

**BEFORE**  
**THE PUBLIC SERVICE COMMISSION OF**  
**SOUTH CAROLINA**  
**COLUMBIA, SOUTH CAROLINA**  
**HEARING #11031**

**MAY 29, 2009**

**10:30 A.M.**

**ALLOWABLE EX PARTE BRIEFING**  
**Requested by Duke Energy Carolinas, LLC**

**Transcript of Testimony and Proceedings**  
**Volume 1 of 1**

**HEARING BEFORE:**

Elizabeth G. "Lib" Fleming, Chairman; John E. Howard, Vice Chairman; and Commissioners G. O'Neal Hamilton, David A. Wright, Randy Mitchell, Swain E. Whitfield and Mignon L. Clyburn.

Hearing Legal Advisor: Joseph Melchers, Chief Counsel

**STAFF:**

Charles L. A. Terreni, Chief Clerk/  
Administrator; Jocelyn G. Boyd, Esquire, Deputy Clerk; Josh Minges, Esquire; F. David Butler, Jr., Senior Counsel; James Spearman, Ph.D., Executive Assistant to Commissioners; Phil Riley and Doug Pratt, Advisory Staff. Missy A. Graczyk, Court Reporter.

**APPEARANCES:**

Catherine Heigel, Esquire, Representing Duke Energy Carolinas

Brett Carter, President, Duke Energy Carolinas

Jeff Lineberger, Director, Hydro Strategy and Licensing

Sam Holeman, Director, System Operations

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**PROCEEDINGS**

CHAIRMAN FLEMING: This ex parte briefing will now come to order. At this time, I'm going to ask Attorney Joseph Melchers to read about the briefing.

MR. MELCHERS: Thank you, Madam Chairman, Commissioners. We are here for an allowable ex parte briefing that the Duke Energy Carolinas, LLC has requested regarding its interest in the South Carolina versus North Carolina Catawba Wateree Apportionment Lawsuit and its critical infrastructure security issues. Thank you.

CHAIRMAN FLEMING: All right. At this time, who will be speaking on behalf of Duke Energy?

MS. HEIGEL: Good morning, Madam Chairman, Vice Chairman Howard and members of the Commission. Catherine Heigel here on behalf of Duke Energy Carolinas. With me today is the President of Duke Energy Carolinas, Mr. Brett Carter. We have Mr. Jeff Lineberger, who is our Director of Hydro Strategy and Licensing, and lastly, but not least, Mr. Sam Holeman, who is our Director of System Operations.

CHAIRMAN FLEMING: Okay, very good. Well,

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we're delighted to have you here today and looking forward to what you have to talk to us about.

MS. HEIGEL: Thank you, Madam Chairman. We do appreciate the opportunity to be here, as always. As you recall, there was a briefing that was held in March by Attorney General McMasters, and we felt it important for this Commission to understand our perspective on the South Carolina versus North Carolina Water Rights Suit and our involvement in that case. Also, we want to take this opportunity, since we had scheduled the briefing to be here for that purpose, to update you about cyber security. There's been a fair bit of media recently about issues associated with critical infrastructure protection and cyber security, so we thought this would be a good opportunity to come and talk to you about what it is we do and the issues affecting the industry in general, and what it is we at Duke do to protect our critical infrastructure. One just side note, we aren't here to request any assurance from the Commission of any action that you may take in the future in any future proceeding. We're just simply here for information sharing today. So

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with that, I will turn it over to Mr. Carter to kick it off with a discussion about the South Carolina versus North Carolina Water Rights Suit.

MR. CARTER: I just want to echo Catherine's comments. We're excited to be here, and thank you all for coming. We've got a couple of pretty hot topics today to go over, and as she mentioned, the first topic is going to be the South Carolina versus North Carolina Water Rights Lawsuit. Jeff Lineberger is going to walk through the detail sitting to my immediate right, and I just want to take a couple of minutes to just outline what we're going to be talking about today. You can see the agenda we're going to move through; quite a bit of information, fairly quickly. One of the things we're going to absolutely try to do is really just lay out the facts. It's a very emotional topic when you start discussing water. We are going to walk through exactly why we're here and what our role is in this lawsuit, what we believe our role to be in this lawsuit. And first, we want to focus on the legal complaint filed in June of 2007 by the South Carolina Attorney General's Office against the State of North Carolina. That action

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asks the Supreme Court to make a decision on what we consider to be a local matter. North Carolina is taking -- well, it says that North Carolina is taking more than its fair share of water from the Catawba Wateree River, and specifically alleges that approved interbasin water transfers, or what we refer to as IBTs, deprive South Carolina of its fair share of water during periods of severe drought. The Complaint also urges that the North Carolina law that allows interbasin water transfers is unconstitutional. Jeff is going to share a little more about those water transfers, specifically the one that sparked this suit. And then we're going to talk a little bit more about how Duke is managing the waterways.

So in the Complaint, the South Carolina Attorney General asked the Court to declare North Carolina's IBT statute unconstitutional, apportion equitably the flow from the Catawba Wateree River, or said another way, decide how much water each state should receive, and then prevent North Carolina from approving any future IBTs while this case is pending in the Supreme Court. We all anticipate that this case will take several years before the court actually

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renders a decision. It does concern us a bit that the Supreme Court has been asked to make a decision about the future use of water, of the Catawba Wateree River, particularly since a lot of the work is already taking place today in what we consider to be a very collaborative effort known as our Catawba Relicensing efforts.

We're pretty confident that the South Carolina and North Carolina respective interests have been represented by the stakeholders up and down the river basin and that those interests have already been captured in a plan outlining how the water should be shared. The Comprehensive Relicensing Agreement we refer to as the CRA incorporates over 70 different stakeholders along the basin, and Jeff's going to delve into in greater detail on that topic, but Duke Energy has asked the Supreme Court to allow our company to intervene in this case in order to protect the work that's been accomplished through the CRA. The interesting piece about the CRA is that it's been in place for decades, and representatives from the South Carolina and North Carolina municipalities and industry and local citizens all participate in the development and

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agreement that we push out, and resource agencies from each state, federal resource agencies and Duke Energy Carolinas folks who focus on our interests, and our electric customers in both states also participate.

As in every legal complaint, each party in a case must be a plaintiff or a defendant. Since the complaint filed by South Carolina Attorney General's Office risked upsetting the interests of South Carolina and North Carolina captured in the CRA, it was clear that Duke had to file as the defendant when we asked the Court to allow us to intervene. So while some would say that we've chosen sides, I want to be clear that nothing could be further from the truth. We are here promoting the CRA, which is a balanced plan, jointly developed by South Carolina and stakeholders. Two other entities representing public water systems have also filed to intervene in this case, and we have been told that the case will not proceed further until the Supreme Court decides whether Duke Energy Carolinas and the other two entities can intervene. We anticipate that the court could bring their decision on this point later in the year.

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So, I'm going turn it over to Jeff to continue our presentation, and he's going to share a little bit more about the IBTs and the Catawba Wateree CRA, and likely, next steps in the court case. We also have time for questions following Jeff's comments.

MR. LINEBERGER: Good morning, everybody. Commissioners, thank you for having us here today. We're talking about one of the most important, if not the most important, public waterway in this state, and a lot of you all are probably familiar with the Catawba Wateree Project. Certainly very important to our company and our electric customers, and I'm going to talk to you about that.

The root of this Supreme Court case is this concept of interbasin transfers of water. And basically, an interbasin transfer is when you take water from one river basin and transfer it to another river basin to use it over there and you don't return it all to the source basin. And the portion that's not returned to the source basin is a consumptive loss to that river. There are also other consumptive losses in the source river basins from the other uses, primarily human

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uses that go on in that river basin. So from the standpoint of loss of water to the river, consumption from an IBT or consumption from uses with the interbasin itself are both losses of water to that river system.

The Comprehensive Relicensing Agreement that Brett told you about takes no position whatsoever on interbasin transfers. It doesn't endorse them, and it doesn't prohibit them. The existence of IBTs is something that was a big discussion point in our relicensing stakeholder team discussions. There was concern there, particularly when you're providing needs outside a river basin from the resources within it. There's a related concern about sustainability. So, what we had to do is consider the IBTs that were there and the potential that those could grow over time in our hydro relicensing process. The CRA itself takes no position, but the modeling work that we did to get a handle on how much water might be needed in the future to provide for the public needs, it had to consider those IBTs. Really, the lightning rod IBT request that resulted in this lawsuit was one filed by, it was a combined request from the

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cities of Concord and Kannapolis in North Carolina. They are located in the Yadkin, Pee Dee River Basin, which is the next basin to the east of the Catawba Wateree. And they asked the State of North Carolina to approve a 38 million gallon per day transfer of water. There was a long process there, it was very contentious at the state level ultimately. The North Carolina Environmental Management Commission approved a 10 million gallon per day request, which was a substantial reduction, and they came to that conclusion based on the science that was provided in that public record of that lake use permit, or of that permitting process. Next slide.

There's been some changes on the regulatory scene. In 2007, North Carolina significantly changed their interbasin transfer law. It is going to be in the future, because of that law change, a lot more difficult to get any interbasin transfers approved. But there's good and bad in that. Certainly there's good in it in that they changed the process, so there's a whole lot more public input now; there's early notification to the water suppliers and local governments in the source basin and the receiving

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basin. There's opportunity certainly for public hearing there, and there are regulatory requirements now that will be part of interbasin transfer certificates that haven't been there in the past, mainly in drought management. You know, what is the requirement of the entity doing the interbasin transfer when there is a drought in the source basin. There should be a requirement there. You know, they should have to conserve water just like the other folks in that source basin should have to conserve when there's not necessarily enough water to meet all the normal needs. So, there were some really positive modifications made there. This IBT law, the law that was repealed as part of this new law, was also one of the main points of the South Carolina Attorney General's case believing that that old North Carolina law was unconstitutional. So that law doesn't apply anymore; the new law is in place.

Next slide. Okay. Familiarize you a little bit with the Catawba Wateree. You've probably seen maps similar to this before. The red boundary is not exactly the river basin boundary, but it's just there to point out where the basin

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is. The basin is inside of that. But, that is basically the backbone, the spine, for Duke Energy and the Carolinas right here. And our company started right there, right at the South Carolina state line, and we started as a hydro company in 1904. The hydro station that was there was all but washed away in the flood of 1916, but there's a newer, bigger one there now. It's called Wylie Hydro, and Lake Wylie spans the state there. This hydro project is extremely important to us, not only for the power generation or the hydro generation, but also the steam generation that I'm going to talk to you about in a second. And, as you can see, there are lots of towns nearby. This river basin, the Catawba basin, is the most densely populated basin in the Carolinas, so there are a lot of people dependent on us to manage this hydro project correctly.

Said it was the backbone for Duke, and here's some reasons why. Forty-five percent of our generating capacity in the Carolinas relies on this hydro project. There's 831 megawatts of hydro power there in 13 stations, but there's also two nuclear stations and three fossil

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stations. And you can see the pictures of those and approximately where they're located. All together, almost 9,000 megawatts counting on this water supply. Eleven interconnected reservoirs, Lake James is the most upstream, and it spans down to Lake Wateree, the most downstream of those.

Drinking water, I'm not sure way back in the early 1900's when this power complex was envisioned that folks really realized how much the communities would ultimately start to depend on the hydro project for their drinking water. Certainly, it was constructed for a reliable low cost source of the electric power, but providing that drinking water is something that we see as being extremely important to the economy and the quality of life here. Industrial water uses, there are still some there. Not quite what they used to be. Hopefully, we'll see some industrial growth in the future. Recreation, certainly years and years ago, you know, these lakes were kind of out in the country, and a lot of them still are, but a lot of folks have found the country. So recreation is an important use. We have about ten million recreation visits a year

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to these eleven reservoirs, and that certainly has an economic impact as well. The water, and the availability of it absolutely long term determines the growth potential for a region. And by building these reservoirs, it's certainly given us the ability to store some water for the times when there's not a lot of rainfall coming so we can have the kind of economic growth and quality of life that a lot of other river basins don't necessarily have. Next slide.

Okay, the relicensing process, this is probably the most significant thing I've ever been a part of, and I don't believe it's an over-statement to say that the relicensing process and coming to this Relicensing Agreement, I think it's the most significant event to happen in this river basin since the construction of Lake Norman in 1963. Reason being is because the Relicensing Agreement is a contract amongst those 70 parties that signed it, and we're requesting by that contract that the FERC give Duke a new license to operate those hydros that will basically shape the way that river is operated through the next 40 or 50 years. So this is something that is really important to this

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region. We convened 85 parties, had 160 total people, most of the parties had a primary and an alternate, and we met all the time, basically for three years. As you can see, we had over 300 public meetings. Those were extremely well attended. People were engaged. They weren't just coming to be there, they were coming to participate with the intent of trying to shape that new license. That's exactly what I would think every river basin would want. It would want a plan that was shaped by the people that depend on it. We make decisions, those teams were facilitated, Duke was a party, certainly a key party, but we had a seat at the table, and they were facilitated, and we made decisions on how to move forward by consensus, and that basically meant the objective was to get everybody to feel like they could live with it. We were largely successful with that. We didn't get quite everybody to sign the agreement, but we sure got a strong nucleus there. Science, I don't believe there is a river basin in this country that has been studied more thoroughly than the Catawba Wateree Basin has. Duke, through the construction primarily of its nuclear

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plants, did a lot of study over the years before this hydro relicensing ever started. But when it came relicensing time, that's the time when a hydro project licensee has to step back. They have to look at their project, they have to look at the impacts that it's having on the river, and they have to figure out in the future, what can you do with that hydro project to make it better fit the public needs that are there. And we spent a lot money on studies, and we tried to, we used those studies to formulate ideas around how the lake should be operated, what a recreation area should be, what the water quality improvements needed to be, and brought those ideas back to the stakeholder teams to incorporate what they wanted to into the relicensing agreement. We looked way out. The FERC licenses are for anywhere from 30 to 50 years. The relicensing agreement supports a 50-year license, and we wanted to do our best -- nobody can exactly predict the future -- but do our best to figure out what the needs would be for five decades. That's something that doesn't happen every day, and it certainly doesn't happen across an entire river basin, but it did here.

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In the end, we came to a vision, 300 plus page document that's a legal contract with 70 parties that signed it. And that contract is the vision for how we think the Catawba ought to be operated. Next slide.

Of the 70 that signed, there are a number of organizations in South Carolina: The Catawba Indian Nation, three of the departments there within the State of South Carolina, all 15 of the local government affiliated entities that participated, signed the agreement. We also had homeowner's associations, environmental groups and individual citizens from South Carolina sign. I mentioned the contract piece of this, and we filed this along with our relicensing application to the FERC in August of '06, and our entire relicensing application was written around that Relicensing Agreement. We adopted it as our licensing proposal with FERC. FERC review has been ongoing. This is the most complex, as they've told us, hydro project in the country that they've ever had to license at the FERC, and it's because of all the folks that depend on it and all the interconnective reservoirs, but they're moving along. We just recently got the

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draft Environmental Impact Statement from the  
FERC, and we have commented on that, we expect a  
final EIS to come out in November, and hope to  
have the new license by April 2010, so we're very  
much looking forward to that. We've also gotten  
water quality certifications now in North and  
South Carolina to support that relicensing  
process, and both of those are in agreement with  
the Relicensing Agreement, which is a good thing.

Just a little about what the CRA provides,  
particularly relative to water. Each of our  
lakes -- in the current license, there is no lake  
level limitation in it at all. We could draw  
those lakes down as far as we could draw them  
down with hydro stations and it wouldn't be a  
license violation. Now, it would be a  
significant problem with common sense and good  
management to do that, but the new license, if it  
agrees with the CRA, will have in it a normal  
operating range, a normal minimum elevation, a  
normal maximum elevation, normal target, that  
will give people that use the lake some  
predictability about where the lakes may be.  
Particularly at Lake Wylie, the flow releases,  
our flow releases out of Wylie Hydro Station,

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that is the flow of the Catawba River into the State of South Carolina. That's what determines how much of that water is coming to South Carolina, and we spent a lot of time looking at what those continuous flows needed to be there, and we established 1,100 cubic feet per second as the continuous flow that needed to be released from Wylie to meet all the downstream needs plus not deplete the upstream reservoir storage in times of severe drought. During wet years, though, when we had more water available than normal, we would increase that to 1,300 CFS, and that would provide, basically, some additional aquatic habitat encroachments. During droughts, we shift to this thing called a Low Inflow Protocol. It's basically just a regional plan for tightening the belt when there's not enough water to meet all the normal needs, and during those times, we would reduce our flow releases from Wylie and use more storage out of the reservoirs until hopefully it started raining again.

Storage in the reservoirs, that is our major drought management tool. We have that storage there, and we count on it. We have to have it

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because things happen like 2007, 2008, when it really gets dry. That was the driest year, '07 was the driest year on record in North Carolina in 114 years of records, and it was the fifth driest in South Carolina. For the Catawba Basin, considering North and South Carolina, it was the driest year on the record. So we had a real challenge here to manage. But because so many of the stakeholders felt good about that drought management protocol we developed in the Relicensing Agreement, we actually implemented it in August of '06, which was early. The agreement didn't require its implementation until after the new license was issued, but it was getting dry, so we implemented the thing to see if it worked, and I can tell you, it worked like a charm, and I'm very glad that we had it in place, because little did we know that a month after we signed the Relicensing Agreement, we would start the new drought of record that would be significantly worse than anything in reported history here.

We managed through that, kept all the water intakes covered, kept some water flowing in the rivers. We didn't have fish kills, we didn't have the major unrecoverable environmental

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impacts. This thing worked because people were bought into it. Water intake owners, I really couldn't say enough about those folks. They have risen to the occasion here, and are cooperating better than I ever could have imagined in this. The reason being is, they recognize we all depend on that water resource that's there, it's a shared resource with shared responsibility to manage it.

We have a Drought Management Advisory Group that those folks are on, plus Duke plus resource agencies that's like the Damage Control Team for dealing with the drought. But this Water Management Group that's mentioned there is the new thing. It's a 501(c)(3) non-profit corporation that Duke Energy and 17 other public water suppliers in this basin are participating on. We all pay dues every year. In total, the dues add up to about \$540,000. We then turn those dues into projects that protect that water quantity and quality for the long term. And we're also now, anytime, per our FERC license, if you want to put a water intake into one of these eleven reservoirs, there's a lake use permitting process you have to go through, and if it's a

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significant water intake being anything bigger than one million gallons a day, Duke actually has to get the FERC's specific approval to allow that intake. What we've started doing since this relicensing process and now that we have the Water Management Group, anybody that wants to do that, part of their consultation process is, they have to come to that WMG, and they have to explain why it is they need the water intake, why it is they need that much, what alternatives did they look at, and how are they going to fit in and comply with the drought protocols that are there. So, it really gives everybody early notice and time to ask the right questions and apply the right pressure so that people treat this resource with the respect it needs to be treated with. The CRA, it is the apportionment, the equitable apportionment as agreed to by 70 parties over a three-year period, and there is a ton of science behind that. We believe it's the right answer, and particularly because it recognizes, the resource there is a public trust resource that's vitally important to both states, everybody that lives in those states and depends on it, and we all have a responsibility to manage

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it.

And when it comes to why are we in the, why are we trying to intervene in the court case, I think from my words, it's probably obvious to you, I'm protective of that Relicensing Agreement that we negotiated, and so is our company, and so are the parties to that Relicensing Agreement. The Supreme Court decision, when it's made, could in fact upset that equitable balance that we agreed to in the Relicensing Agreement. If, for instance, the Supreme Court decided that the flows that we are providing into South Carolina are just wrong and they have to be higher, well, you could do that for a period of time. If we would have had substantially higher flows to deal with in 2007, I can assure you that we would have uncovered water intakes in this reservoir system, and that is the wrong answer for this region. So we're very concerned about the impacts that a Supreme Court decision could have. That storage is the bank account, and it's hard to understand 11 reservoirs working together, but it helps me, anyway, to think of it as your personal finances. The storage is the bank account, the stream flow is your income. When you're not having much

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income, you're going to rely on that bank account. You're going to draw from that thing, and you hope that your income comes back up before the bank account runs dry. That's the way this storage works. It's really not a lot more difficult than that. The difficulty is reducing the outflow when the inflow, which is not in our control, you know, it rains when nature and the good Lord decides it does, but we catch it in the reservoirs and store it for when it doesn't rain. Such a situation, as I mentioned there, could certainly impact long term growth potential in both states. If you can't rely on the storage anymore, you have a less reliable water supply, absolutely impacts economic growth. And the concern from a contractual standpoint is, when we have Relicensing Agreement parties, that because of a Supreme Court change, their bargain for benefits have gone away, and now they get to withdraw from the agreement, and we would just have a domino effect where a lot of parties would withdraw and then the other things that are in the Relicensing Agreement may not ever actually happen.

The real question is, is this something the

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Supreme Court needs to decide, or is it better off decided by local people that depend on the resource. I think you know where our company is. We believe the local people have decided, and that's where the decision should stay.

Next steps, Supreme Court cases, who knows when it will be over. Certainly, it will take years, we expect. Special Master has been assigned, and we want to intervene, we filed to intervene. We believe our intervention would not increase the cost on South Carolina. In fact, it would probably lower the cost, because the more parties that are there, the more sharing of the cost. October, the Court will probably hear the arguments, and by the end of the year, decide if we can intervene. And that is just step one of a very lengthy process. Thanks.

Questions for me?

COMMISSIONER HAMILTON: Madam Chair, I have a question.

CHAIRMAN FLEMING: Yes, Commissioner Hamilton.

COMMISSIONER HAMILTON: Mr. Lineberger, how are you today, sir?

MR. LINEBERGER: Just fine, Commissioner

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Hamilton.

COMMISSIONER HAMILTON: Very informed discussion. I appreciate that. Couple of questions I have. What, on your reservoir storage, how much capacity -- I don't know if that's rated in days or -- how do you rate it, and how much is it?

MR. LINEBERGER: We rate it acre feet, which is a volume calculation. There's 737,000-acre feet of usable storage in total in those eleven reservoirs, but in gallons, that's 240 billion gallons of water.

COMMISSIONER HAMILTON: So that would give you an extended period of usage in any drought?

MR. LINEBERGER: Yes. Yes, it would. It certainly depends on how fast you're releasing it, but yes, sir, it would.

COMMISSIONER HAMILTON: How much did you have to release, or how low did your reservoirs get during the major drought that we've just completed?

MR. LINEBERGER: We took all the lakes down to their limiting reservoir elevation. In other words, if we went any further, we would be turning off somebody's water intake, and it might

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have been a power plant, or it might have been a public water system. The one exception there is Lake James, the most upstream. It doesn't have any water intakes on it. The only intake on it is our hydro station, and we can pull that lake down 39 feet before we have to turn the hydro station off. And we, in December of '07, we got down a little over 13 feet from full pump, so we had a ways to go on that. I will tell you, though, if you think back to that '07 drought, you heard about Atlanta, you heard about Raleigh, you heard about Greensboro, how many days they had left. It is very hard to determine that number of days for eleven pockets. Those folks were doing it based on one. We were trying to do it based on eleven. But we used our experience and our models, and at one point there, we were projecting that within four to five weeks, we could be at Stage 4, which was the most severe stage of our drought protocol. Now, that wouldn't have uncovered an intake, but Stage 4 requires emergency water use restrictions, which is not a place you want the region to be. So, it was looking bad. We were losing two to three percent of the storage per week in late '07.

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COMMISSIONER HAMILTON: Does the study group have any recommendations for any additional storage? Is that something that some of, maybe not Duke, but some of the municipalities are thinking about?

MR. LINEBERGER: I'm glad you brought that up. The Water Management Group is actually looking at that. We've got a five-year rolling projects list, and one of those, we're in Phase I of that, but it's to evaluate just how much additional storage would you have to have to make a significant difference in terms of the safe yield of the total system. So that WMG is looking at that, and they would be considering a new reservoir. There's another thing to think about here too, though. Part of what the Water Management Group is also doing is looking at those limiting water intakes on those reservoirs, see if there's a way they can be redesigned, they can be combined with another one, they can be modified, so that the lake can be drawn down further and still not impact the intake. In a way, you would be getting additional lake storage out of the lakes you already have, and you wouldn't have to have all the additional expense

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and environmental impacts, people impacts, land impacts of building a new reservoir.

COMMISSIONER HAMILTON: Who is the Management Group, Water Management Group? Who does that consist of?

MR. LINEBERGER: Duke Energy, City of Morganton, Hickory, Lenoir, Granite Falls, Valdese, Statesville, Lincoln County, Gastonia, Mt. Holly, Rock Hill, the Catawba River Water Plant, Camden, Lugoff, Chester Metropolitan District. So there's Duke and 17 public water suppliers there.

COMMISSIONER HAMILTON: So you've got representation from South Carolina, but if it's a voting strength that's in North Carolina's favor, how is that handled?

MR. LINEBERGER: Well, that group tries to reach consensus as well, which means everybody can live with it, but per our bylaws, we have some decisions that are simple majority, some that are super majority, and some that do require that consensus. So it depends on the decision. We haven't, to this point, seen a lot of very difficult decisions that one particular area is all for and another area is all against. We've

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been able, except for one vote that we had on a contractor, so far all of our decisions have been unanimous.

COMMISSIONER HAMILTON: Okay. Why are the Natural Resources Department of the two states, are they involved in this Water Management Group?

MR. LINEBERGER: They're not on the Water Management Group. They are involved in the Drought Management Group, the Crisis Management Group. The negotiated conditions on the Water Management Group was, you had to have a water intake that relied on the reservoir system, and you had to be willing to pay the dues. And the state agencies didn't--

COMMISSIONER HAMILTON: Couldn't get the money -- we understand that.

MR. LINEBERGER: Yes, sir.

COMMISSIONER HAMILTON: That's very good. Tell me about economic development for new industrial users that would need to be on this water basin. Does this group have some influence as to what and how this could come about?

MR. LINEBERGER: The group certainly has some influence. Being a 501(c)(3) though, we have to be very careful about what kinds of

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positions we take as the Water Management Group. The Relicensing Agreement though, planned for growth. We did a study called Water Supply Study where we worked with all those individual members of the Water Management Group and did projections for their system for 50 years, combined all those together and said, here is not only how much, but where we think the additional demands are going to be and plugged that into our water quantity models to see if we thought there would be enough water to support that kind of growth.

COMMISSIONER HAMILTON: Thank you, Mr. Lineberger, for a very informative report.

MR. LINEBERGER: Thank you.

CHAIRMAN FLEMING: Any other questions? Commissioner Mitchell?

COMMISSIONER MITCHELL: Good to have you with us, Mr. Lineberger. We appreciate it, very informative, and all of Duke, we're glad to have you with us.

My first question, is there any conflict between the interests of Duke's North Carolina operations and Duke's South Carolina operations? Have you experienced that? Are there any conflicts that your group, that have arisen

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there?

MR. LINEBERGER: No, sir.

COMMISSIONER MITCHELL: None whatsoever?

MR. LINEBERGER: None whatsoever. And this relicensing effort really solidified that. We have, Duke, for 100 years, has operated this project as a system regardless of boundaries, and when we were in that negotiation with those other folks, they really took this on as a regional effort and not a oneupsman kind of thing, so I was really pleased with that.

COMMISSIONER MITCHELL: The other question I have is about the IBT, the Interbasin Transfer Certificates. Let's suppose that you have a certificate that's been granted in North Carolina or South Carolina, and that flow doesn't need to be the same, suppose some industries have left. What happens then? Who has the right to go back and, as I believe Commissioner Hamilton brought up, any new resources as far as new development, how does that work?

MR. LINEBERGER: Are you talking about basically the reapportionment of some water that at one time was granted under an IBT but the use is gone?

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COMMISSIONER MITCHELL: Absolutely. That's what I'm asking.

MR. LINEBERGER: Yeah, that would be something in North Carolina that the North Carolina Environmental Management Commission could take up, and I believe that that legislative change that occurred in August of '07 accounted for that. You have to do annual reporting of how much water you're actually transferring versus how much you were permitted for, and if you're not, over time, using what you got permitted for, you may have your approved transfer reduced. So then that is, in theory, water that's available for somebody else's use. You can also, obviously, buy a water system or an industrial outfit and buy their certificate basically.

COMMISSIONER MITCHELL: All right. Are there any other utilities in South Carolina involved in this process that you're mentioning as far as being part of this Committee?

MR. LINEBERGER: Of the Water Management Group?

COMMISSIONER MITCHELL: Right. You named a lot of them, and I didn't particularly hear any.

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Are they?

MR. LINEBERGER: Yes. The Catawba River Water Treatment Plant is a, it's a Special Use District that's owned jointly by Lancaster Water and Sewer District in Lancaster County, and by Union County, North Carolina. And they are on the Water Management Group, and their representative, Mike Bailes, is also the At Large Director on the Board of Directors for WMG. The City of Rock Hill is on the Water Management Group, and the cities of Camden and the Lugoff Elgin Water Authority are on that. Also the Chester Metropolitan District in Chester County, another Special Use District, is on the Water Management Group. And those are all of the large water intakes in South Carolina that depend on the storage in the hydro projects, so they're all there.

COMMISSIONER MITCHELL: Good. Thank you. That was very informed.

CHAIRMAN FLEMING: Yes, Commissioner Whitfield.

COMMISSIONER WHITFIELD: Thank you, Madam Chairman.

Good morning, Mr. Lineberger.

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MR. LINEBERGER: Good morning.

COMMISSIONER WHITFIELD: Thank you for that informative report. I want to follow up a little bit on a question that Commissioner Hamilton had addressed to you about economic development and potential economic development on the lake, and I believe you answered his question in that regard, but I saw something in the last week or two, an article concerning your Comprehensive Relicensing Agreement, and I can't remember exactly where I saw it or what it was, but it had to do with something about you all may have to purchase back some of the, I think I read 100 miles of shoreline.

And anyway, could you expand a little bit, or maybe tell us a little bit about what that was about and where that's headed.

MR. LINEBERGER: Sure. I think what you're referring to is the Draft Environmental Impact Statement that FERC issued. It had a lot of recommendations in it. Most of those were consistent with our Relicensing Agreement, but there were a few that weren't, and what you're talking about is one that was not consistent with that agreement. In that draft IES, they are

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suggesting that we should buy back a 50-foot wide horizontal strip around the entire project, and you're talking about lakefront property, and there's 1,700 miles of shoreline, and a lot of that shoreline has houses on it.

COMMISSIONER WHITFIELD: I believe I saw a number, something like two billion dollars it would cost; does that sound right?

MR. LINEBERGER: Yes, sir, that's the number. That's Duke's number, but it's our estimate, and it's realistic of what that would cost. And we're in opposition of that, obviously. We have a solid shoreline management program. What that basically is is a, if that came to be, and we had to do that as part of the new federal license, that's basically the federal government saying they need to be in the zoning business on that 50-foot strip around those reservoirs. And we don't believe that's so. We don't believe our company should be in the zoning business of private property. Certainly it would be a cost impact to us and to our electric customers, because we have interacted with all of those local governments that have the building permit programs and the local zoning authority,

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we're coordinated with them. We're not going to issue dock permits in the lake part that we control for a piece of property they can't ever have a house on it per the local zoning requirements. And we're actually, as part of the Relicensing Agreement, signing formal Memorandums of Agreement with all those local entities that will put down on paper how we do this coordination that we've been doing for years. We're just going to formalize it now. So that's one of the things we feel very strongly is unnecessary. It's not a requirement yet by the FERC. That draft EIS just says here's what we're thinking about. We have commented heavily on that, and we hope in the final EIS, the FERC staff will consider the record that's being created for this public process. The record does not support that recommendation. So we hope the FEIS, the final document, will not include that in it.

COMMISSIONER WHITFIELD: Thank you, Mr. Lineberger.

CHAIRMAN FLEMING: Commissioner Clyburn?

COMMISSIONER CLYBURN: I wanted to ask about, you mentioned the stakeholders, in terms

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of coming to consensus as it relates, in terms of relicensing process, but you said consensus. You did not say that it was a hundred percent unanimous. Can you give me a feel, if it's not too troublesome for you, some of the pushback that you might have gotten from some of the parties? What were the points that some of the, that did not bring that to 100 percent?

MR. LINEBERGER: Some of the folks, basically, there were 15 parties that were eligible to sign the Relicensing Agreement but chose not to. And they had, those folks had a lot of varied reasons for why they chose not to sign. Most of them actually shared what those reasons were. There were a few of them that didn't say why they didn't sign, they just chose not to. But some of the reasons given were, you know, these lakes store water so, and certain times of the season and over certain times of years, the flow in the river will be greater than or less than what natural flow would have been without the dams there. Some of the folks that participated in what's called Run of River Operation, which basically means, in the FERC's world, at any instantaneous time, whatever's

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coming into that lake has to be leaving that lake. So it takes away the entire advantage of having a lake in the first place. You build a lake to store water, and some of those folks wanted the Run of River operation, which would have been made it much more difficult, not only to run the steam plants and industries and water systems that depend on it now, but certainly to grow. We had to have that storage. So the people that really felt like that was their marquee issue, they couldn't agree with the Relicensing Agreement. Some other things, the point that Commissioner Whitfield brought up about the shoreline buffer, that was the marquee issue for some folks. They really wanted Duke to have to do that. And that's not part of the agreement, so they felt like they couldn't sign.

I'm trying to think of others that were shared -- oh, one that was fairly unique, the South Carolina Department of Health and Environmental Control participated throughout the stakeholder team process, participated on the study teams, they were very active, but they felt like, because they had to ultimately issue a 401 Water Quality Certification on the project, that

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because of their unique role, they just could not sign this Relicensing Agreement, although we built into the agreement plenty of outs for local government entities to sign the agreement but still reserve all their statutory rights and responsibilities. But they felt like they couldn't sign, so they didn't sign.

COMMISSIONER CLYBURN: I was going to ask, that's a perfect segue, I was going to ask you, out of those fifteen, how many of those were Palmetto State entities?

MR. LINEBERGER: South Carolina DHEC which I mentioned, the Coastal Conservation League was one of those. Some of them are, their office is located in South Carolina, but I wouldn't necessarily call them a South Carolina entity, such as American Rivers. Their office is here in Columbia, but they're a nationwide organization. There were some private citizens, some of those that lived along reservoirs. I'm trying to think if there were any, there were a couple of homeowners on Lake Wateree that did not sign, although both of the lake-wide homeowner associations down there did sign the agreement. I'm trying to remember -- the Catawba River

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Keeper did not sign the agreement, and that organization is North and South Carolina, it's throughout those.

COMMISSIONER CLYBURN: My last question is based on, you mentioned the new North Carolina IBT law, I'm wondering -- that has been in effect for just shy of two years -- have all of the, are all the appeals, everything is exhausted as it relates to that? That is done?

MR. LINEBERGER: Yes, ma'am.

COMMISSIONER CLYBURN: I'm wondering, you made mention that a couple of things that I wrote down, it's more difficult to get an IBT approved because of that, and that you thought that, I quote, a more meaningful opportunity for South Carolina and South Carolinians, or South Carolina and others to participate in any of the future application process. Can you give me a feel how South Carolina, in terms of our leadership, what do they feel about the new law? Do they share your enthusiasm as it relates to--

MR. LINEBERGER: I'm not sure they do. I haven't heard one way or the other from the key folks in South Carolina how pleased or not they are with that new law. I would think that

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anybody, though, that has a concern about interbasin transfers should at least be somewhat pleased with that law, because it has so much more public process in it now, so much more opportunity.

COMMISSIONER CLYBURN: Thank you, and thank you, Madam Chair.

CHAIRMAN FLEMING: Are there any other questions?

I wanted to go back to those fifteen entities that didn't sign. I know you mentioned a number of them. I believe there's another investor-owned utility on the Catawba River in South Carolina. Were they a part of this group?

MR. LINEBERGER: Yes, Madam Chairman, they were.

CHAIRMAN FLEMING: Were they one of those that did not--

MR. LINEBERGER: They signed the agreement.

CHAIRMAN FLEMING: They did sign it?

MR. LINEBERGER: Yes, ma'am. They signed the agreement. They have the Wateree Steam Station, which is about 72 miles downstream of our last dam, Lake Wateree, but the flow regimes that we're providing protect their resource; they

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signed. International Paper also, which is located down in that Eastover area, they participated and signed.

CHAIRMAN FLEMING: Okay. And when the Attorney General, I believe, said that there were allegations that South Carolina concerns were stonewalled by the Environmental Management Commission in North Carolina, can you shed a little light on that?

MR. LINEBERGER: I believe what he's referring to is the concerns that South Carolina expressed to North Carolina to the North Carolina Attorney General, I'm not sure if they expressed them directly to the EMC in North Carolina, but it was about the Concord Kannapolis Interbasin Transfer Certification, when that thing was still being evaluated by the North Carolina Department of Environment and Natural Resources, prior to it going to the EMC for a decision, I think he expressed a lot of concern that South Carolina wasn't being, the interests in South Carolina weren't being considered on the same level as North Carolina to the Attorney General. But that whole IBT process, permitting process, that's not Duke's. That's the State of North Carolina's

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process.

CHAIRMAN FLEMING: Right. I understand that, but with this Relicensing Agreement and the group that you've put together, it sounds like it would have some input into that.

MR. LINEBERGER: Yes. Here's how it would happen if a new IBT was proposed to withdraw water from of these eleven reservoirs that this Catawba Wateree Project is composed of. If they were going to withdraw that water and put a water intake in our lake to do it, they would have to go through our Lake Use Permitting Process. Consultation with a bunch of local governments, state agencies, and cultural resource agencies, the Catawba Indian Nation, all of that would have to occur, but in that process, they would also have to come to that Water Management Group and explain why they needed that interbasin transfer, why they needed that water intake in the lake, justify the public need for it, explain what the options were that they looked at that would be less impacting to the Catawba, and answer questions of the members.

Now, the Water Management Group itself would not file comments in that Lake Use Permit, but

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the individual members would. Those individual members, it's a convenient forum to come basically answer to the other folks that your use might impact why you really need it. And then those individual governments and Duke that are members of the Water Management Group could file comments on that Lake Use Permit and the Interbasin Transfer Certificate that they would have to get from the state. So no IBTs in the future, no way are they going to sneak up on anyone, and the process is going to be lengthy, and you're going to have to do your homework, and you're going to have to know that's the right reason they have an interbasin transfer in North Carolina. There are interbasin transfers in South Carolina as well, and really, the new law in North Carolina is much more heavy on the input and process than the law is in South Carolina.

CHAIRMAN FLEMING: Okay. And I wanted to go back to this FERC suggestion, I guess we would call it, that you, I thought it was undeveloped land that they had wanted you to purchase?

MR. LINEBERGER: Well, it depends on how you read their draft Environmental Impact Statement. They mentioned those same comments in two or

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three places, and those were one of the sets of comments that they really had some quality control issues with. They don't read the same from page to page, but it's talking about the same thing. So there's some cleanup work the FERC needs to do with their document in that case and others. Even if it was just the undeveloped pieces though, you're still talking about hundreds of miles of shoreline property that they're not making any more of.

CHAIRMAN FLEMING: And could you clarify again why they made this request?

MR. LINEBERGER: There were comments in the earlier stage of the FERC relicensing process that were made by parties that didn't sign the Relicensing Agreement that just suggested, well, there needs to be a buffer here because there are shoreline buffers at a lot of other projects in the country. So it was kind of a, there just should be, rather than well, where is the real benefit of doing that, and does the benefit outweigh the cost. And that's where we are. The benefit of doing that on this project does not outweigh that cost.

CHAIRMAN FLEMING: Well, it certainly seems

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like, I know we've heard about this group getting together for the Relicensing Agreement, and I commend you all for being very involved in bringing so many people together to build consensus for that.

MR. LINEBERGER: Thank you very much.

CHAIRMAN FLEMING: This has been very informative.

Are there any other questions?

(No response.)

If not, thank you once again for this information.

MR. LINEBERGER: I've got some brochures here. They give you a little more detail about what's in the Relicensing Agreement itself. There's also a sheet in the back that tells you about the importance of that forgotten generation source, hydro power, to the Carolinas. And there's also a lake by lake sheet if you have an interest in a particular lake that says what will be new and better for that lake because of the new Relicensing Agreement.

Thank you again. Thank you very much for listening to me today and listening to me go on, but this is something that's very important to

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our company and the region, and I'm going to turn it back to Brett now.

MR. CARTER: Thank you. Great questions, and as I said, we're going to hit the facts, we were just going to go over the facts. Again, it's a very emotional conversation.

We're going to move quickly to a discussion on cyber security. One of the things that I wanted to pass around to you was, just to kind of set the stage is, it's actually a pen. It's a pen that Duke purchased, and it's just an example of how prevalent the technology really has become. This particular pen actually has a screw cap on it, and underneath, it has a USB port that plugs into a computer, and it's a hard drive. And one of the topics on this particular piece is information security.

Over the past ten years, obviously, cyber security has grown in prominence and significance, in our industry especially, with the facilities that are supporting the grid. Obviously, the media has gotten ahold of this, and the general public is very interested as well. We've been at this for a very long time, Duke Energy, in protecting data. Today, we

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wanted to review the history of the control systems and cyber security. We're going to talk a little bit about the current state of the control processes and the control systems, the change drivers that have impacted control systems today. It's gone through quite a metamorphosis as our systems have become a lot more integrated. Our Duke Energy strategy for managing cyber security and moving forward, basically the central message is that Duke Energy has been at this and will continue to be committed to protecting our critical assets in the interests of our customers and shareholders. And Sam Holeman's here to kind of walk us through presentation on cyber security, and we'll have time for questions after Sam covers that.

MR. HOLEMAN: Thank you, Brett. Good morning, Madam Chairman and fellow Commissioners. We appreciate this opportunity.

We would like to talk a little bit about an historical perspective on control systems and on cyber security. If you look at the systems we're talking about, they are typically associated with control rooms in generation plants in the current state and looking back into the 80's and the 90's

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and the control centers associated with centralized control operations. You're talking about control room operators that had typically in the past worked in generation stations, and system operators who work in these centralized control centers. And if you look at it from a historical perspective, going back to the 80's and the 90's, these systems were very isolated. They were very insular in their approach. They were based on proprietary software and hardware. They were built around a concept of self-containment. And in all that built in to the reality at the time, there was very little connectivity, there was very little interoperability, and there were significant levels of manual processes versus automated processes. And because of this insular kind of self-contained approach and design, the risk of cyber and physical attacks were limited. If you look at the picture here, kind of our version of a Maytag repairman, this security guard was typical of the way we approach physical security in the 80's and 90's, because that was all you needed. The computer rooms were typically right next door to the control center or the control

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room, there was very limited, if any, remote access built around these processes in the 80's and the 90's. If you needed to come in and do work, or if you were in the control room yourself as an operator, you had to be there. There was very limited remote access. You had to be there to log in. And so typically, both the cyber and the physical security approach were pretty much guards or limited card access because of the insular and isolated nature of these systems. And so, that was the historical perspective from the 80's and 90's.

Now, as you transition to the current state -- and I think, Catherine, you can kind of click in -- as you transition to the current state, and this graphic here more illustrates from a functional perspective, we have had significant change. From a functional perspective in the 80's and 90's, pretty much the focus was on a singular function that was control area operations. Recently, NERC has delved into a more granular approach to functional assignment. And, because of the nature of the markets and the operation of the system, we are much more involved in interoperability,

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connectivity and real time exchange of information. In the past, our exchange of information was pretty much limited to our neighboring utility companies, and it was typically over infrastructure that was owned and operated by that company, meters included, Telecom included, and it was a lot of phone-based communication that was also on dedicated, company owned and controlled assets.

In today's world, we're much more networked. We're much more about exchanging information in the real time; that's been driven by the needs of the market and the needs of the system. And so, if you look at this graphic here, Duke and the Carolinas performs one of several functions. We're a balancing authority, we're a reliability coordinator, we're a transmission operator, we're a generation operator, we're an interchange authority. All of these things in the current state have specific performance expectations and specific compliance requirements. And so, the world we operate in today is much more built around connectivity, there's much more automation built within the processes, and there's a much more focussed use of commercial software. So

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we've gone from a proprietary world and insular world, a self-contained world, to a world where we're much more connected. There's much more of an emphasis on redundancy and backup capability than there was in the past, and we're much more tied to each other. It is a much more complex world.

Now, all of the benefits of connectivity, of realtime data exchange, of the ability to be nimble and quick in the way you operate the system, along with that comes an increased exposure to cyber and physical threats. And I think you've seen in the media, there's been a lot of attention paid to that, and that kind of formed the genesis of the development of cyber security type standards and compliance expectations.

There's also been some very significant external drivers that have impacted not only our country, the world, but certainly the utility industry and the electric sector, the first being approximately ten years ago, and that was the Y2K event. The transition at Y2K was an example of how we could collectively work together to successfully manage this. It did introduce into

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the public consciousness, I believe, this concept of critical infrastructure of cyber and physical security and the idea that there are a lot of us that depend on these critical infrastructures.

Now, that was a positive experience. We were able to manage through that, both in the prep work and the actual implementation and in the followup work. That was quickly followed up with the events of 9/11, very significant consequences to our country and the world, again hammering home that point of critical infrastructure and the importance of protecting that critical infrastructure. That was followed up, and we don't have it on here, but that was followed up with the events of August of 2003, the Northeast blackout. All three of these events were broad-based, very significant events, that really hammered home a concept that those in other industries have had for a long time, and that is, to a certain degree when it comes to the critical infrastructure around the electrical services, we are hostages of each other.

In the nuclear industry and the airline industry, there's a recognition that a weakness or a perceived weakness in any one of us is a

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weakness or a perceived weakness in all of us. And so, we're kind of collectively trying to manage this risk. In addition to that, you all have seen in the media various reports of viruses and hackers getting into other industry systems and creating some degree of havoc. You've also seen in the press recently issues of identity theft and confidential information being compromised. So that's the reality of the world we live in, and we do live, as Brett showed you, with the USB port in the pen, we do live in a world where speed, where connectivity has almost become part of our culture.

Because of these incidents and because of the media attention, that has driven legislative and regulatory changes. If you look at the world we operate in now, you've got the Department of Homeland Security that is obviously focused on National Infrastructure Protection. We're engaged in activities there. You've got the Nuclear Regulatory Commission, who's obviously focused on the nuclear assets and public safety there. In our world, in the operations world, you've got FERC, Federal Energy Regulatory Commission, who has established the Electric

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Reliability Organization, there's NERC, North American Electric Reliability Corporation, and their local enforcement entity is the Regional Reliability Organization, which is the SERC Reliability Corporation.

So we've gone from a compliance regime in the 80's and 90's that was built upon common peer pressure and kind of community support to doing the right thing to a compliance regime today that is very much built on structure. You've got FERC directing NERC who puts the compliance and enforcement responsibility locally to SERC, and in the cross-hairs of that is the industry of which Duke Energy is a part of. As I mentioned before, we are a reliability coordinator, we are a balancing authority, we are a transmission operator, we operate generation, we own and operate generation and transmission, all of those have growing and expanding specific requirements around performance, and specific requirements around compliance. So it's very much a changing world for the electric sector.

NERC and its response to a lot of these events going back all the way to Y2K, 9/11 and blackout, the concept of critical infrastructure

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protection standards kind of evolved over the last ten years. And these CIP standards, as they're referred to in the industry, are out there now. And if you look at what they're built around, they're built around the application to control center substations and generation plants. And we'll talk in a minute about the phased in approach to that. They were FERC enforceable, we are already in our compliance regime where audits are taking place, both regularly scheduled and spot audits, and the reality of it is, since June of 2007, non-compliance will result in monetary penalties. So you've got mandatory standards in place with monetary penalties for noncompliance.

Now, the nature of these CIP requirements are around the identification of critical assets. That's personnel screening and training -- and this is a big issue; this is the issue of trying to make sure that the people that have access, that need access to do their jobs, are allowed to do their jobs. But the people that don't need access or are ill-intended, who are trying to make unofficial, unauthorized access are stopped. So that's a major training effort for a large population of people.

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Access control, same thing, 24 by 7 focus on allowing those that need access in, preventing those that don't from getting in. You've got Incident Management and Disaster Recovery. Disaster Recovery and Incident Management are all about redundancy, the ability to withstand the unforeseen contingency. The compliance timeline for the CIP standards, we began a phase-in approach in 2006. This will complete in 2010 under the current formation of the standards. Control centers started in '09. This will expand to bulk electric system substations and generation plants in 2010.

The point of the CIP standards is that they have just begun, we're in the beginning phases of implementation now, we're actually, they're implemented now. And the anticipation is, these will expand from a population of control centers that are centralized across the country to bulk electric system substations and at generation stations over the next couple of years. One of the more interesting pieces of this is the identification of critical assets. And that's an evolving focus. We're just in the beginning stages of it, and it typically includes, based on

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the standard, things like control centers and backup control centers. And this is that concept of being prepared, doing your job in the current state, but being ready, positioning yourself for what might happen, the ability to go to a backup center, the ability to go to backup procedures. It also would include transmission substations and generation resources that support the reliable operation of the bulk electric system. That could possibly include Blackstar units that help you respond to system restoration, which is the third point, and then finally, those system facilities that are critical to automatic load shedding.

The compliance effort in its current state is large, and it's significant, and the anticipation of the industry is that it will expand as we move forward. And the implementation, this is an interesting point, generally in the area of skills set that are available to us, this is a relatively new skills set, this concept of cyber and physical security and being able to position yourself against what might happen. It's in high demand, and that's going to be an area as we move forward to make

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sure we have the right people to help us manage this challenging situation, because the fact of the matter is, the people that are trying to cause harm are very adaptable, and they're very bright. So the industry will have to stay ahead of those folks to prevent these situations from happening.

What is the Duke focus here? And as Brett said, we've been about this for as long as I've been employed at Duke. Granted, in the 80's and the 90's, it was a simpler world, it was a less exposed world, but we've always been focused on protecting the assets and the interests of our customers and our shareholders. What we're doing, and we've been doing it, we're trying to weave into every aspect of our operation, this concept of cyber security and physical security, asking those questions like do you need access to this facility, have you been cleared, have you had your training, have you had your screening, kind of developing a culture of compliance focus around cyber and physical security. We are very engaged with industry activities and collaborative efforts. We're very engaged in trying to find out what other people are doing.

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If they've got a better mouse trap, we at least want to consider that mousetrap for implementation in the Carolinas at Duke. We are very actively engaged, seems like almost in the realtime and every day, with making sure our tools and our technicians, our employees and our teammates understand where they're at, understand what's expected of them, and are aware and alert to their situations around them.

A lot of times, cyber security and physical security is a lot like safety. You need to be situationally aware to what's around you. And that's another term that we use a lot in operations, situational awareness. It also applies to other industries. It applies to the airline industry, it applies to the nuclear industry, it applies to the military. And in our world, it kind of extends to, you need to understand where you've been, you need to know where you're at, and then you need to position yourself to be able to withstand the unexpected. And historically, that's been about, in the operations world, equipment, systems, flows, things like that. In today's world, what we're finding is that perspective is expanding to cyber

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security and physical security. So as we grow with it, we will continue to focus on that. We will continue to move forward, and then obviously, staying ahead and staying up-to-date on potential threats and security risk as they develop from a national perspective and from an international perspective.

One interesting concept that we deploy a lot, not only in physical and cyber security, but even in operations, and it's used in a lot of other industries, especially, and from a military perspective, is this "defense in depth" approach. And there's a lot of technical methodologies and equipment used to accomplish this, but it involves intrusion detection, multiple firewalls, and we can go on down that list there without getting into a lot of details, but I'll show you one thing that is commonplace at Duke, and this is one of these FOB things. Found out on the internet that FOB really doesn't stand for anything. It's an acronym that goes back to the 1800's around pocket watch chains and things that people used to carry on their pocket watches. But if you look at that diagram down below, this is an example of a "defense in depth" approach to

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cyber security. It could just as easily apply to physical security. The concept is you set up multiple set points or check points to insure that the people that get through it are supposed to, and it stops or prevents the people that aren't supposed to get through it from passing.

And you'll see here, there's multiple levels of that. This FOB here allows me to get where I'm supposed to get, and it prevents me from getting where I'm not supposed to get. It allows folks to log in and get in remotely, which in our culture today is often encouraged.

And so, it's an accommodation or recognition of we live in a world today that is much more connected, it is much more network based, but that doesn't alleviate us of our responsibility to protect the assets from cyber and physical threats.

And so, we're also very involved in 3rd party reviews of our security practices. We go through the procedures and the disciplines of testing our systems off line, both with using internal experts and contracted experts to see if they can hack into our system, to see if they can compromise our systems in the off-line mode.

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That's a common practice in the industry, it's a common practice in other industries.

Getting into our vision, we are very focussed on protecting our critical assets. It has been, it is, and it will continue to be one of our core responsibilities to our customers and to our shareholders. The challenge with this particular aspect of operations, and that would be cyber and physical security, is that we're going to be challenged with adapting to the strategies and the tactics of the adversary, those people that are trying to get into our system and cause harm. We are very engaged in national collaboration, Department of Homeland Security, obviously, EPRI is very engaged in this activity, FERC and NERC, as far as the regulatory side, are very engaged, and the National Institutes of Standards and Technology, they're very engaged in these issues, and we are very engaged in those collaborative efforts. And then there's the ongoing discipline of making sure our teammates are trained and our contractors are trained and understand the expectations in managing that continual process of being vigilant and standing ready.

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MS. HEIGEL: We need to correct the typo on the slide. NERC does not stand for Nuclear Regulatory Commission.

MR. HOLEMAN: Oh, yes. It is the North American Electric Reliability Corporation, that is correct.

MS. HEIGEL: I apologize for that.

MR. HOLEMAN: Thank you. At this point, we will open it for questions.

CHAIRMAN FLEMING: Commissioners? Yes, Commissioner Clyburn?

COMMISSIONER CLYBURN: You made mention of personnel issues in terms of -- I'm wondering whether or not, I know you, on the -- I'm familiar with some of the -- on the nuclear side, on the other side of this -- well, originally, it's not the other side of this. You've got collaboratives with some of the Institutions of Higher Learning. I'm wondering, as it relates to this particular subset, whether or not the same holds true. Where are you getting personnel, and going forward, what are your plans as it relates to that with either an ageing or a work force that needs to be retrofitted so to speak, present company excluded.

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MR. LINEBERGER: I can kind of resemble that remark, but I appreciate it, Commission Clyburn. Our reality in the engineering world, generally, not just specifically to the cyber security kind of world, is that we're facing that challenge of finding the skills set we need in moving forward, and Duke is very engaged with Institutes of Higher Learning, both in the Carolinas and in the Midwest and attempting to foster that relationship with the universities in those areas. We're going to need the bright, the next generation of engineers, technicians, computer scientists that can help us manage this, and I know we're engaged with universities in our footprint, and other collaborative efforts like P-SERC, which is a collection of university and industry collaboration to identify and encourage our students to get involved in these type of areas.

And I'll also mention, I personally believe it starts before college. It starts in high school and middle school, and we're engaged in the National Engineering Week, where we go into the middle schools and the high schools, and even the latter years of elementary schools in some

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cases, in attempting to talk up this national need and to engage the students and encourage them to consider these more technical fields for their future endeavors. Now, it's a little, you know, I'm doubting you're going to find a fourth grader that's got the vision of where they're going to be five or ten years ago, they could be the exception.

COMMISSIONER CLYBURN: Well, my niece definitely has been saying the same thing since age seven, so--

MR. HOLEMAN: Could we get her name?

COMMISSIONER CLYBURN: She's very -- in fact, she's on line to be a Duke Scholar.

MR. HOLEMAN: Congratulations. But we're very, we recognize that the situation, not only us, but any engineering technical based industry, is going to be facing in the next 5, 10, 15 years, and we're trying to be proactive in engaging the community, the students to consider a technical career.

COMMISSIONER CLYBURN: Thank you.

CHAIRMAN FLEMING: Any other questions?  
Commissioner Whitfield?

COMMISSIONER WHITFIELD: Thank you, Madam

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Chairman.

Thank you for that informative report as well. And I've got a letter I wanted to ask you a question about. I don't know if you've had a chance to see it or not, but it's from the NERC Vice President and Chief Security Officer, Michael Assante, sent a letter in April of, April 7 of this year to industry stakeholders, and in that letter, he requested that industry stakeholders, quote -- and I think it's on the, near the bottom of Page 2 in my letter -- it says, and I quote, he asked stakeholders to "take a fresh comprehensive look at their risk methodology and the resulting list of CA's with a broader perspective on the potential consequences to the entire interconnective system, not only the loss of assets that they own or control, but the potential misuse of those assets by intelligent threat actors." From hearing your presentation, I can tell that you're working in that direction, but I guess my real question to you is, has Duke responded to this letter, or how do they intend to respond to Mr. Assante's request?

MR. HOLEMAN: Thank you, Commissioner

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Whitfield.

Yes, I think Duke is aware of that letter. Just generally, and I'm not sure of the timeline that Duke will be formally responding to the process, but just in terms of process, this is kind of the anticipated, I guess, maturation of this process. The reality of the situation is the bulk electric system is by and large owned and operated by the larger utilities, and I think there have been some, there's been an effort to register a lot of the industry participants in various, I guess, functional designations, and a lot of the smaller entities have registered, and I think we're still trying to get that right as far as the industry goes. But I think what you'll find is that a lot of the larger entities have identified what they believe is their first pass at critical assets. And that process will continue to develop. I think this will be part of the standards development effort at the national level.

The next phase will be providing better clarity around those expectations and requirements, and Duke obviously is a registered entity in multiple of those functions, including

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transmission operator owner, generator operator owner. We will have to fine tune and respond to that clarity that comes out of the standard process which follows a specific regimen around how you get industry feedback, and how you adjust the standards as they move forward.

COMMISSIONER WHITFIELD: Thank you, Mr. Holeman.

CHAIRMAN FLEMING: Commissioners?

COMMISSIONER MITCHELL: I have one.

CHAIRMAN FLEMING: Yes, Commissioner?

COMMISSIONER MITCHELL: Thank you, Madam Chairman.

How are you doing, Mr. Holeman?

MR. HOLEMAN: Doing fine.

COMMISSIONER MITCHELL: I had one, and it's actually talking about Duke's efforts, and a possibility of interest of other vertically integrated utilities, and what is Duke doing for the Southeast, as possible federal legislation to increase the federal government's role in regulating cyber security is being crafted, how does Duke fit into that picture as far as how it's protecting itself and other regulated utilities? Can you comment on that as far as the

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federal legislation that's coming up?

MR. HOLEMAN: Commissioner Mitchell, I guess I could comment more, and this may be at a deeper level than you're expecting the answer to be, and if it is, you can redirect the question, but I think as far as the operational perspective, we are very engaged in the standards development processes. And that's kind of the details. That's what's going to be expected of an entity, but we obviously can't be involved in every single standards development process, but the ones we think are significant, we assign individuals that can sometimes represent Duke, sometimes represent sectors of the industry to participate on those particular standard drafting teams. Then we obviously actively participate in the ballot process. We can offer feedback on a particular standard, the Critical Infrastructure Protection Standards are an example of those, and we offer our feedback, and at the end of the day, we do ballot as a part of the industry segment. So I think from a kind of a feet on the ground perspective, we are actually engaged, so are the other utilities in South Carolina, Santee Cooper and South Carolina Electric and Gas, both

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actively engaged in those processes. You kind of got to choose where you want to be engaged, because there's a lot of activity going on in the industry. But we are actively engaged in those processes. Is that--

COMMISSIONER MITCHELL: That's sort of where I am. It's more or less a joint effort? Full cooperation with the other utilities of South Carolina?

MR. HOLEMAN: Yes, and what we typically do is, because some of these issues are very significant and very broad, we attempt to coordinate our opinions, our technical views on this, both at the SERC level, Southeastern level, and at the sector level. And there's a lot, one of the observations on the ballot process, on the standards process, it's similar to what Jeff was talking about, collaboration, it has driven the collective need to talk about issues, to voice your opinions, to exchange ideas so that where there is a common interest, that we present that in an articulate way that's understood.

COMMISSIONER MITCHELL: Thank you very much.

MR. HOLEMAN: You're welcome.

CHAIRMAN FLEMING: Are there any others?

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Yes, Commissioner Howard?

COMMISSIONER HOWARD: Good afternoon. Do you see federal legislation extending itself to areas like generation and distribution, do you see there being federal jurisdiction there? Those two areas I mentioned have traditionally been under state jurisdiction. Do you see that, under the guise of cyber security, federal government getting more involved in generation and distribution?

MR. HOLEMAN: That's an interesting question.

MR. CARTER: Are you talking about from a security perspective, Commissioner Howard?

COMMISSIONER HOWARD: Yeah, security, cyber security, using that cyber security.

MR. CARTER: I think the Department of Homeland Security has sent some signals that they would like a broader reach. You know, it's interesting to watch how federal government has been moving closer and closer to gaining some oversight with private industry. I believe that there will be a push for, especially the Department of Homeland Security, to have more input into how the distribution network operates.

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If you look at what we just went through in terms of the interoperability of these systems, it's no longer a one facility type approach. I mean, we are all integrated. If one system that's integrated with another system is not appropriately managed, it can bring down an entire portion of a grid, so I think there will be a push for that. We haven't seen anything directly related to that. Potentially, maybe that Aurora event, that was sort of a positioning piece. And of course, Catherine just pointed to me that Obama is looking at appointing a cyber czar if you will, so nothing saying that they're going to gain control, but I will say that it seems as though the federal government is getting its hands closer and closer to controlling physical assets such as that.

CHAIRMAN FLEMING: Are there any other questions? Commissioner Clyburn?

COMMISSIONER CLYBURN: Mr. Lineberger, I wanted to, there was a question, and you answered it, I just wasn't quick with my handwriting, when you talked about the Water Management Group, you also said that it was a dues paying entity. What did you say in terms of that half a million

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dollars, I think -- where did you say that went?

MR. LINEBERGER: That Water Management Group has a five-year projects list, and it's a rolling projects list so every year that goes by, we hopefully complete the projects we wanted to that year and add another year's worth of projects. But that money is spent on those projects, all of it.

COMMISSIONER CLYBURN: Affirm to me a couple that you said that--

MR. LINEBERGER: One that -- and keep in mind that this group just officially formed in December of 2007, so it's fairly new, and being a startup 501(c)(3), a lot of that first year was eaten up in making sure we had all our administrative processes in place -- but be that as it may, one of the early projects was getting a better network of groundwater monitors established in the Catawba Wateree Basin, and we partnered with the Centralina Council of Governments and US Geological Survey to do that over a period of three years. We only had three groundwater monitors in the whole Catawba Wateree Basin to use data from. So to a large extent, we really don't know much about the water that's in

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the ground, and that's connected to the surface water. That groundwater is what is putting the water in the streams when it's not raining, so it's really important to know what's down there. And we have initiated that project installing new groundwater monitors so that at the end of that three years, we'll have ten in the ten different geological belts that occupy the Catawba Waterree Basin. So we'll have a start of being able to get good data about groundwater.

We are also, right now, we have a consultant working on an independent evaluation of safe yield of this project, and that's a technical term, but it's a calculation that's done to say, how much of this water, how much of the bank account can we really count on for the long term, even if we have difficult droughts again. How much of the water can we count on? We did an evaluation of that in the relicensing process, we're getting a consultant to look at other areas of the country, and really the world. A lot of work has been done in Australia around this.

But look at the methodology we used, and see if it was, in fact, most appropriate for the basin, or there's another way to look at that

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risk related concept. The project that I mentioned about determining, you know, if we were going to add storage, how much would you need to add to improve that safe yield, that's one of those projects as well, and we're also just getting underway a benchmarking study to look at demand side management techniques that are being applied at other places in the country to see which ones of those would be a good fit for the public water systems that supply water out of this project so that we can all be more sufficient at our houses about how we use the water.

COMMISSIONER CLYBURN: Thank you.

CHAIRMAN FLEMING: Okay, let's get back to the cyber security issues. And I'm not sure, I've just heard on the radio this morning, but I wasn't listening closely enough at the time to catch up, but I believe, is the cyber czar going to be announced today? Was that what I heard? It's very imminent from what I understood.

MR. CARTER: No, I was going to say that the expectation that it's going to be announced fairly soon; I don't know the exact timing of that announcement.

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MS. HEIGEL: I also had the impression it was going to be later today, but you know, I don't know the answer.

CHAIRMAN FLEMING: But one of the comments they said in the studies, one of the reasons they're doing it is that they studied the system, including the grid system as well as computers, all of the network systems, and their grades were bad and very bad. And this was their reason for doing that. So I'm just saying that to go to, I know that Duke is very involved in all the groups, NIST and EPRI and NERC and all, and I understand, I've heard that Duke is really one of the leaders in that area. There have been very positive comments that I've heard on the national level. But being involved in a group that's dealing with bad and very bad standards at this time, what do you see as your biggest challenge in working with these groups to increase the standards to the level that they need to be?

MR. CARTER: I will say this much. In terms of the grades that they're using, it's hard to determine exactly how they're creating the grades. I know that banks are pushing back on the stress tests that they're using in

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determining how much capital they need.

When I think about where we probably have the worst grades is the intelligence built into the network, the intelligence that we have in the Carolinas is probably some of the most advanced intelligence in terms of the distribution network itself. And that's the one way meter communication devices. When we start to move to Smart Grid technology, there's more data points of information that we're going to need to capture, we're going to need to deploy new devices on the system so that it's more intelligent in terms of being able to correct itself when there's outages, being able to communicate back to the various control centers, and I think those are where we're probably having our, I'll just say the bad grading aspect of things. It's just the intelligence of this system. I would also think that they are probably pulling in the fact that, if we're looking at spending billions and billions of dollars on renewables, that the transmission grids that are in place today are not actually capable of delivering that power to where it needs to be.

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So, you know, we've seen a lot of transmission grids announced that are in the tens of billions of dollars, and they are being placed in odd places because of where the renewable energy is going to have to be located, North Dakota and such. So there's a couple of different avenues, I think, that we're going to have to really look at.

There's a lot of dollars on the table when you're looking at a multi-trillion dollar grid across our country. And then you look at the, I'll just say there's not a substantial enough money in the dollars that are being pushed out, and the stimulus dollars that are being pushed out, to actually correct the types of, the type of issues that we have if we truly want to move to a completely intelligent grid.

So I would think that it would be pretty easy to give a harsh grade if you were looking to where we want to be, if you're looking to where we want to take the system.

CHAIRMAN FLEMING: Well, I just want to clarify. Their grade was not directed to electricity. It was to systems across the board, and I think it was, you know, hacking in--

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MR. CARTER: From a security perspective?

CHAIRMAN FLEMING: Yes, hacking into the computer systems and all of that. I'm sure you all, and I'm sure that would probably be more in the future, but knowing those challenges, that's what I was looking, that there are a lot of big challenges to bring those up to standard and with the smart grids coming online, what are the biggest challenges that you're being faced with in those different groups in bringing about those standards?

MR. HOLEMAN: Well, I think, as Brett spoke of, as we sit here now, and we look ahead to all the changes, whether it's renewable or whether it's Smart Grid or more intelligent metering, the challenge will be, and I think what we're seeing, as people get together to talk about the design of these systems, cyber and physical security is one of the fundamental tenants of that perspective. If you see some of the discussions that take place in the Smart Grid arena, they talk about the fact that, okay, we're going to have to build in fundamentals around cyber security and physical security protection. So I think that's built into the dialogue, it'll be

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built into the design. But, you know, to a certain extent, as you mature and change the system, you've got to -- and I've heard the phrase before, you're kind of trying to re-wire the house while you're still trying to live in it -- you've got to be able to do that, you've got to deliver the services that you're obligated to in realtime while you adapt to the changes that you see, not only tomorrow, but maybe ten years from now.

And so, I think that will be a challenge for the industry to collectively pull together and make the changes we need to make while we're still doing a good job, which I think history will tell us we do a good job with the realtime, do a good job with what we're doing in the here and the now, making sure we're doing our job today, but also being prepared for what might come down the pike, not only tomorrow, but maybe ten years from now.

CHAIRMAN FLEMING: And on those Smart Grid systems, the platforms, are they going to be, will there be kind of a standard system that can be modified and adapt to these rapidly changing advances that we're seeing?

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MR. CARTER: Well, that's part of the reason that it's taking so long for companies like ours to really go out with a massive deployment, because what we've seen in terms of the technology is that it's not agnostic. So, in other words, you can't just apply all types of data and information into these different hard devices, so what you run into is once you make the bet, you're betting on either VHS or Beta, and if you make the wrong choice, you can be stuck with a technology that potentially doesn't take off.

CHAIRMAN FLEMING: That's an expensive bet.

MR. CARTER: It's a very expensive bet. It is a very expensive bet.

The other piece to it is one that the deployment of the hardware is a portion of it. The systems that we use to actually manage the information when it comes to Smart Grid are not capable of handling the amount of data that comes back to you. If you think about the -- and I'll just take it simple to the home -- right now, you get one meter read a month, and we have an advanced system where we actually drive by and get the read automatically. There are a lot of

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companies that are still actually walking and collecting these meter readings.

The next wave of meters will actually send information back to us without even driving by. But that technology is going to cost a lot of money, because it's a manual retrofit. The hidden cost is this back-end system that if you get to a point where you're actually capturing hourly data, you have to encrypt that information so that everybody just can't have access to it.

But second point is, if you're really going to do hourly pricing, the information coming back to you is exponential in terms of the amount of information that we receive today, one monthly meter read versus a read that occurs potentially on the 15 minute or on the half hour. It takes your information gathering and the sorting of that information to a completely different system level.

So the expenditure of the software, and we've talked a lot, Sam, about the software. The software side of things is really where a lot of protection comes into play, and it's in the hundreds of millions of dollars as well. So the infrastructure itself is one piece that we have

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to safeguard against in terms of cyber security, but then being able to capture this information and effectively manage it and protect it is a completely different level of protection that we're looking at as well.

CHAIRMAN FLEMING: And Boulder City is doing the Smart Grid; are they going to be kind of the guinea pig so to speak?

MR. CARTER: I wouldn't call them the guinea pig, but--

CHAIRMAN FLEMING: But I mean, as far as--

MR. CARTER: No, they are the guinea pig.

CHAIRMAN FLEMING: --of these cyber security measures.

MR. CARTER: Absolutely, absolutely. We are choosing a few pilots who, another larger pilot actually taking place in the mid-west, we're rolling out this new technology to between 60- and 70,000 customers.

CHAIRMAN FLEMING: Duke is?

MR. CARTER: Duke is, exactly.

CHAIRMAN FLEMING: Oh, great.

MR. CARTER: It's in the Kentucky region. We have a much bigger issue in the midwest with regards to antiquated technology and meters. We

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have approximately half a million meters that are actually inside the home that have to be manually read. So, it creates a completely different dynamic, but at the same time, the opportunity for advancement is there, because you have a greater savings. Here in Boulder City, we're actually looking at ways to capture the information, secure it, effectively use it without presenting an opportunity for others to either interfere or take that information. So it is sort of a guinea pig of sorts.

CHAIRMAN FLEMING: Is Duke involved with that as well?

MR. CARTER: Absolutely, absolutely.

MS. HEIGEL: If I might just add, in the Ohio rollout, as part of the Electric Security Plan that was approved by the Ohio Commission, in December, they approved, essentially, a rider or rate mechanism to allow the company to deploy Smart Grid precisely for the reasons that Brett mentioned. I don't know that the number is quite half a million, but there are a substantial number of customers for whom we have keys to their homes.

MR. CARTER: 60,000 keys.

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MS. HEIGEL: 60,000 keys, and so, you have to make sure someone's home, and there were a lot of operational issues. I mean, they're really, really far behind where we have been technology-wise here in the Carolinas in terms of being able to do the drive-by meter readings. And so, there was a great cost benefit analysis that the Ohio Utility was able to show for the full replacement of that system.

MR. CARTER: And that's another level of security that's not even cyber. You think about managing 60,000 keys to residences, it presents a completely different issue. But it's something that is kind of rolled over from a long time ago. I'm just glad we don't have those issues in the Carolinas. That's our personal touch program. It's a little different.

CHAIRMAN FLEMING: So -- well, the benefits certainly could be incredible, but the challenges are equally so with that. Now, I was thinking Intergy was Boulder City. I didn't realize Duke's involvement.

MR. CARTER: We've been partnering with the Consortium of Utilities, Todd Arnold, who leads our Smart Grid Organizations, actually on a

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consortium that's made up of, I think it's 12 different utilities, and it's an information sharing. Being involved in it is, from an information sharing perspective, is a little different than rolling out hardware.

CHAIRMAN FLEMING: Now, is that part of that UtiliSec Working Group?

MR. CARTER: I think it's called the Customer Contact Consortium. It's based, I think they're based out of Chicago.

CHAIRMAN FLEMING: But you're part of the UtiliSec Group as well?

MR. CARTER: I'm not sure. I'm not familiar with UtiliSec, but I am familiar with the customer consortium that, you know, has that 12 utility consortium that works through these issues. But I can get you some information on the UtiliSec piece.

CHAIRMAN FLEMING: Okay. All right. It's all very interesting. I can't wait to hear more about the Smart Grid as you move along.

MS. HEIGEL: Well, we were here a year ago, I think to give you all an update on pilots that we were getting ready to get into at that point in time in the upstate here in South Carolina,

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and of course, the one that Brett had mentioned in the Midwest, and also in Charlotte. I will tell you, one of the challenges has been, just what you've noted, which is the open platform issue and the constant evolution of the technology and it's, you know, trying to catch that bus so to speak. You get there, and then, you know, what do you do. Most of the technology out there is proprietary and isn't open, and so, as the technology changes, you're kind of trapped to whatever you've bet on at the outset.

And so, one of the things that our company has looked at is this open platform, and that's the road that we're going down. But it has, you know, it has its challenges as does the other. We will come back and update you as we have more progress in that area.

CHAIRMAN FLEMING: Well, thank you. This has been very informative and interesting, educational. I believe I say that every time, but it is. So, we really appreciate your coming and sharing this information.

COMMISSIONER CLYBURN: And Madam Chair, I just wanted, when Mr. Carter brought out the pen, I was kind of, I went back to my Get Smart years,

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and I was hoping it was going to be like a laser, you know, had laser functions. But you know, that's cool.

CHAIRMAN FLEMING: Thank you.

MS. HEIGEL: We thank you all for the opportunity to be here today. As always, it's a pleasure.

CHAIRMAN FLEMING: And this briefing is now adjourned.

(WHEREUPON, at 12:23 p.m., the allowable ex parte briefing in the above-entitled matter was concluded.)

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STATE OF SOUTH CAROLINA )  
 )  
 COUNTY OF LEXINGTON )      **CERTIFICATE**

I, Missy Graczyk, Court Reporter and Notary Public, certify that the hearing in this matter was held before the Commission in the Commission's Hearing Room, Synergy Business Park, 101 Executive Center Drive, Saluda Building, Columbia, South Carolina, on May 29, 2009, commencing at 10:31 a.m. I also certify that these pages constitute a true and accurate transcript of the testimony given at that time and place.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this the 2nd day of June, 2009.

\_\_\_\_\_  
 Missy A. Graczyk

Notary Public for South Carolina  
 My Commission Expires: January 18, 2010

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