a peak time, generally in the summer afternoon, what the cost at capacity energy wise is for the utility to operate and construct their facility. That is the test of what the avoided cost is. Once you calculate the number that is what is paid for the energy that is produced as well as the capacity that is provided by QF's that produce the energy that Duke Energy, Progress, and Dominion are required to purchase under PURPA. Those avoided costs that are paid out to the QF's are recovered through the fuel rider clauses. The incremental cost, which is the compliance cost above that, that's recovered through the REPS rider. That's how the cost flows back into the customer's bill.
- Asked if you have a QF, typically they're going to have a 15 year contract for an IOU or power contract, are they getting paid the same rate through the 15 years based upon the avoided cost? Mr. Ayers says it depends on the option the QF selects. A QF can pick a variable rate, standard flat rate, levelized cost, and non-levelized cost. Most people to get financing look at a levelized long term fixed contract.
- Asked if the QF chooses the set rate, that's based upon whatever the avoided cost is that has been determined for that 2 years they enter the contract for over the 15 years? Mr. Ayers says yes, the avoided costs, at the time they enter into the contract, they can contract for that rate over the course of the contract assuming it is a fixed flat rate.



Stone

- Asked about renewable energy jobs, are you familiar with the calculation used to figure the number of actual jobs they put in? Mr. Ayers said he is not sure of the exact calculation but asked to clarify the question to see if he meant the number of jobs produced by each renewable facility that is constructive within the State?
- In response to Mr. Ayer's question, Rep. Stone said he was referring to the number of jobs throughout the State that were created through renewable energy but then there is a calculation where they come up with that number and did not know if Mr. Ayers could explain that? Mr. Ayers responded that unfortunately he could not explain it and no Public Staff member present couldn't explain it either. Rep. Hager explained that Mr. Ivan Urlaub, Executive Director of North Carolina Sustainable Energy Association would speak next and could probably answer Rep. Stone's question. Mr. Ayers explained that if Mr. Urlaub could not answer the question that he would go find the answer and present it back to the Commission.

Hager

- Asked if a spending reserve is also required with renewables when they're running? Mr. Ayers replied that they are not required.
- Commented that he knows they discussed the redundancy from the Attorney General's office to Mr. Ayer's office. Rep. Hager wanted Mr. Ayers to know that they are going to continue to speak on that and see where the redundancy is to make the process more efficient.

Rabin

- Asked about how much of the \$112.00 admin cost is tied up in people accounting for all of the regulations and all of the things that have to happen and the reports that have to be made that if we were not in this business we wouldn't have to be paying? Mr. Ayers replied that no one has tried to quantify that, so he does not have a number. Mr. Ayers explain that the base rate is an enlarged part. The investment and the capital that is made by the utility and the transmission distribution, there are various regulations and components that require components in generation distribution transmission but extrapolate that, I don't think anyone has attempted to do that.
- Commented that the base rate includes employees which would tie it into the previous question. There has got to be employee time, processing time, information technology time, and a whole bunch of other costs that would tie into the \$112.00 administrative cost. The cost and the effect it is really having on his constituency in terms of how much they pay, he would like explained.



Representative Hager recognized Mr. Ivan Urlaub, Executive Director of North Carolina Sustainable Energy Association. Mr. Urlaub thanked the Commission for inviting him to speak and presented on renewable energy providers in North Carolina. Mr. Urlaub referred members to his PowerPoint presentation in their handouts. A copy of his presentation is attached to the meeting minutes as Attachment #10. Representative Hager opened the floor and the following questions and comments were made:

Brock

- Asked about the jobs being created through Ingersoll Rand, was he counting all the jobs in Ingersoll Rand in that number? Mr. Urlaub responded that they do not count all jobs in the numbers. When they conducted their survey, they ask the firms how many of their jobs are directly related to clean energy activity only in North Carolina.
- Asked that looking at the graph of \$173 million in savings, does that include the 65% of both the federal and State tax credits and making up the difference that tax payers and rate payers pay on those two? Mr. Urlaub responded that the study done by RTI and La Capra Associates analyzed three policies together. They analyze the REPS, renewable energy tax credit, and the government requirement to reduce government state facilities and energy consumption by 30%; over what he believes is 5 years.
- Asked if it did have the extra amount of money of what was involved with the tax credits and having that not taking in the possible sunsets? Mr. Urlaub responded that they did not assume tax credit extension. From the study they gained the insight that for every dollar tax credit resulted in \$1.87 in State and local revenue.
- Asked if the La Capra study was from 2006? Mr. Urlaub replied that the Utilities Commission selected La Capra Associates in 2006; this was the 2013 RTI study. Both La Capra and RTI worked together on the study.

Catlin

- Asked if Mr. Urlaub had any specifics on what and how much is being exported? Mr. Urlaub responded that he would get more specifics as long as he does not violate the confidentiality of responding firms.
- Mentioned that in discussions today renewable energy is peaked, not steady. Asked if there has there been any thought or conversation in transferring that into potential energy like elevated water storage to use a generator so you can have constant power generation? Mr. Urlaub responded that they're starting to see this enter the market around the world. A business model is rising in the PJM Interconnect territory is coupling solar and battery storage, for example, selling into the demand response market, charging essentially the storage with solar. There are a number of ways of doing this. Cost of storage has gone down, for example, lithium ion batteries has gone from 4 years ago \$1,000/kilowatt to



\$350/kilowatt. The third highest job growth reported for 2013 is in the energy storage sector for North Carolina after manufacturing R and D is energy storage. They anticipate it will be for sale in our market, depending how it is treated in regulation and policy, later this decade.

- Asked why do you think Germany and California have done so poorly with their renewables and lost jobs? Mr. Urlaub responded that in looking at job loss/job creation, it is totally attributable to energy policy or even an inch of that energy policy being a certain resource mix. Germany was the first mover, it was clear that their economic development investment community came together and said give them a 10 year certainty timeline horizon and adopted a policy where they paid high amounts of money for their renewable energy guarantee for years into the future. When we talk about North Carolinas 15-year plan, they're completely different on all levels. We will not achieve on our REPS what Germany has done, we will achieve something less. We are taking an incremental small approach to measure along the way. We will not have a Germany or California experience.

Stone

- Commented that in Mr. Urlaub's presentation, he mentioned that solar and wind traditionally poll to the top every year. As a Representative, Rep. Stone receives several calls and has great conversations with constituents about solar and wind. Several of his constituents say they would like to go all solar and wind, in which he explains the price and the cost. Rep. Stone stated it is a popular thing to say you like solar and wind, but when you look at the cost of the actual thing it is the consumer has no clue. Constituents are under the impression the government is paying for this but in actuality the citizens are paying for it. He embraces the technology, he just wishes there was more truth in what we're actually paying and what we're actually getting so that constituents are informed. Mr. Urlaub responded that he appreciates the sentiments Rep. Stone expressed after all the presentations from today and they cannot power everything in someone's home with renewable energy. That is why they took more of an incremental approach with their EPS and it is smaller, at 12.5%, than what other states require. They needed to prove to themselves if they have the resource and at what cost will it come in, they're gaining these insights with several years of experience. Mr. Urlaub expressed he was doing his best in trying to show that to the Commission today. Mr. Urlaub said it is a worthwhile discussion to talk about cost and financing options available to consumers and various programs offered by utilities.
- Asked if for every dollar, renewable companies return \$1.87? Mr. Urlaub responded State and local combined.
- Asked why are we not opening this up to everyone because this is a great deal to receive \$1.87 for every dollar? Mr. Urlaub responded that is why he stresses that we look into our assumptions we make about the roll in cost of clean energy.



Everything over the last few years has been turned on its head in energy from natural gas, to solar, to energy efficiency, to rates, to consumer's ability to understand their bill. Now consumers can receive information on how to make their bill lower. This process is only going to be enhanced going forward. He thinks the real issue is if we have a divergence where the utility interests that they have to optimize under a regulation in policy, is it divergent to the customer's interest. We can pick at solar, we can pick at energy efficiency or something like that but we have a fundamental increase in disconnect between the utility and the customer. I think we are confounding and confusing a lot of ideas and assumptions that cost is being put on the consumer, when in reality we are enabling the utility to take advantage of what is a lower cost portfolio under how they are currently constrained. Utilities run a phenomenal business constrained by parameters of regulation and policy and we're all grateful for what our utilities do. They cannot take advantage of this in ways they might like under current parameters and constraints that are the core policy question we need to take hold with over the next few years.

Rucho

- Commented that he appreciated Mr. Urlaub's time in explaining how this process works. Clean energy, renewable energy, fossil fuels and conservation are all a part of our energy sources to produce electricity and move North Carolina forward. We definitely like the jobs to put North Carolinians back to work. Asked about the REPS on page 9 of Mr. Urlaub's presentation, if \$36.5 million was the amount of money energy companies had to pay for renewable power in 2013? Mr. Urlaub responded said the \$36.5 million was the amount of money for renewable energy certificates.
- Asked if that was what Duke, Progress, Dominion, i.e. had to spend for renewable energy. Mr. Urlaub responded that there is the avoided cost payment which is the cost the utility avoids because someone else built a generation asset, and that as Mr. Conrad noted, that cost is set by the Utilities Commission. Then there is that additional cost recovered under the REPS rider on the customer's bill.
- Asked if potentially that kilowatt hour would be higher than what normally would be produced under normal based load? Mr. Urlaub responded that for example the cost over a solar renewable energy certificate in North Carolina is almost zero. You would see that cost of the certificate there.
- Mentioned that the cost of doing business, as was mentioned earlier by Mr. Newton, it is critical that we have low cost electricity because it is a huge enhancement for creating economic growth and jobs, something were all striving for. On top of the REPS, Sen. Rucho wanted to know if the estimate he received that in 2015 about \$58.3 million of renewable credits, which is what we use to help support the renewable energy and clean energy industry, is accurate? Mr. Urlaub asked if he meant the total utilization of the tax credit in 2015? Sen. Rucho



said he is correct, therefore, you're looking at roughly \$90 million of cost to the tax payers to other businesses, how does one justify this to other businesses and to the individuals that are paying higher rates and taxes to allow this industry to continue doing business in North Carolina, which we welcome, and when do we find the break even where they can be competitive and it does not need to be subsidized anymore? Mr. Urlaub explained that he can guarantee these companies are competing with price and quality and trying to get their cost down as fast as possible. The first firm to be able to deliver into our market without utilization of the State tax credit has a competitive advantage over all other firms. That significantly expands a potential customer base. They have every incentive under their policy and they intentionally worked to design their EPS policy and tax credit policy this way over the last several years that they wanted to have enough certainty for entrepreneurs and investors to enter the market with enough competition that companies would feel significant pressure to drive the price down as fast as possible so that we could get to a break even point. That break even point can be estimated, studied, and predicted but will vary. It will vary by resource type, system size, and customer circumstance. When you place a facility on the ground, not all locations are identical. The utility scale systems will be the first to not need the incentive and the small systems that are least able, on a per installation basis; to achieve economies to scale will be the last to need the incentive.

- Asked when? Mr. Urlaub responded that it is something the Association can explore; he did not have an answer at that moment.
- Asked how he explains the higher cost which makes all of our other business uncompetitive or less competitive at the subsidization of this industry? Mr. Urlaub believed he was looking at the tax implementations, such as general funds, as well as rate impact. He refers back to slide number 10 of presentation to show the most recent study to show that is a false premise, it is not an increased cost. There are a number of things going into rates across the spectrum of activity of the utility and the clean energy industry. The graph shows if we did not have the REPS and the tax credit, our rates would be higher. He said if there was an issue with the analysis, he is available to discuss more. Analysis is available on RTI's website. The tax, he goes back to the point that every dollar forgiven, they've seen \$1.87 return to State and local government. If that have not been the case, the Association would have more concern, but it does appear right now that the market activity being enabled by the tax credit is returning that much and more into government, presumably holding other tax payers harmless.

McLaurin

- Asked as we seek high tech companies to locate in North Carolina, such as Google, what type of objectives do they set for themselves? Mr. Urlaub responded that there is a relationship with Commerce, Google, and Duke Energy for



example. The Association talks to Duke Energy about Google's requests for a green source rider, in which Duke Energy presented this to the Utilities Commission, which they approved in December. This is an example of that they allow all participants in their clean energy economy to align their interests. Duke Energy, Google, and NC Sustainable Energy Association have made a great effort to try meet in the middle with the green source rider. NC Sustainable Energy Association endorsed it after discussions with industries, for example Duke Energy and Google, now they will see what happens going forward.

Hager

- Asked on page 5 of the presentation, how many of those 18,404 Full Time Equivalents are attributable to the renewable energy portfolio just in energy generation? Mr. Urlaub responded that he can go back and look to see how much was generation ownership and operation but he could not show, for example, if a business had 10 jobs, 7 were attributable to the REPS, due to the tax credits, etc.
- Rep. Hager said in the past he knows the Association has done so in 2010 or 2011 that they had 15,000 jobs and about 12,000 were energy efficiency issues. Mr. Urlaub replied they can break down by resource but the resource happens inside and outside of the REPS.
- Asked if there is a property tax reduction on solar farms? Mr. Urlaub replied yes, under State policy there is an 80% reduction in local property tax.
- Asked if he was correct in that on the capital side there is a 35% tax credit on the State side and a 30% tax credit on the federal side? Mr. Urlaub replied yes to both but they're not additive, it's something less.
- Asked if there is any plan of paying money back to the tax payers once the solar farm starts making money? Mr. Urlaub replied that they have gone further and further in calculating what is the net fiscal impact to State and local government. So far they have the RTI study showing that every dollar forgiven, they've seen \$1.87 return to state and local government. He did not believe studies have looked at the 80% property tax reduction. If the association can have more time to crunch the numbers he would have a more precise answer.
- Asked if the La Capra study takes into account the opportunity cost of what North Carolina could have done with the \$53 million? Mr. Urlaub said no, La Capra studied and RTI studied clean energy industry activity related to that suite of policies.
- Stated that North Carolina could've invested somewhere else, for example paying teachers more or investing more in our infrastructure. Mr. Urlaub replied that the general concept that EPS allows a limited market competition where no competition was allowed before. The tax credits, with the objective to diversify resources, were dependent on three resources to power the economy. REPS are affectively going to triple, if not quadruple, our resources in our portfolio on cost effective levels.



- Asked on the chart on page 10, the diversion will happen in 2016/2018, is that a good timeframe to end the portfolio? Mr. Urlaub replied that it was an interesting question because it is predicated on the idea that the policy is netting out to cost customers more, what the evidence is showing is it is costing less.
- Asked if renewables will not need the money going forward? Mr. Urlaub replied that the current policy mix is what is enabling that reality is to unfold as depicted in the presentation. If you change the policy, you will most likely get higher rates, less employment, and fewer exports out of the industry.
- Asked without the infusion of tax dollars, referring to the above answer? Mr. Urlaub responded that you have to look comprehensively at the policy and portfolio environment; there is the tax credit, REPS, and efficiency requirement from government that yields to this result. If you change one or all of those policies, rates will go up.

Presentations related to use of alternative fuels for the State's school bus fleets

Representative Hager recognized Mr. Neal Robbins, Director of Legislative and Intergovernmental Affairs, Department of Environment and Natural Resources. Mr. Robbins presented an overview of the North Carolina Alternative Fuels Feasibility Study in House Bill 177. A copy of his presentation is attached to these minutes as Attachment #11. Representative Hager opened the floor for questions, no questions were asked.

Representative Hager recognized Secretary Bill Daughtridge, Jr., Department of Administration. Sec. Daughtridge presented on the addition of a propane fuel option to the State's school bus bidding form. A copy of Sec. Daughtridge's presentation is attached to these minutes as Attachment #12. No questions were asked of the members.

Representative Hager recognized Mr. Derek Graham, Section Chief, Transportation Services, Department of Public Instruction (DPI). Mr. Graham provided additional information on the addition of a propane fuel option to the State's school bus bidding form. Mr. Graham commented that DPI was approached by Gregory Poole Equipment Company in 2012 to study and analyze switching to propane fueled school buses. Gregory Poole Equipment had school buses being used in fleets starting in Union and Brunswick Counties. From there they moved onto Nash County and Chapel Hill/Carrboro City Schools which were just taken out of service in December to gather experience analyzing the miles per gallon, the cost, how the buses operated, fueling, etc. DPI is in the process of conducting the report, propane fueled buses are an option to LEA's as they do know the cost; between \$7,000 to \$14,000. There are not propane fueled buses currently owned in North Carolina. Results of the findings will be available once the results are compiled. Representative Hager opened the floor for questions and the following questions and comments were made:



Newton

- Asked to make sure he was correct, if the study was not completed? Mr. Graham replied that he was correct.
- Asking if the study was not complete, why was propane added as an alternative? Mr. Graham replied that DPI has a long history of testing alternative fuels going back to gasoline conversion, CNG engines, OEM/CNG engines, biodiesel, hybrid-electric engines, etc. Pursuing this study in cooperation with Gregory Poole made sense to DPI. There was no down side to including propane fueled engines into the contract in their view. It gathered additional information on the cost, no requirement to purchase the product, it is just an extra option,
- Asked why CNG was not included in the contract when Cummins in Whitakers, North Carolina is producing a CNG engine right now? Mr. Graham replied that the only CNG engine buses that are currently being manufactured are Type D, that are transit style with a flat nose. Cummins has now announced they're in production of a Type C conventional school bus. When the option is available, DPI will be interested in looking at it as an option. They have not purchased Type D buses, due to the design; they have not performed as well.

Rucho

- Asked why would you put something on a contract if you never studied to know if it is effective and efficient? Mr. Graham replied that propane fueled buses were only put out as an option. One way to find out the cost impact is to do a complete analysis is to gather those prices. Since DPI was putting out a contract at that point to add propane as an option that required no obligation to the State made sense.
- Asked about a study requested a year or so ago to evaluate the different types of energy fuel, their efficiencies, and the cost for either converting or buying new fleets which was a piece of legislation. Where is DPI with the study so that the General Assembly could have a comprehensive view of the most efficient way of delivering transportation in the school system? Mr. Graham replied that the study was referenced by Mr. Robbins through the State Energy Office. They produced a report that showed the different kinds of fuels available for school buses and there was no resounding recommendation to pursue any one fuel, so DPI continued to look at other options.
- Commented the study he referenced is Session Law 2012-186/House Bill 177, if he was not mistaken, CNG was proved to be the most cost effective way of school transportation in the study. Would like Mr. Graham to come back and explain what DPI's recommendations are for the future. Mr. Graham agreed.

Hager

- Asked knowing Charlotte is in one of the biggest non-containment areas which puts the far west of Charlotte as far as emissions testing in Rutherford County, have they looked at and coordinated with DENR in developing CNG and propane



fueled school buses in non-containment areas, is there a plan in place? Mr. Graham replied that DENR submitted DPI's activities with an EPA award program because of the history with DENR. It is not about emissions as much anymore; diesel school buses available now are extremely environmentally friendly. The discussion isn't about being environmentally friendly; it is about cost and foreign oil.

Presentation on permitting of wind energy facilities in the State

Representative Hager recognized Ms. Jennifer Mundt, Commission Analyst. Ms. Mundt provided an overview of House Bill 484/Session Law 2013-51. Ms. Mundt referred members to her handout provided in the member's packets. A copy of her handout is attached to the meeting minutes as Attachment #13. Representative Hager opened the floor and the following questions and comments were made:

Brock

- Asked about the impact on natural resources, especially with windmills killing so many birds. Windmills are primarily going down eastern North Carolina, are we bringing in information from other states because North Carolina is a little different about bird migration and bird populations? Sen. Brock just wants to make sure we protect our State's birds and have this issue be studied.

Rabin

- Asked if the permitting is done at the State level through DENR? Ms. Mundt said yes.
- What happens if local residents do not want windmills, how do they get their voice heard? Ms. Mundt explained that there are portions in the legislation she can point out that require the application and DENR to go to local governments that may be impacted by the facility. Ms. Jennifer McGinnis, Commission Counsel, wanted to point out that there is nothing in the legislation that prohibits local governments from zoning as they typically would, there is no preemption from the State.
- Asked if there is no provision for preemption, how do local residents get a voice in the approval or denial of the facility going in? Ms. McGinnis explains that whatever zoning process the local government had to begin with, which requires notices and hearings, and at the State level through the permit program in the legislation there is also notification to citizens and local governments. The residents would be able to discuss their concerns through the zoning process and government approval of the project.



Representative Hager recognized Mitch Gillespie, Assistant Secretary for Environment, DENR. Assistant Secretary Gillespie presented on the status of wind permitting process within DENR and pending projects. Assistant Secretary Gillespie referred members to his PowerPoint presentation in their handouts. A copy of Assistant Secretary Gillespie's presentation is attached to these minutes as Attachment #14. No questions were asked by the members.

USEPA's proposed greenhouse gas emissions (carbon control) standards for new and existing power plants

Representative Hager recognized Donald R. Van der Vaart, Chief, Permitting Section, Division of Air Quality, DENR. Dr. Van der Vaart presented on the recent proposal and discussion for future proposals from federal EPA on regulations on Greenhouse Gas Fossil Fuel-fired Electric Generating Units and the testimony given to the Committee on Energy and Commerce Subcommittee on Energy and Power of the United States House of Representatives. Dr. Van der Vaart also gave an update on renewable energy projects. Dr. Van der Vaart referred members to his PowerPoint presentation in their handouts. A copy of Dr. Van der Vaart's presentation is attached to these minutes as Attachment #15. Representative Hager opened the floor and the following questions and comments were made:

Hager

- Asked about intermediate based load stations Duke Energy has that is coal-fired, was Dr. Van der Vaart saying a lot of those are forced to almost operate against peaking units in the fact that they do more transient loads now or low load operation which would drive more pollution per megawatt? Dr. Van der Vaart replied theoretically that is what is happening. DENR is now looking at this, but whether it is a coal-fired unit or a gas-fired unit, operating in the transient mode is not what they're designed to do and they tend to be less efficient and more polluting.

There being no further business, the meeting adjourned at 4:09 PM.

Representative Mike Hager
Presiding

Lindsey Dowling, Committee Clerk