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S.C. SUPREME COURT

THE STATE OF SOUTH CAROLINA
In the Supreme Court

APPEAL FROM THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

Public Service Commission Docket Nos. 2018-319-E & 2018-318-E

Duke Energy Carolinas, LLC ..... Appellant-Respondent,

v.

The South Carolina Office of Regulatory Staff, Hasala Dharmawardena, CMC Recycling, Cypress Creek Renewables, LLC, SC Department of Consumer Affairs, Sierra Club, South Carolina Coastal Conservation League, South Carolina Energy Users Committee, South Carolina Solar Business Alliance, Inc., the South Carolina State Conference of the National Association for the Advancement of Colored People, Upstate Forever, Vote Solar, and Walmart, Inc. ..... Respondents,

of whom,

South Carolina Energy Users Committee is ..... Respondent-Appellant.

Duke Energy Progress, LLC ..... Appellant,

v.

The South Carolina Office of Regulatory Staff, Nucor Steel-South Carolina, Cypress Creek Renewables, LLC, SC Department of Consumer Affairs, Sierra Club, South Carolina Coastal Conservation League, South Carolina Energy Users Committee, South Carolina Solar Business Alliance, Incorporated, The South Carolina State Conference of the National Association for the Advancement of Colored People, Upstate Forever, Vote Solar, and Walmart, Inc., .. Respondents.

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how each of the Company's historical and ongoing CCR compliance costs are reasonable, prudent, and cost-effective given the individual facts and circumstances at each power plant and ash basin site at issue.

Q. ARE YOU PROVIDING ANY EXHIBITS WITH YOUR TESTIMONY?

A. Yes, I have attached 10 total exhibits, described below, as well as an appendix:

Kerin Exhibit 1: Statutes and Regulations (listing of relevant coal ash environmental regulations);

Kerin Exhibit 2: CCR Rule (text of the Federal CCR Rule);

Kerin Exhibit 3: Site Locations NC and SC (map of coal ash facilities);

Kerin Exhibit 4: Site Facts (site-specific background information);

Kerin Exhibit 5: Ash Basin Information (site-specific information about ash units)

Kerin Exhibit 6: Responses to Rule Changes Through the Decades DEC (summary of DE Carolinas' compliance with evolving environmental regulations);

Kerin Revised Exhibit 7: Beneficiation Year 2015 thru ~~August~~ September 2018 (summary of beneficiation at DE Carolinas Sites);

Kerin Exhibit 8: Graphics Cap-in-Place and Landfill (graphical depiction of cap-in-place and landfill closure methodologies);

Kerin Exhibit 9: Closure Plans (site-specific closure plans and engineering reports); and

Kerin Revised Exhibit 10: Components of ~~2017~~ 2016-2018 Recovery Request (summary of costs and regulatory drivers relevant to DE Carolinas' application).

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II. DE CAROLINAS' GENERATION RESOURCES

Q. PLEASE PROVIDE AN OVERVIEW OF THE COMPANY'S ELECTRIC GENERATION ASSETS.

A. DE Carolinas has provided reliable electric generation for decades to its wholesale and retail customers in South Carolina and North Carolina from a diverse portfolio of generating assets including those that generate electricity using coal, nuclear fuels, natural gas, hydro flows, and solar photovoltaic energy sources. Until recently, coal has been the historic "go-to" fuel choice for base-load, least-cost reliable service. Accordingly, in South Carolina and North Carolina, DE Carolinas has operated eight coal-fired generating facilities with CCR units that contain historically produced CCR directly resulting from the coal combustion process. These eight coal-fired DE Carolinas generating facilities have 17 CCR basins that date back to the 1950s and were an integral part of historical coal-fired power generation at these sites.

Q. WHAT IS THE CURRENT STATUS OF THE COMPANY'S COAL-FIRED GENERATING FACILITIES?

A. Of the eight coal-fired DE Carolinas generating facilities with ash basins, coal-powered electric generation has ceased at four of these stations, including the Dan River, Buck, Riverbend, and W.S. Lee plants. Refer to Kerin Exhibit 3 for the geographical location of the eight coal-fired generating facilities with ash basins in the DE Carolinas service territory.

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Q. WHAT ARE COAL COMBUSTION RESIDUALS?

A. CCR are byproducts produced from the burning of coal in coal-fired power generation plants and include fly ash, bottom ash, boiler slag, and FGD material. Fly ash and bottom ash are direct byproducts of the coal combustion process. Fly ash is a very fine, powdery material composed mostly of silica produced from the burning of finely ground coal in the boiler. Bottom ash is a coarse, angular ash particle that is too large to be carried up into the smoke stacks, so it forms in the bottom of the coal furnace. Bottom ash makes up approximately 15 percent of the total ash produced. In the early years of operation, bottom ash was manually collected at the bottom of the boiler, and then transported to an ash storage location. Later, the industry utilized a water sluice process to efficiently transport the bottom ash to ash storage basins. In the early years, fly ash went directly out the smoke stack. The industry later employed collection of the fly ash using electrostatic precipitators and bag houses in order to improve air emissions, where the ash was then efficiently water sluiced to an ash basin. As I explain above, DE Carolinas' coal-fired generation facilities either have been or are being modified to incorporate dry fly ash and/or dry bottom ash handling. Additional CCR flow in the form of wastewater is produced by the operation of FGD systems at specific operating coal-fired sites. All of the types of CCR mentioned above are byproducts of the electricity production process lifecycle at coal-fired generation plants.

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Q. PLEASE PROVIDE A HISTORY OF DE CAROLINAS' ELECTRIC GENERATION RELYING ON COAL AS THE FUEL SOURCE.

A. The Company's electric power generation from burning coal dates back to the Greenville Steam Station, Duke Power's first coal-fired fossil plant, which was completed and placed in service in Greenville, South Carolina, to supply standby and peak-load electricity on April 1, 1911. Kerin Exhibit 4 provides details regarding the commercial operation date, generation capacity (megawatts or MW), and retirement date, if applicable, for the eight DE Carolinas coal-fired generating stations with ash basins in the Carolinas.

All of these coal plants produced CCR, fly ash, and bottom ash, as direct byproducts of the coal combustion process. In the 1950s the electric utility industry began to efficiently transport bottom ash by water sluicing to constructed surface impoundments, which we commonly refer to as ash basins. Some of DE Carolinas' older ash basins include the 1956 primary ash basin at the Dan River Plant and the 1957 ash basins at the Allen, Buck, Riverbend and Cliffside plants. Kerin Exhibit 5 provides details regarding when DE Carolinas' ash basins were constructed, their estimated content of ash in tons, and when they were taken out of service, if applicable. The CCR contained in these basins represent the byproduct of decades of reliable coal-fired generation at these sites and a process step in the electricity generation life cycle.

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Q. HOW HAVE ENVIRONMENTAL COMPLIANCE OBLIGATIONS RELATED TO CCR MANAGEMENT EVOLVED OVER TIME?

A. Environmental regulations related to CCR management have evolved significantly over time, affecting how the Company has operated its coal-fired stations in compliance with new and evolving environmental obligations. At each step in the environmental regulatory evolution process, DE Carolinas was in line with industry standards and reasonably and prudently managed CCRs and its coal ash basins.

Before the Clean Air Act was amended in 1970, the only type of CCRs collected at the Company's plants was bottom ash. Bottom ash was sometimes stored in basins and sometimes placed dry on the land surface in "lay of land" areas, which was lawful at the time. After new Clean Air Act requirements were put in place, the utility industry, including DE Carolinas, added electrostatic precipitators to coal-fired plants in the 1970s to reduce air emissions of fly ash. The collection of fly ash significantly increased the volume of CCR being handled at the plants, giving rise to the need for larger basins and ash handling systems. Additionally, since the 1990 Clean Air Act amendments, a greater emphasis on sulfur emissions control has prompted many coal burning power plants to install FGD units (also known as "scrubbers"). FGD scrubbers generate byproducts, primarily gypsum, which are classified as a type of CCR.

In 1972, the Federal Water Pollution Control Act, now known as the Clean Water Act ("CWA"), was amended to provide a new comprehensive program for regulating discharge of pollutants into the waters of the United States and

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regulating quality standards for surface waters. The CWA resulted in the establishment of a systematic permit system to monitor water quality and to provide specific limits for the flow and content of process water leaving these ash basins. Many of the Company's ash basins (at least one at each power plant) were operating before the passage of the CWA amendments in 1972, which created the NPDES permitting program. These plants subsequently received NPDES permits from South Carolina and North Carolina after the states received authority from the EPA to issue permits.

In accordance with the CWA, the EPA promulgated Effluent Limitations Guidelines ("ELGs") for the Steam Electric Power Generating industry category in 1974. The Development Document for the 1974 rule states that most coal-fired plants across the industry used wet ash handling and ash basins for treatment of ash handling wastewater, although some plants employed other methods for site-specific reasons, such as space constraints. In the 1974 rule, the EPA set limits based on Best Practicable Control Technology Currently Available ("BPT") and Best Available Technology Economically Achievable ("BAT") for fly ash transport water and bottom ash transport water. In both cases, the limits were based on the use of wet ash handling and treatment in ash basins. In 1982, the EPA withdrew the BAT limitations on fly ash transport water and left the limits on bottom ash transport water unchanged.[3] The ELGs for the Steam Electric Power Generating category were not amended again until 2015. As a result, from 1974 to 2015, ash basins were a lawful and effective way of meeting the wastewater

[3] The rule did prohibit the discharge of fly ash transport water at new facilities.

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treatment requirements under the CWA. In 2015, the EPA finalized new ELGs that adopted a zero discharge requirement for both fly ash and bottom ash transport water at existing facilities. Meeting these limits effectively requires converting to dry ash handling or ceasing plant operations.

Before 2015, CCRs were not regulated under the Resource Conservation and Recovery Act ("RCRA"). CCRs are classified under RCRA as a "special waste." Under RCRA § 3001(b)(3)(A) (known as the Bevill Amendment), fossil fuel combustion waste and several other waste categories were initially exempt from regulation as hazardous waste under RCRA Subtitle C. The EPA was required to assess fossil fuel combustion waste and the other types of exempted waste and submit a formal report to Congress on its findings. The EPA was then required to make a final regulatory determination as to whether the special waste should be regulated as a hazardous waste. The EPA published rules in 1993 and 2000 concluding that CCR should not be regulated as hazardous waste. On December 22, 2008, a large coal ash spill occurred at the TVA power plant in Kingston, Tennessee. While this event prompted the industry to take note of the causes for the TVA spill from an operational perspective, the event also prompted the EPA to revisit its determination regarding CCR. On June 21, 2010, the EPA proposed regulations under RCRA to address the risks from the disposal of CCR generated from the combustion of coal at electric utilities and independent power producers. This proposal contained three regulatory options. Under the first, the EPA proposed to list CCR as special wastes subject to regulation under Subtitle C (hazardous waste) of RCRA when they are destined for disposal in landfills or

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surface impoundments. Under the other two options, the EPA proposed to regulate disposal of such materials under Subtitle D (non-hazardous waste) of RCRA by issuing national minimum criteria. Because the proposals were very different, it was difficult for the utility industry, including the Company, to predict the timing and methods that would be required under the new rule for closing ash basins. The rule was not finalized until 2015, when the EPA announced its selection of the Sub-Title D option, regulating CCR as non-hazardous waste. Additional details about the CCR Rule are set out below.

Before the CCR Rule, CCR management was regulated under state laws by statutes and regulations dealing with water quality protection and solid waste management. Ash basins were regulated through dam safety regulations and NPDES permits. Use of ash removed from ash basins was regulated by rules for distribution of residual wastewater solids, which required a permit for the use of removed ash. Construction and operation of landfills were governed by solid waste rules, and beneficial use of dry ash for structural fill was regulated by provisions of the solid waste rules.

As noted above, in September 2014 the Company entered into the W.S. Lee Consent Agreement ("Consent Agreement") with SCDHEC, which addressed future ash management at the W.S. Lee Plant. The Consent Agreement requires DE Carolinas to excavate ash from the Inactive Ash Basin, the Ash Fill Area, and any other areas where ash may have potentially migrated from these sites and dispose of the ash in an onsite landfill. Excavation of the Inactive Ash Basin and

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Ash Fill Area is in addition to the Company's decision pursuant to the CCR Rule to excavate ash from the W.S. Lee Plant's Primary and Secondary Ash Basins.

In 2014, the North Carolina General Assembly passed CAMA, which, among other things, requires the closure of ash basins in North Carolina according to a defined schedule and methodology.

Compliance with each phase of new environmental regulatory requirements that I have discussed required DE Carolinas to modify its operations and incur additional expenditures. Kerin Exhibit 6 graphically depicts how these regulations and requirements changed over time and how DE Carolinas reasonably and prudently responded to each of those changes.

Q. HOW DID THESE EVOLUTIONS IN ENVIRONMENTAL OBLIGATIONS IMPACT CCR PRODUCTION AND STORAGE AT THE COMPANY'S COAL-FIRED GENERATION FACILITIES?

A. Both the volume and characteristics of CCR managed at the Company's facilities have changed in response to changes in air emissions control requirements, beginning with the use of electrostatic precipitators to capture fly ash. As the coal-fired generating plants addressed evolving air emissions requirements, modifications such as the addition of selective catalytic reduction equipment to control emissions of nitrogen oxides and FGD systems to control sulfur dioxide were made to many of DE Carolinas' coal-fired generating plants. The addition of FGD systems affected the existing ash basins by directing FGD blowdown flow to the CCR basins, which represented a new additional CCR flow. At certain sites, such as at the Marshall Plant, newly-constructed engineered wetlands were

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built within the footprints of the CCR basins to process the FGD blowdown flow. At Allen and Belews Creek, bio-reactor systems were installed to process the new CCR flows. Further, as a result of new FGD systems being added, limestone pile run-off flows and gypsum pile run-off flows were typically also directed to the existing ash basins.

Consistent with the rest of the industry, as recognized by the EPA in its ELGs, the Company has relied primarily on ash basins to treat these waste streams, at least as a final step. The ash basins have been effective at treating wastewater to meet NPDES permit limits. In the absence of any regulatory directive to do so, the Company reasonably did not pursue and should not have pursued regulatory closure or retrofitting for any site that was still generating ash and that maintained its NPDES permit. However, the South Carolina Consent Agreements in 2014 established a new set of procedures for closure plans for plants in South Carolina. In compliance with the CCR Rule and state regulatory requirements, the Company has now prepared closure plans or site analysis and removal plans, as applicable, for all of its ash basins.

Historically, the Company has invested in conversion to dry ash handling at certain plants when it was called for by site-specific conditions. Following the promulgation of the CCR Rule and passage of CAMA, however, the Company is converting to full dry ash handling at all operating plants as required by those requirements and as the only viable alternative to plant closure. This involves both installing new equipment and securing disposal capacity. The ash basins are a part of the coal-fired generation process at the sites and provide dilution,

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settling, and/or retention functions for other power plant process water flows, such as low volume wastewater, coal pile run-off, landfill leachate, and FGD wastewater. Additionally, all plant discharges will be rerouted away from ash basins at retired and active sites.

DE Carolinas has also historically pursued opportunities to sell ash for beneficial reuse and will continue to do so as feasible. As the regulatory requirements for ash reuse tightened, the Company limited its sale of ash to situations in which compliance could be carefully monitored and to encapsulated uses.

In summary, beyond the storage of fly ash and/or bottom ash, the operation of ash basins has historically evolved to accept new CCR flows resulting from FGD modifications required to address air emissions and also to accept other non-CCR process flows, such as coal pile run-off and low volume wastewater. The construction and use of the ash basins is the final step in the generation process that has resulted in reliable, efficient, coal-fired electricity in the Carolinas for many decades.

Q. IS THERE ANY FUTURE FOR BENEFICIAL REUSE OF CCRs?

A. Yes. As referenced above, Duke Energy has endeavored across its coal-fired generating fleet to maximize the beneficial use of production ash and to reclaim, where possible, stored ash for sale for beneficial use. Ash beneficiation for DE Carolinas began in 1986/1987 at Belews Creek, selling ash for the cement industry. From January 2016 through September 2018, 38 percent of the DE Carolinas fleet production ash, or approximately 941,000 tons, was sold for

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beneficial reuse to produce products such as a replacement for Portland Cement, bricks, and blocks. It should be noted that the beneficial uses of ash for products are limited based on the quality of the ash produced or stored, particularly the carbon content, and the regional market demand. Also, beneficial use opportunities as a structural fill are limited based on specific regional projects that are in need and by statutory and regulatory requirements. Please refer to Kerin Exhibit 7 for details on sales for beneficial use of production ash and stored ash in the Carolinas.

Q. WERE AND ARE THE COMPANY'S CCR HANDLING PRACTICES IN ACCORDANCE WITH INDUSTRY PRACTICE AND REGULATORY REQUIREMENTS?

A. Yes. In 1988, the EPA submitted its Report to Congress on Wastes from the Combustion of Coal by Electric Utility Power Plants ("1988 Report"). The 1988 Report is a comprehensive assessment of the electric utility industry's use of coal and management of CCR up to that point in history. The 1988 Report found that 80 percent of CCR in the industry was being treated and stored in surface impoundments or disposed of in landfills. Of those units, only 40 percent were lined, either with a synthetic, clay, or composite liner. Historically, surface impoundments were the single most widely used treatment and storage method for CCR. At the time of the 1988 Report, landfilling of CCR was increasingly common. As of 1988, Duke Energy was employing both surface impoundments and landfills, which the 1988 Report noted were the most commonly used types of treatment, storage, and disposal units used by the industry.

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In the preamble to the CCR Rule, the EPA provided an updated assessment of the coal-fired electric power industry. The CCR Rule details that in 2012 alone, over 470 coal-fired electric generating facilities burned over 800 million tons of coal, generating approximately 110 million tons of CCR in 47 states and Puerto Rico. In 2012, approximately 40 percent of the CCR generated were beneficially used, with the remaining 60 percent treated and stored in CCR surface impoundments; of that 60 percent, approximately 80 percent was stored in onsite basins and landfills. Across the United States, CCR disposal currently occurs at over 310 active onsite landfills, averaging over 120 acres in size with an average depth of 40 feet and at over 375 active onsite surface impoundments. Stated differently, the Company is re-using (selling) and storing CCR in the same manner and at approximately the same percentages as the coal-fired utility industry's national averages. Duke Energy's practices have been and continue to be consistent with those of the industry.

Similar to the industry, DE Carolinas has onsite CCR landfills that are actively receiving production fly ash and some bottom ash, at specific coal-fired generating sites, including the Allen, Belews Creek, Cliffside and Marshall Plants in the Carolinas. Also similar to the industry, DE Carolinas has active ash basins that will receive bottom ash, and some fly ash, at specific coal-fired generating sites through first quarter 2019. These sites include the Allen, Belews Creek, Cliffside and Marshall Plants in the Carolinas. The ash handling practices for ash basins and ash landfills in the Carolinas are consistent with the applicable regulatory requirements that were in effect during the history of these CCR units.

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Q. ARE THE COMPANY'S CCR STORAGE AND HANDLING PRACTICES CONSISTENT WITH THE PRACTICES OF OTHER DUKE ENERGY AFFILIATES?

A. Yes. The Company's CCR storage and handling practices are consistent across the Duke Energy fleet, including coal generation located in Florida and in the Midwest. Duke Energy as it exists today has been formed over the years through the mergers of several utilities with independently operated coal-fired generation, including the Cinergy Corporation in 2006 and Progress Energy, Inc. in 2012. Indeed, going farther back in time, Progress Energy, Inc. was created in 2000 from the merger of legacy utilities Carolina Power & Light ("CP&L") and Florida Power Corporation ("FPC"). Similarly, Cinergy Corporation was created in 1994 by the merger of legacy utilities Public Service Indiana ("PSI") and Cincinnati Gas & Electric Company ("CG&E"). Yet, the historical and current CCR handling and use of CCR units is consistent across all of these legacy companies that make up Duke Energy today, and consistent with the industry.

III. NEW REQUIREMENTS REGARDING CCR AND ASH BASINS

Q. PLEASE DESCRIBE THE CCR COAL ASH REGULATORY REQUIREMENTS.

A. The CCR compliance requirements described below represent new regulatory requirements that have significantly changed the operation and life cycle of the onsite ash basins and ash landfills. The Company must comply with the CCR Rule, South Carolina coal ash Consent Agreements and closure plans, CAMA in North Carolina, and other agreements and court orders concerning the

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management and disposal of CCR, operation and closure of CCR units, and corrective action and post-closure care.

Q. PLEASE SUMMARIZE THE MAJOR REQUIREMENTS UNDER THE CCR RULE.

A. The purpose of the CCR Rule is to protect groundwater and water quality near CCR units and ensure stability of those units. The EPA's final CCR Rule established national minimum criteria for CCR landfills and surface impoundments that consist of: (1) location restrictions; (2) design and operating criteria; (3) groundwater monitoring and corrective action; (4) closure requirements and post-closure care; (5) recordkeeping; (6) notification; and (7) Internet posting requirements. These requirements are summarized below, and they result in different impacts at each CCR unit, depending on site-specific factors.

The CCR Rule requires that new and existing CCR surface impoundments and new CCR landfills and lateral expansions meet location restrictions for: (1) placement above the uppermost aquifer; (2) wetlands; (3) fault areas; (4) seismic impact zones; and (5) unstable areas. If a CCR basin does not meet the location restrictions, then basin closure is required under the CCR Rule. The specific location restriction assessments that are most likely to affect the Company's CCR basins, because of typical geological characteristics and historic groundwater elevations in the Carolinas, are placement above the uppermost aquifer and wetlands.

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The placement above the uppermost aquifer location restriction requires that existing CCR basins be constructed with a base that is located no less than 1.52 meters (five feet) above the upper limit of the uppermost aquifer or demonstrate that there will not be an intermittent, recurring, or sustained hydraulic connection between any portion of the base of the CCR unit and the uppermost aquifer due to normal fluctuations in groundwater elevations (including the seasonal high water table).

The wetlands location restriction considers whether the CCR unit causes or contributes to significant degradation to wetlands, and in the event of such effects, sets out compensatory steps that may be taken to achieve no net loss of wetlands in order to avoid basin closure.

The CCR Rule contains design criteria for new CCR landfills and lateral extensions and new CCR surface impoundments, as well as structural integrity criteria for new and existing CCR surface impoundments, including an assessment of dam safety factors.

The CCR Rule contains operating criteria for fugitive dust control, run-on and run-off controls for landfills, hydraulic capacity requirements for surface impoundments, and inspection requirements for landfills and surface impoundments. If the ash basin dam does not achieve the minimum factor of safety requirements, then ash basin closure is required. The CCR Rule also contains requirements for the assessment of groundwater impacts from CCR landfills and surface impoundments. It provides requirements for the assessment of corrective measures, selection of remedies, and implementation of corrective

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action programs for identified groundwater impacts. Results of the groundwater assessment may also require ash basin closure.

The CCR Rule contains requirements for how and when CCR basins must be closed. It provides two alternatives for closure, "closure by leaving ash in place" and "closure through removal of the CCR," also referred to as excavation. In the case of closure by leaving ash in place, commonly referred to as "cap-in-place," it provides design criteria for the closure cap system. Post-closure monitoring requirements are also detailed in the CCR Rule. Lastly, the CCR Rule requires: specific notifications, such as to state agencies; specific requirements for record keeping, such as the written operating record; and, also, specific requirements for posting information on a publicly accessible Internet site.

Q. HOW ARE CCR CLASSIFIED UNDER THE CCR RULE?

A. As stated in the CCR Rule, the EPA considers CCR to be a non-hazardous solid waste.

Q. HOW IS THE CCR RULE ENFORCED?

A. The CCR Rule was promulgated as a self-implementing rule that could only be enforced by citizen suit and not by administrative measures. However, the Water Infrastructure Improvements for the Nation Act (WIIN Act), which was signed into law in December 2016, gave the EPA immediate direct enforcement authority, authorizes states to establish permit programs for implementing the CCR Rule, and requires the EPA to do so, conditioned on federal funding, in those states that do not adopt a CCR permit program.

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Q. TO WHICH DE CAROLINAS UNITS DOES THE CCR RULE APPLY AND WHY?

A. Pursuant to Section 257.50(b) of the CCR Rule, the requirements of the CCR Rule apply to all owners and operators of new and existing landfills and surface impoundments, including any lateral expansions of such units that dispose or otherwise engage in solid waste management of CCR generated from the combustion of coal at electric utilities and independent power producers. Pursuant to Section 257.50(c), the CCR Rule also applies to inactive CCR surface impoundments at active electric utilities or independent power producers, regardless of the fuel currently used at the facility to produce electricity. When the CCR Rule was promulgated, it contained a provision that excluded "legacy" impoundments at sites where the utility had ceased producing electricity prior to October 19, 2015, the effective date of the CCR Rule. *See* Section 257.50(e). One DE Carolinas coal-fired generating site – the Riverbend Plant – qualified for exemption under Section 257.50(e). The issue of whether the CCR Rule must apply to impoundments at power plant sites that have ceased generating electricity was litigated in the D.C. Circuit Court of Appeals in *Util. Solid Waste Activities Group, et al., v. Envtl. Prot. Agency*, 901 F. 3d 414 (D.C. Cir. 2018) ("*USWAG v. EPA*"). In that case, environmental petitioners asserted that there was no rational basis for excluding impoundments at inactive plants given that the CCR Rule covers inactive impoundments at active facilities and, therefore, impoundments such as those at the Riverbend Plant must be regulated pursuant to RCRA. In the recently issued decision, the Court agreed with the position of the environmental

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petitioners and determined that the EPA's decision to exclude legacy impoundments from the CCR Rule was "arbitrary and capricious." The EPA is expected to undertake an expedited rulemaking to bring these legacy impoundments into the CCR Rule. Accordingly, as a result of the D.C. Circuit Court of Appeals' decision, the CCR Rule will apply to all DE Carolinas sites.

Q. IN ADDITION TO THE CCR RULE AND CAMA, IS THE COMPANY SUBJECT TO SPECIFIC SOUTH CAROLINA COMPLIANCE OBLIGATIONS CONCERNING THE MANAGEMENT OR REMEDIATION OF CCR?

A. Yes. DE Carolinas has other CCR-related obligations that result from South Carolina environmental regulatory oversight under existing rules and regulations. As noted above, in September 2014, the Company entered into the W.S. Lee Consent Agreement with the SCDHEC applicable to ash management at the W.S. Lee plant. The Consent Agreement requires the Company to excavate ash from the W.S. Lee Plant's Inactive Ash Basin, the Ash Fill Area, and any other areas where ash may have potentially migrated from these sites. This is in addition to the Company's decision pursuant to the CCR Rule to excavate ash from the W.S. Lee Plant's Primary and Secondary Ash Basins. DE Carolinas will be disposing most of the ash in a lined CCR landfill. Approximately 1.6 million tons of ash have been removed from the W.S. Lee Plant to date. Currently, DE Carolinas is in the process of dewatering the basins in preparation for building the landfill and resuming excavation activities.

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Q. PLEASE BRIEFLY SUMMARIZE THE MAJOR REQUIREMENTS UNDER CAMA.

A. CAMA requires closure of all ash basins in North Carolina, with the closure option and closure deadline driven by a prioritization risk ranking classification process. CAMA requires that all CCR ash basins be closed by dates ranging from 2019 to 2029. The law requires the cessation of storm water flows to CCR ash basins and conversion to dry ash handling. Groundwater wells are required along with monitoring and post-closure maintenance programs. CAMA also requires that the Company provide permanent water supplies to all homeowners within an established boundary of the ash basins. Lastly, the Company must install and operate three ash beneficiation projects capable of annually processing 900,000 tons (300,000 tons from each site) of ash stored within the impoundments at the site to specifications appropriate for cementitious products.

Q. HOW IS CAMA ENFORCED?

A. CAMA implementation in North Carolina is overseen by the Department of Environmental Quality ("NCDEQ"), which has enforcement authority over CAMA compliance issues.

Q. TO WHICH DE CAROLINAS FACILITIES DOES CAMA APPLY?

A. CAMA applies to all of DE Carolinas' CCR surface impoundments in North Carolina located at seven coal-fired generating sites.

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Q. SINCE CAMA ONLY APPLIES TO THE COMPANY'S NORTH CAROLINA FACILITIES, HOW IS IT RELEVANT TO THIS SOUTH CAROLINA RATE PROCEEDING?

A. South Carolina customers receive the benefit from electricity generated at DE Carolinas' South Carolina and North Carolina plants; therefore, South Carolina customers should also share costs from the generation process of electricity production in both South Carolina and North Carolina. This issue is addressed in greater detail in the direct testimony of Company Witness Wright.

Q. DO THE CCR RULE, SOUTH CAROLINA REGULATORY POLICY, AND CAMA REQUIRE CLOSURE OF THE COMPANY'S CCR BASINS?

A. Yes. Under one or a combination of the above-listed federal and state regulatory regimes, the Company will be required to close all of its CCR basins.

Q. HOW DO THE CCR RULE AND STATE REGULATORY REQUIREMENTS WORK TOGETHER TO ADDRESS MANAGEMENT AND REMEDIATION OF THE COMPANY'S CCR BASINS?

A. The CCR Rule requires DE Carolinas to comply with minimum national criteria, as well as applicable state laws, in the closure of ash basins. Thus, the CCR Rule provides overarching requirements pursuant to which each state may set forth more specific regulations. However, as long as minimum national criteria are satisfied, the CCR Rule does not specify a particular method for closing ash basins. Thus, the CCR Rule leaves to the states to approve the method of ash basin closure, as long as such method meets the timeframes and minimum requirements set forth in the CCR Rule. In North Carolina, the method of closure

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required under the CCR Rule will be selected through the process set forth in CAMA. In addition, CAMA requires the submittal of detailed Corrective Action Plans ("CAPs") to NCDEQ to address groundwater impacts. CAMA sets forth specific closure methods which are consistent with the CCR Rule's minimum national criteria for sites deemed intermediate risk. The CCR Rule regulates CCR landfills in addition to CCR surface impoundments, whereas CAMA only addresses CCR surface impoundments. Finally, South Carolina has required utilities to excavate ash storage areas, which are exempt from CCR Rule applicability because they ceased receiving CCR prior to the effective date of the rule.

Q. ARE THERE SOME SITES TO WHICH THE CCR RULE APPLIES, BUT NOT TO EACH SPECIFIC CCR BASIN AT THAT SITE?

A. Yes. After the D.C. Circuit Court of Appeal's ruling in *USWAG v. EPA*, all of DE Carolinas' ash basins at its seven North Carolina sites are or soon will be subject to the CCR Rule; however, the Inactive Ash Basin at the W.S. Lee Plant in South Carolina is not subject to the CCR Rule because it did not contain liquids as of the effective date of the CCR Rule. Please refer to Kerin Exhibit 5 for a detailed breakdown of DE Carolinas' ash basins in the Carolinas and which ash basins are subject to the CCR Rule.

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Q. PLEASE EXPLAIN HOW THE COMPANY IS COMPLYING WITH ITS COAL ASH REGULATORY OBLIGATIONS INCLUDING THE CCR RULE, SOUTH CAROLINA OVERSIGHT, AND CAMA.

A. DE Carolinas has reviewed and inventoried the applicable requirements to determine the full scope of required actions to be taken by the Company, and the limitations and/or constraints imposed by some of those requirements. The Company intends to complete the most restrictive actions by the earliest applicable due dates across these various compliance regulatory drivers. Required actions and due dates are routinely monitored in various Duke Energy management meetings in the CCP organization.

As an example, both CAMA and the CCR Rule require the development of ash basin closure plans. CAMA, however, is more granular in the required level of detail to be included in the narrative of the proposed closure plan as compared to the CCR Rule. Conversely, the CCR Rule has a more limiting due date for development of the ash basin closure plans. Therefore, for sites to which both the CCR Rule and CAMA are applicable, the less granular closure plans were developed to meet the CCR Rule's required due date of October 2016, while more detailed closure plans are separately being developed to meet the exacting requirements of CAMA by the December 2019 deadline.

As discussed above, the CCR Rule requires DE Carolinas to comply with minimum national criteria, as well as any applicable state laws, in the closure of ash basins. Thus, the CCR Rule leaves to the states to approve the method of ash basin closure, as long as such method meets the timeframes and minimum

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requirements set forth in the CCR Rule. In South Carolina, the method of closure required under the CCR Rule was selected based on the Consent Agreement.

In addition to closure requirements, Duke Energy is complying with the other CCR Rule requirements at its facilities in South Carolina, including its groundwater monitoring and corrective action, recordkeeping, notification, and Internet posting requirements.

Again, the Company will complete the most limiting action with respect to closure method and timeframe.

Q. IS THE COMPANY REQUESTING RECOVERY OF COSTS ASSOCIATED WITH ITS OBLIGATIONS RELATED TO THE 2014 DAN RIVER ASH RELEASE?

A. No. On February 2, 2014, a release of coal ash into the Dan River occurred at the Dan River Steam Station north of Eden, North Carolina. The Company responded promptly to the Dan River release to repair plant equipment and contain the release. The Company also worked with affected communities and with environmental regulators to assess and address environmental impacts.

The Company has isolated costs related to this response and is not requesting their recovery in this proceeding. We have also established unique process codes for these costs to ensure they are not included in this case.

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IV. DUKE ENERGY'S COMPLIANCE PLANS

Q. HOW DO THE REQUIREMENTS UNDER THE CCR RULE, SOUTH CAROLINA OVERSIGHT, AND CAMA AFFECT THE COMPANY'S COAL-FIRED PLANTS?

A. The CCR compliance requirements affect how the coal-fired power plants operate and effectively require the coal ash basins to be retired. With regard to ash basin operation, modifications to the power plants are required to direct storm water flow away from the ash basins and to cease bottom ash and fly ash sluice flow to the basins. As the ash basins are closed, other process streams, such as low-volume wastewater, coal pile run-off, and FGD blowdown flows, must also be directed away from the ash basins to facilitate de-watering and closure. As detailed earlier in this testimony, the CCR Rule, South Carolina oversight, and CAMA require closure of the ash basins; the timing and approach of these closures is dictated by the most limiting regulatory requirement.

Q. PLEASE DESCRIBE THE COMPANY'S ACTIVITIES UNDERTAKEN PURSUANT TO ITS COAL ASH REGULATORY OBLIGATIONS.

A. For each site, preliminary engineering and design work was performed to determine the best ash basin closure option for the site as well as permitting needs. Ash basin closure requires the removal of all in flows to the basin such as sluiced ash, process water, and storm water prior to ash basin closure options of excavation, cap in place, and/or beneficiation.

DE Carolinas' approach for closing specific CCR units has evolved over time to meet the changing state and federal regulatory landscape. State-specific

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regulatory obligations, such as the W.S. Lee Consent Agreement and CAMA, provided additional clarity for developing closure options. Additionally, technical investigations of groundwater, dam stability, and environmental concerns has continued to inform the Company's decision-making.

For both state and federal regulatory obligations, a ground water monitoring program has been established. This includes the installation of numerous ground water wells and well monitoring for at least 30 years following basin closure.

To comply with the federal CCR Rule's mandates on stopping flows to the ash basins, many sites required modifications to convert to dry ash handling, new or additional wastewater treatment, and rerouting of storm and process water handling. These activities are largely complete at the DE Carolinas sites.

Once the basin in flows are stopped, the ash basin can then be closed by excavation, cap in place, and/or beneficiation depending on engineering and scientific analysis and regulatory requirements. For any of the closure methods, the basin water must be treated and removed. Site Closure Plans and Site Analysis and Removal Plans have been developed for each site and are attached to my testimony as Kerin Exhibit 9. Kerin Exhibit 8 provides illustrations of the technical approaches to the excavation and cap-in-place closure methods.

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Q. HAS THE REASONABLENESS AND PRUDENCY OF THE CLOSURE OPTIONS THAT THE COMPANY HAS SELECTED FOR EACH SITE BEEN FULLY EVALUATED AND SCRUTINIZED IN A PRIOR RATE PROCEEDING?

A. Yes. As I mentioned earlier, I testified on behalf of DE Carolinas in its North Carolina rate case that was filed in 2017. Certain intervenors to the case hired engineering consultants to review and critique the Company's decision-making with regard to its selected CCR compliance options. The North Carolina Utilities Commission held that DE Carolinas' selected closure options were reasonable and prudent, with only limited exceptions. As an appendix to my testimony, I am providing site-by-site summaries of each DE Carolinas site, which include historical background, an explanation of the Company's selected closure option, and an overview of the issues raised and decided in the North Carolina rate case. *See* Kerin Appendix.

Q. PLEASE PROVIDE THE COMPLIANCE COSTS RELATED TO ASH POND CLOSURE REQUESTED FOR RECOVERY IN THIS CASE.

A. DE Carolinas reasonably and prudently incurred and expects to incur a total of $958 million (on a system basis) related to incremental ash pond closure compliance costs from January 2015 through December 2018. Company Witness Smith describes the calculation of and the recovery requested related to this deferred balance. These current and expected compliance activities are reasonable, prudent, and cost-effective solutions given the individual characteristics of each CCR plant and basin site.

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Q. HAS THE COMPANY IDENTIFIED ANY COSTS THAT IT WILL NOT BE SEEKING FROM SOUTH CAROLINA CUSTOMERS?

A. Yes. The Company will not be seeking from South Carolina customers certain costs that are associated with the provision of drinking water to North Carolina residents. These costs include the provision of bottled water and permanent drinking water supplies, *e.g.*, connection to a public water supply or filtration systems. The Company has decided to absorb the share of these costs that the North Carolina Utilities Commission ordered should be allocated to South Carolina.

Q. HOW, IF AT ALL, DO THE COMPANY'S HISTORICAL CCR PRACTICES IMPACT THE COMPLIANCE COSTS THAT DE CAROLINAS IS SEEKING IN THIS PROCEEDING?

A. They do not affect them at all. I make clear in prior sections of my testimony that DE Carolinas' historical handling of CCRs was reasonable, prudent, and consistent with industry standards over time. These facts are important to show that nothing that DE Carolinas has done historically is causing the Company to incur any unjustified costs today to comply with coal ash regulatory requirements.

Q. REGARDING THE ASH POND CLOSURE COSTS ALREADY INCURRED OR EXPECTED TO BE INCURRED PRIOR TO DECEMBER 2018, WHAT DO THOSE COSTS COMPRISE AND WHY ARE THEY REASONABLE AND PRUDENT COSTS?

A. In Kerin/Revised Exhibit 10, I have broken these costs down into their core components and have described the plants to which these costs apply. In detailing these costs,

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I have also provided narrative summaries as to why these costs were incurred and why the compliance actions that led to those costs were the most reasonable and cost-effective options given the applicable facts and circumstances. This exhibit, coupled with the balance of my testimony and exhibits, demonstrate that these costs are reasonable and prudent.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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Allen Steam Station

Location:

- **Gaston County, North Carolina**

Historic CCR Storage Areas:

- **Retired Ash Basin**
- **Active Ash Basin**
- **RAB Ash Landfill**
- **DORS Areas**

Closure Option Selected:

- **Cap-in-place**

I. History of CCR Management

Duke Energy Carolinas, LLC's ("DE Carolinas" or the "Company") Allen Steam Station ("Allen Plant") is situated along Lake Wylie in Belmont, Gaston County, North Carolina. DE Carolinas began commercial operations at the Allen Plant in 1957. The Allen Plant has two onsite ash basins that were constructed to receive sluiced coal combustion residuals ("CCR") from the coal-fired electric generation units at the plant. The first ash basin, known now as the Retired Ash Basin, was constructed in 1957 and was in operation until 1973. The second ash basin, known now as the Active Ash Basin, was constructed in 1972 and is still in operation today.

There are four areas designated as Distribution of Residual Solids ("DORS"), which are unlined dry ash stack overfills located above the west portion of the Retired Ash Basin that began receiving ash in 1995 through 2006. The DORS ash was dredged from the Active Ash Basin in order to extend the useful life of the Active Ash Basin. The DORS have served as laydown areas and access roads, and have improved drainage in the areas nearby.

In 2009, the Allen Plant replaced its fly ash sluicing operation with a flue gas desulfurization ("FGD") facility. Also in 2009, DE Carolinas received a permit to operate an onsite, lined landfill, known as the RAB Ash Landfill, which was constructed within the footprint of the Retired Ash Basin. The RAB Ash Landfill receives dry fly ash generated by the Allen Plant's coal-fired units. The Active Ash Basin still receives sluiced bottom ash from the coal-fired units.

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II. Closure Plan

DE Carolinas' closure plan for the Allen Plant entails closing the Retired Ash Basin and Active Ash Basin in place pursuant to state and federal regulatory requirements. *See* 80 Fed. Reg. 21301 (CCR Rule); North Carolina Coal Ash Management Act ("CAMA"), S.B. 729 (2014) & H.B. 630 (2016). This closure method is also referred to as the "cap-in-place" closure method. Under CAMA, the North Carolina Department of Environmental Quality ("NC DEQ") classified the Allen Plant as an "intermediate risk" site. However, DE Carolinas is in the process of establishing replacement water supplies to neighboring properties and performing dam safety repair work that will make the site eligible for "low risk" classification under CAMA. A "low risk" classification will allow the Company to pursue a cap-in-place closure method for the Allen Plant as described in the federal CCR Rule.

The cap-in-place closure method to close the Retired Ash Basin and Active Ash Basin will require: removal and treatment of the bulk water/free liquids; interstitial/pore dewatering (as needed) and treatment; stabilization of remaining CCR materials sufficient to support the final cover system; grading of in-place CCR materials to promote positive drainage (no ponding) and prevent sloughing or movement of the final cover system; installation of a final cover system, including stormwater management controls; partial lowering of the dam; and post-closure groundwater monitoring and cover system maintenance. This will likely involve the installation of a low permeability barrier layer and a vegetated soil cover to protect the barrier layer. *See* 40 C.F.R. § 257.102(d).

DE Carolinas' closure plan for the Allen Plant, as described above, must be approved by NC DEQ. DE Carolinas expects a decision from NC DEQ on the Allen Plant closure plan in 2020.

III. Issues Addressed in the North Carolina Rate Proceeding

The issues surrounding DE Carolinas' selected closure option and associated costs for the Allen Plant were fully litigated in the North Carolina rate proceeding, North Carolina Utilities Commission ("NCUC" or the "Commission") Docket No. E-7, Sub 1146. Three intervenors, the Sierra Club, the North Carolina Attorney General's Office ("AGO") and the Public Staff of the NCUC ("Public Staff"), submitted testimony and evidence regarding the Company's proposed closure plan and cost recovery relating to the Allen Plant.

The Sierra Club disagreed with DE Carolinas' selection of the cap-in-place closure method for the Allen Plant. The Sierra Club asserted that continued storage of coal ash at Allen poses significant environmental risks, and that removal of coal ash from the Ash Basin would be more protective of the environment. The Sierra Club also contended that there are documented impacts to groundwater at these basins and that a cap will not prevent lateral inflow of groundwater from adjacent areas, and concluded that closure in place at the Allen Plant will allow continued contamination of downgradient groundwater and violate the technical standards of the CCR Rule. The Sierra Club also criticized the Company for continuing to operate unlined disposal areas after the mid-1970s, arguing that it was more cost-effective and commonplace to

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build lined landfills beginning since the mid-1970s. NCUC Docket No. E-7, Sub 1146, Tr. Vol. 6, pp. 19-118, 120-124.

At the hearing, the Sierra Club, however, did not dispute on cross examination by the Company's counsel that the EPA had concluded in 1988 that only about 25% of all facilities had liners to reduce offsite mitigation of leachate, that only 40% of generating units built since 1975 had liners, that only 15% had leachate collection systems, that only one-third had groundwater monitoring systems and that such systems were more common at newer facilities, and that coal combustion waste streams generally do not exhibit hazardous characteristics. The Sierra Club witness also confirmed that he did not conduct a site-by-site engineering analysis of the cost to the Company to close and remediate its ash basins and construct new, lined dry landfills. Tr. Vol. 6, pp. 143-50.

The AGO alleged that DE Carolinas violated dam safety standards because, between 1996 and 2009, inspectors expressed concerns regarding stability of the ash basin dams. The AGO also alleged water quality violations at the Allen Plant. Tr. Vol. 11, pp. 259-267. The AGO admitted that its analysis did not identify any specific costs that could have been lower or should be disallowed, and stated that it was not in a position to say what the Company should or should not have done with respect to environmental compliance at the time the Company's CCR remediation costs were incurred. Yet, the AGO contended that it *could* opine on how the Company should have managed its coal ash in the past. Vol. 11, pp. 279 – Tr. Vol. 12, pp. 13-24.

The Public Staff did not recommend any specific disallowances to the Company's proposed cost-recovery relating to the Allen Plant. The Public Staff argued that, because CAMA does not require the submission of proposed closure plans for low and intermediate risk impoundments until December 31, 2019 to the Department of Environmental Quality ("DEQ"), a prudence review of the Allen Plant's closure plans at this time would be premature. The Public Staff therefore took no exception in the case to DE Carolinas' current proposed closure method for the coal ash basins located at the Allen Plant. Tr. Vol. 21, pp. 54-57.

After reviewing the testimony and evidence offered by the Company and intervenors regarding proposed costs for recovery in relation to the Allen Plant, the Commission held that the closure plans for both the Allen and Marshall Plant were appropriate. *Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction* ("NCUC Order") filed on June, 22, 2018 in Docket No. E-7, Sub 1146. As an initial matter, the Commission rejected the Public Staff's argument that because DE Carolinas was not yet required to submit its closure plans for Allen to DEQ until 2019, review of the Allen Plant was immature. Specifically, with respect to pending determinations by DEQ, the Commission stated that they would not "delay [their] work in order to wait for [the] agenc[y] to complete their work," and concluded that review of Allen was proper at this time and that CCR cost recovery would also not be provisional. *Id.* at 323-324.

The Commission also rejected the Sierra Club's contentions, and found that witnesses for the Sierra Club had made no effort to quantify the economic impact of their recommendation, which was found to actually increase costs for customers if accepted. Instead, the Commission found Company witness Jon Kerin's testimony to be "persuas[ive]" in finding the closure plan

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for the Allen Plant. The Commission, therefore, held that the requested costs for Allen Plant were reasonably and prudently incurred. NCUC Order at 270.

Additionally, the NCUC rejected the AGO's proposed disallowance theory outright. As noted by the Commission, the various intervenor's theories relating to disallowance were "all over the map" and "deficiently inconsistent." *Id.* at 317. Therefore, no costs proposed by the Company for recovery in DE Carolinas' general cost of service rate relating to the Allen Plant's ash management practices or closure plans were disallowed. *Id.* at 270.

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Belews Creek Plant

Location:

- **Stokes County, North Carolina**

Historic CCR Storage Areas:

- **Active Ash Basin**
- **Pine Hall Road Landfill**
- **Craig Road Landfill**
- **FGD Landfill**
- **Structural Fill**

Closure Option Selected:

- **Cap-in-place**

I. History of CCR Management

Duke Energy Carolinas, LLC's ("DE Carolinas" or the "Company") Belews Creek Steam Station ("Belews Creek Plant") is located along Belews Lake in Stokes County, North Carolina. Belews Creek Plant has been in service since 1974. The Belews Creek Plant has one basin – the Active Ash Basin – that was constructed between 1970 and 1972 and became operational in 1974. Just south of the Active Ash Basin, there is an additional impoundment that has been used to collect chemical wash-down water. This additional impoundment was constructed between 1972 and 1974 and is known as the Chemical Pond.

In 1984, the Belews Creek Plant converted to dry handling of fly ash and began disposing the fly ash in an onsite landfill known as the Pine Hall Road Landfill. The Company continued to sluice bottom ash to the Active Ash Basin. Disposal of fly ash continued at the Pine Hall Road Landfill until 2003. From 2003 to 2007, dry fly ash from the Belews Creek Plant was disposed of the Structural Fill nearby the Pine Hall Road Landfill. In 2007, the Company constructed the Craig Road Landfill in 2007, which then began receiving the plant's dry fly ash. In 2008, flue gas desulphurization ("FGD") residue, or gypsum, began to be produced as a result of the installation of FGD technology to improve air emissions from the site. That gypsum is disposed of in the onsite FGD Residue Landfill.

II. Closure Plan

DE Carolinas' closure plan for the Belews Creek Plant entails closing the Active Ash Basin, pursuant to state and federal regulatory requirements. *See* 80 Fed. Reg. 21301 (CCR Rule); North Carolina Coal Ash Management Act ("CAMA"), S.B. 729 (2014) & H.B. 630

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(2016). This closure method is also referred to as the "cap-in-place" closure method. Under CAMA, the North Carolina Department of Environmental Quality ("NC DEQ") classified the Belews Creek Plant as an "intermediate risk" site. However, DE Carolinas is in the process of establishing replacement water supplies to neighboring properties and performing dam safety repair work that will make the site eligible for "low risk" classification under CAMA. A "low risk" classification will allow the Company to pursue a cap-in-place closure method for the Belews Creek Plant as described in the federal CCR Rule.

The cap-in-place closure method to close the ash storage areas at the Belews Creek Plant will require: removal and treatment of the bulk water/free liquids; interstitial/pore dewatering (as needed) and treatment; stabilization of remaining CCR materials sufficient to support the final cover system; grading of in-place CCR materials to promote positive drainage (no ponding) and prevent sloughing or movement of the final cover system; installation of a final cover system, including stormwater management controls; partial lowering of the dam; and post-closure groundwater monitoring and cover system maintenance. This will likely involve the installation of a low permeability barrier layer and a vegetated soil cover to protect the barrier layer. *See* 40 C.F.R. § 257.102(d).

DE Carolinas' closure plan for the Belews Creek Plant, as described above, must be approved by NC DEQ. DE Carolinas expects a decision from NC DEQ on the Belews Creek Plant closure plan in 2020.

III. Issues Addressed in the North Carolina Rate Proceeding

The issues surrounding the DE Carolinas' selection of a closure option for the Belews Creek Plant site and the associated costs were fully litigated in the North Carolina rate proceeding, North Carolina Utilities Commission (the "Commission" or "NCUC") Docket No. E-7, Sub 1146. Two intervening parties - the Sierra Club and the Public Staff of the NCUC – submitted testimony and evidence regarding the Company's proposed cost-recovery relating to the Belews Creek Plant.

The Sierra Club alleged that DE Carolinas has a history of mismanagement and inaction with respect to CCR, and contended that such history is conclusive evidence of DE Carolinas' imprudence in managing CCR at the Belews Creek Plant, and all other Company ash sites. The Sierra Club specifically alleged that, among other things, DE Carolinas waited 20 years after a fish kill occurred at the Belews Creek Plant to convert other plants to dry fly ash handling. This, they argued, supported a finding of imprudence with regard to all of DE Carolinas' CCR costs, including those relating to the Belews Creek Plant. However, the Sierra Club did not identify any particular costs for disallowance relating to the Belews Creek Plant, or identify a particular CCR-related practice at the Belews Creek Plant as unilaterally evidencing imprudence. *Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction*, at 226-228, Docket No. E-7, Sub 1146 (June 22, 2018) ("NCUC Order").

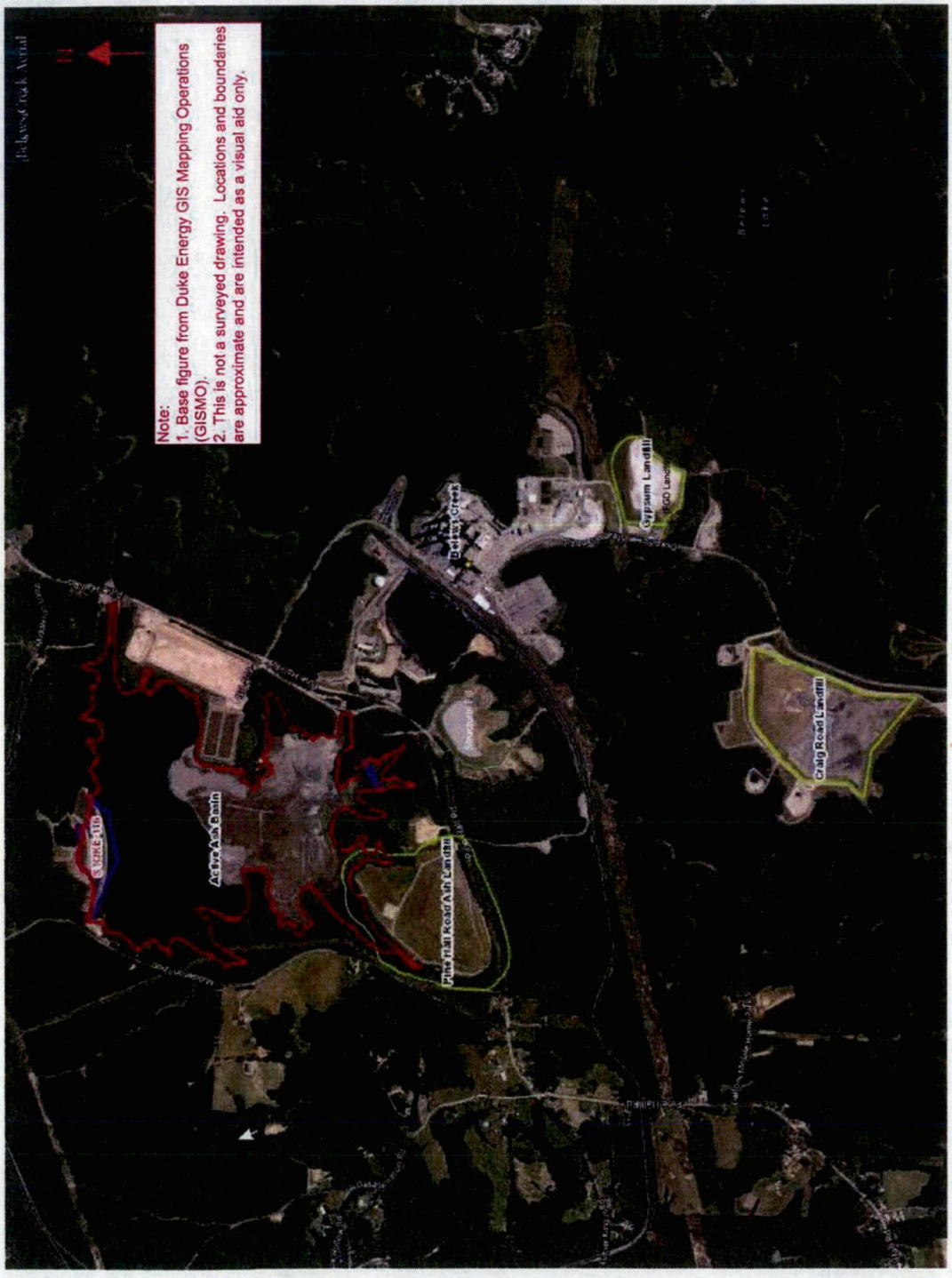
The Public Staff did not recommend any specific disallowances to the Company's proposed cost recovery relating to the Belews Creek Plant. The Public Staff argued that, because CAMA does not require the submission of proposed closure plans for low and intermediate risk

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impoundments until December 31, 2019, a prudence review of the Belews Creek Plant's closure plans at this time would be premature. The Public Staff therefore took no exception in the case to DE Carolinas' current proposed closure method for the coal ash basins located at the Belews Creek Plant. NCUC Docket No. E-7, Sub 1146, Tr. Vol. 21, pp. 54-57.

However, the Public Staff took exception to costs the Company incurred relating to groundwater extraction and treatment costs at Belews Creek Plant. The Public Staff contended that these costs were incurred to remedy environmental violations, and that the costs exceed what the Company would have incurred under CAMA absent these violations. The Public Staff pointed to (1) the NC DEQ Settlement, also known as the Sutton Settlement, which the Public Staff contended resulted in costs greater than would have been necessary to pay for CAMA compliance without violations and (2) resolution of lawsuits involving alleged environmental violations where the resolution was more expensive than what would have been incurred absent the litigation. On these bases, the Public Staff argued that expenditures for groundwater extraction and treatment costs at the Belews Creek Plant should be disallowed. Tr. Vol. 26, pp. 730-734.

In reaching its decision regarding the Company's requested costs, the Commission "relie[d] heavily" upon Company witness Jon Kerin's testimony. As to the Public Staff's proposed disallowance of groundwater treatment costs, the Commission found witness Kerin's testimony to be "instructive" and "entitled to substantial weight" and concluded that the Company's groundwater treatment costs were reasonable, prudent and therefore recoverable. The Commission also agreed with witness Kerin that the Public Staff's position ignored the fact that, while the measures undertaken at the Belews Creek Plant were reflected in the Sutton Settlement, they still would have been undertaken pursuant to CAMA. The Sutton Settlement simply accelerated the timeline for undertaking those remedial measures. Additionally, and again relying on witness Kerin's testimony, the Commission also rejected the Sierra Club's claim that the Company had a history of mismanagement and inaction with respect to CCR at the Belews Creek Plant, and ultimately allowed all of the Company's CCR costs to be recovered. NCUC Order at 296-299.


Note:
1. Base figure from Duke Energy GIS Mapping Operations (GISMO).
2. This is not a surveyed drawing. Locations and boundaries are approximate and are intended as a visual aid only.
Lakewood Track Aerial
N
Gypsum Landfill
Craig Road Landfill
Pineyard Road Ash Landfill
Ash Ash Basin

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Buck Steam Station

Location:

- **Rowan County, North Carolina**

Historic CCR Storage Areas:

- **Primary Ash Basin**
- **Additional Primary Ash Basin**
- **Secondary Ash Basin**
- **Dry Ash Storage Area**

Closure Option Selected:

- **Onsite Beneficiation Project**

I. History of CCR Management

Buck Steam Station ("Buck Plant"), located along the Yadkin River in Rowan County, North Carolina, was Duke Energy Carolinas, LLC's ("DE Carolinas" or the "Company") first large capacity coal-fired electric generation unit built in the Carolinas. Buck Plant began commercial operations in 1926. All of its coal-fired units were retired by 2013. DE Carolinas currently operates a 620 MW natural gas facility at the Buck Plant site, which came on line in 2011.

The original ash basin at the Buck Plant, known as the Primary Ash Basin, was formed in 1956 by constructing a dam across a tributary to the Yadkin River. In 1977, the Company increased its ash storage capacity at Buck Plant by raising the main dam that formed the Primary Ash Basin and constructing a divider dam across the ash basin to create the Secondary Ash Basin. In 1982, DE Carolinas began construction on the Additional Primary Ash Basin to provide more storage for sluiced coal combustion residuals ("CCR"). In 2009, approximately 200,000 cubic yards of ash was excavated from the Additional Primary Ash Basin and placed within an onsite dry ash storage area to free up space for sluiced coal ash. DE Carolinas ceased sluicing any additional coal ash to the Buck Plant ash basins in 2013.

II. Closure Plan

DE Carolinas will be excavating ash from all ash storage areas at the Buck Plant. The Buck Plant's three ash basins will be excavated consistent with the federal CCR Rule. Ash that is excavated from the Buck Plant basins will not be placed in an onsite or offsite CCR landfill, but will instead be processed through an onsite CCR beneficiation facility called a STAR® processing unit. The STAR® processing unit will be constructed by SEFA Group Inc. and will

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be capable of processing 300,000 tons of CCR annually, as required by the North Carolina Coal Ash Management Act ("CAMA"). *See* N.C. Gen. Stat. § 130A-309.216 as enacted by 2016 N.C. Sess. Law 95. The STAR® unit will convert the CCR into a material that will then be sold for beneficial use to the concrete industry.

III. Issues Addressed in the North Carolina Rate Proceeding

The issues surrounding the Company's selection of a closure option for the Buck Plant site and the associated costs were fully litigated in the North Carolina rate proceeding, North Carolina Utilities Commission ("NCUC" or the "Commission") Docket No. E-7, Sub 1146.

Witnesses for the Public Staff of the NCUC ("Public Staff") took exception to DE Carolinas' selected closure method for the CCR storage areas at the Buck Plant. The Public Staff contended that DE Carolinas should have selected Weatherspoon, as opposed to the Buck Plant, as one of the three beneficiation sites as required by N.C. Gen. Stat. § 130A-309.216. By choosing Weatherspoon instead of Buck for beneficiation, Public Staff argued that the Company would have been able to lower closure costs for the Buck Plant. The Public Staff argued that the CCR units at the Buck Plant could have been classified as low risk upon completion of the establishment of permanent replacement water supplies and completion of applicable dam safety repair work, and instead may have been eligible for closure under the "cap-in-place" closure method under CAMA, which is a lower cost method. Based on this argument, the Public Staff recommended that the Commission disallow $10 million that had already been incurred by DE Carolinas for the cementitious beneficiation project at the Buck Plant. NCUC Docket No. E-7, Sub 1146, Tr. Vol. 21, pp. 58-61.

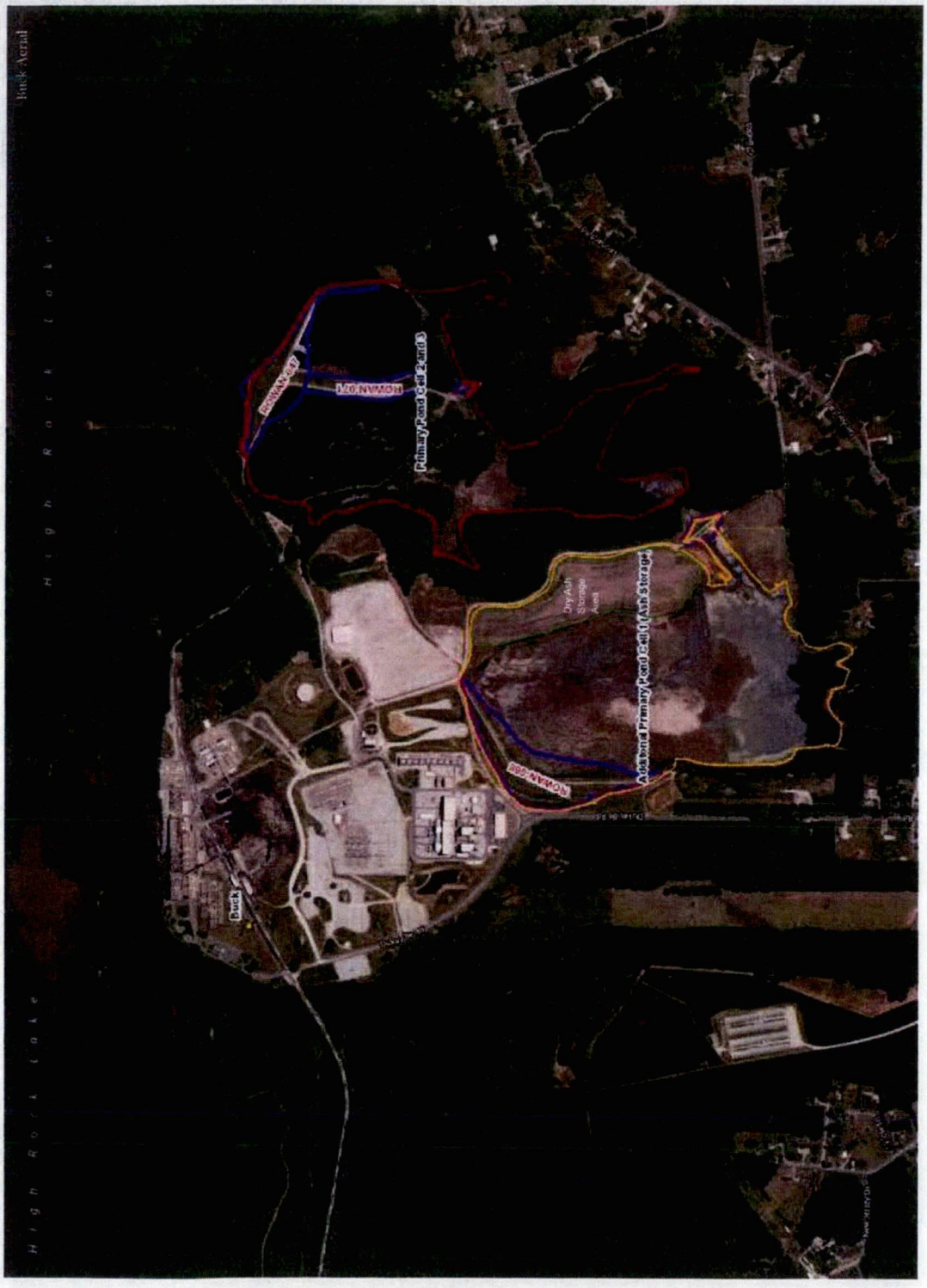
In the NCUC *Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction* issued on June 22, 2018 in Docket No. E-7, Sub 1146 ("*NCUC Order*"), the Commission accepted Company witness Jon Kerin's description of DE Carolinas' closure plans and resulting costs at Buck Plant as reasonable and prudent, and rejected the Public Staff's proposed disallowances relating to the Buck Plant. The Commission agreed with the Company's decision to select the Buck Plant for installation of an onsite beneficiation project. *Id.* at 307-308. The Commission found that, contrary to the Public Staff's position, the most reasonable reading of N.C. Gen. Stat. § 130A-309.206 is that the North Carolina General Assembly intended the Company install and operate technology to process and transform ash to a usable product rather than use the basic drying and screening methods such as those occurring at Weatherspoon. Therefore, because the Company's handling of Weatherspoon ash does not involve beneficiation processing or much of any processing beyond excavation, it would not satisfy the CAMA beneficiation requirement. Further, because the Public Staff concluded that the same beneficiation technology will be used by the Company at H.F. Lee and Cape Fear that will be used at the Buck Plant was a reasonable and prudent "method of executing the requirements of CAMA," the Commission determined that the Public Staff could not credibly argue that the Company could have simply excavated, dried, and sold ash from Weatherspoon in order to comply with CAMA. *Id.* at 307.

Additionally, the Commission agreed with witness Kerin that because CAMA requires the installation of specific beneficiation technology, which costs approximately $181 million, it

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was reasonable for the Company to consider the amount of ash available at the site and the potential uses for the ash when making a decision to invest in beneficiation of a particular location. Noting that the Weatherspoon Plant has only 2.4 million tons of ash, approximately one-third of the amount located at the Buck Plant, the per-ton cost to process ash at Buck is significantly lower than it would be at Weatherspoon. *Id.* The Commission also noted that due to the Weatherspoon Plant's poor geographic location in relation to the major markets for ash used in the cement industry, and because trucking the ash is part of the cost of the sales, Buck Plant's proximity to Charlotte and Greensboro additionally makes it a much better location for beneficiation, with the highest revenue projection, followed by Cape Fear and H.F. Lee. *Id.* In conclusion, the Commission stated that the Public Staff's proposal was not feasible as it would not satisfy the Company's statutory requirement to beneficiate ash, and that therefore, the Company's choice beneficiation closure plan at the Buck Plant was reasonable and prudent. *Id.*

Duck Aerial


High Rock Lake
Primary Pond Cell 2 and 3
Additional Primary Pond Cell 1 (Ash Storage)
Dry Ash Storage Area
Duck
High Rock Lake

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Rogers Energy Complex (Cliffside Steam Station)

Location:

- **Cleveland and Rutherford Counties, North Carolina**

Historic CCR Storage Areas:

- **Active Ash Basin**
- **Units 1-4 Inactive Ash Basin**
- **Unit 5 Inactive Ash Basin**
- **Dry Ash Storage Area**
- **CCP Landfill**

Closure Option Selected:

- **Excavation and cap-in-place**

I. History of CCR Management

Duke Energy Carolinas, LLC's ("DE Carolinas" or the "Company") Cliffside Steam Station ("Cliffside Plant") is located in Mooresboro in Rutherford and Cleveland Counties, North Carolina. The Cliffside Plant began operations in 1940 with four coal-fired electric generation units ("Units 1 through 4"). Unit 5 came on line in 1972, followed by Unit 6 – a clean-coal unit – in 2012. Units 1 through 4 were retired from service in 2011. Currently, only Units 5 and 6 are currently in operation.

Coal combustion residuals ("CCR") from the Cliffside Plant's units have been historically disposed of in onsite ash basins. The oldest ash basin, known now Units 1-4 Inactive Ash Basin, was constructed and began operations in 1957 to receive sluiced ash from Units 1 through 4. The Units 1-4 Inactive Ash Basin was retired in 1977 when it reached capacity and has recently been excavated and repurposed for a storm water basin.

The plant's second ash basin, known as the Unit 5 Inactive Ash Basin, was constructed in 1970 in advance of Unit 5 coming on line. The Unit 5 Inactive Ash Basin received sluiced CCR from 1972 until it was retired in 1980, when it reached full capacity.

The plant's third ash basin, known as the Active Ash Basin, was constructed in 1975 to receive CCR from Unit 5. The Active Ash Basin was later expanded in 1980 to its modern footprint and continues to receive sluiced bottom ash and fly ash from Unit 5. An additional dry ash storage area is located within the northwestern portion of the Active Ash Basin's waste boundary. This dry ash storage area was likely created when ash was removed from the active ash basin in the 1980s to provide additional capacity for sluiced ash.

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DE Carolinas also operates a Coal Combustion Products ("CCP") Landfill, which was constructed with an engineered liner and is permitted to receive fly ash, bottom ash, and other CCR. Placement of CCR into the CCP Landfill began in October 2010 as Phase 1 of the landfill. Phase 2 of the CCP Landfill was placed into service in 2016 and currently Phases 3 and 4 are being designed.

II. Closure Plan

DE Carolinas' selected closure option for the Cliffside Plant involves both closure in place, or cap-in-place closure, and excavation, pursuant to state and federal regulatory requirements. *See* 80 Fed. Reg. 21301 (CCR Rule); North Carolina Coal Ash Management Act ("CAMA"), S.B. 729 (2014) & H.B. 630 (2016). The Company has selected the excavation closure method for the Cliffside Plant's Units 1-4 Inactive Ash Basin, which was completed in accordance with the CCR Rule. Excavated CCRs from the Units 1-4 Inactive Ash Basin were placed in the onsite CCR Landfill.

The Active Ash Basin and the Unit 5 Ash Basin will be capped-in-place. The Company also plans to incorporate CCR from the Dry Ash Storage Area into the Cliffside Plant's cap-in-place closure approach. Under CAMA, the North Carolina Department of Environmental Quality ("NC DEQ") classified these basins at the Cliffside Plant as "intermediate risk" basins. However, DE Carolinas is in the process of establishing replacement water supplies to neighboring properties and performing dam safety repair work that will make these basins eligible for "low risk" classification under CAMA. A "low risk" classification will allow the Company to pursue a cap-in-place closure method for these basins pursuant to the CCR Rule.

The cap-in-place closure method to close the Active Ash Basin and the Unit 5 Inactive Ash Basin will require: removal and treatment of the bulk water/free liquids; interstitial/pore dewatering (as needed) and treatment; stabilization of remaining CCR materials sufficient to support the final cover system; grading of in-place CCR materials to promote positive drainage (no ponding) and prevent sloughing or movement of the final cover system; installation of a final cover system, including stormwater management controls; partial lowering of the dam; and post-closure groundwater monitoring and cover system maintenance. This will likely involve the installation of a low permeability barrier layer and a vegetated soil cover to protect the barrier layer. *See* 40 C.F.R. § 257.102(d).

DE Carolinas' closure plan for the Cliffside Plant, as described above, must be approved by NC DEQ. DE Carolinas expects a decision from NC DEQ on the Cliffside Plant closure plan in 2020.

III. Issues Addressed in the North Carolina Rate Proceeding

The issues surrounding DE Carolinas' selected closure option and associated costs for the Cliffside Plant were fully litigated in the North Carolina rate proceeding, North Carolina Utilities Commission ("NCUC" or the "Commission") Docket No. E-7, Sub 1146. Both the North

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Carolina Attorney General's Office ("AGO") and the Public Staff for the NCUC challenged aspects of the Company's proposed cost recovery relating to the Cliffside Plant.

The AGO alleged that DE Carolinas had violated dam safety standards at the Cliffside Plant based on concerns about the stability of the plant's dams expressed by inspectors between 1996 and 2009. The AGO also alleged that DE Carolinas had violated the water quality standards at the Cliffside Plant, which the AGO argued was indicative of imprudent management. NCUC Docket No. E-7, Sub 1146, Tr. Vol. 11, pp. 259-267.

The AGO admitted that its analysis did not identify any specific costs that could have been lower or should be disallowed, and that it was not in a position to say what the Company should or should not have done with respect to environmental compliance at the time the Company's CCR remediation costs were incurred. Yet, the AGO contended that it *could* opine on how the Company should have managed its coal ash in the past. Vol. 11, pp. 279 – Tr. Vol. 12, pp. 13-24.

The Public Staff did not recommend any specific disallowances to the Company's proposed cost recovery relating to the Cliffside Plant. The Public Staff argued that, because CAMA does not require the submission of proposed closure plans for low and intermediate risk impoundments until December 31, 2019, a prudence review of the Cliffside Plant's closure plans at this time would be premature. The Public Staff therefore took no exception in the case to DE Carolinas' current proposed closure method for the coal ash basins located at Cliffside. Tr. Vol. 21, pp. 54-57.

Due to the fact that no party proposed specific disallowances relating to the plant, the North Carolina Utilities Commission's *Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction* filed on June, 22, 2018 in Docket No. E-7, Sub 1146, did not specifically evaluate the Company's closure plans or costs relating to the Cliffside Plant. However, the Commission did reject the Public Staff's argument that because DE Carolinas was not yet required to submit its closure plans for Cliffside to NC DEQ until 2019, review of the Cliffside Steam Station was immature. Specifically, with respect to pending determinations by NC DEQ, the Commission stated that they would not "delay [their] work in order to wait for [the] agenc[y] to complete their work," and concluded that review of Cliffside was proper at this time and that CCR cost recovery would not be provisional. NCUC Order at 323-324. Additionally, the Commission did reject the AGO's proposed cost disallowance theory. In conclusion, no costs proposed by the Company for recovery in DE Carolinas' general cost of service rate relating ash management practices or closure plans at the Cliffside Plant closure plans were disallowed. *Id.* at 270, 317.

1232-55


Active Ash Basin
Unit 3 Inactive Ash Basin
Unit 4 Inactive Ash Basin
Cliffside
C&D Landfill
Note:
1. Base figure from Duke Energy GIS Mapping Operations (GISMO).
2. This is not a surveyed drawing. Locations and boundaries are approximate and are intended as a visual aid only.

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Dan River Steam Station

Location:

- **Rockingham County, North Carolina**

Historic CCR Storage Areas:

- **Primary Ash Basin**
- **Secondary Ash Basin**
- **Ash Fill 1**
- **Ash Fill 2**

Closure Option Selected:

- **Excavation**

I. History of CCR Management

Duke Energy Carolinas, LLC's ("DE Carolinas" or the "Company") Dan River Steam Station ("Dan River Plant") began operations in 1949. The original ash basin at the site was constructed in 1956 to receive sluiced coal combustion residuals ("CCR") for storage and disposal. In 1968, the Company expanded the original ash basin to cover the area later occupied by the primary and secondary basins. Approximately 8 years later, the Company modified the original basin to form the two basins known as the Primary and Secondary Ash Basins. These modifications were made to increase the storage capacity at the site and to improve the water quality of the effluent being discharged from the basins. In 1980, the Company constructed two onsite dry storage areas, Ash Fill 1 and Ash Fill 2, north of the primary and secondary ash basins. These ash fill areas served as a place for ash to be relocated from the primary and secondary basins to extend their service life.

Beginning in 2012, the Company began the process of decommissioning the Dan River Plant's coal-fired generation units and smaller gas-fired generation. By April 1, 2013, DE Carolinas had ceased sluicing any ash to the onsite ash basins.[1] These now demolished units have been replaced with a 620-MW natural gas facility that serves over half a million customers.

II. Closure Plan

DE Carolinas is excavating the Primary and Secondary Ash basins at the Dan River Plant. The ash basins are being excavated consistent with the federal CCR Rule. Both ash basins have also been designated by the North Carolina General Assembly as "high priority,"

[1] History of Construction – Dan River, at pp. 2-9 (2016).

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requiring that they be excavated. *See* Coal Ash Management Act ("CAMA"), S.B. 729 (2014) & H.B. 630 (2016).

The CCR Rule and CAMA both require that excavated ash be placed in a lined CCR landfill. In 2014, DE Carolinas began investigating locations for a CCR landfill, including onsite and offsite options. The Company ultimately decided to construct an onsite landfill within the footprint of the Ash Fill areas, which required that those areas be excavated, as well. Ash from the Ash Fill areas has been placed in offsite landfill in Jetersville, Virginia. The remaining ash at the Dan River Plant will be excavated and placed in the onsite landfill.

III. Issues Addressed in the North Carolina Rate Proceeding

The issues surrounding the Company's selection of a closure option for the Dan River Plant and the associated costs were fully litigated in the North Carolina rate proceeding, North Carolina Utilities Commission ("NCUC" or the "Commission") Docket No. E-7, Sub 1146. No party criticized the reasonableness or prudence of the Company's decision to excavate the primary and secondary ash basins and place the ash in an onsite, lined CCR landfill. Instead, some criticisms were lodged regarding the timing of excavation and the location of the landfill.

A witness for the Public Staff of the NCUC ("Public Staff") took exception with DE Carolinas' decision to excavate and transport coal ash from Ash Fill 1 at the Dan River Plant off-site to the Amelia Landfill in Jetersville, Virginia. Had DE Carolinas conducted an adequate assessment of on-site greenfield landfill options at the time it began evaluating off-site disposal options, the Public Staff witness argued, the Company would have identified viable onsite disposal options that would have allowed DE Carolinas to dispose of all of the ash on-site without having incurred the added expenses associated with the off-site transfer and disposal. The Public Staff further disputed whether the CAMA moratorium had any impact on DE Carolinas' ability to construct an onsite greenfield landfill at Dan River in a timely fashion, and stated that there was no valid technical reason why an adequately sized onsite landfill could not have been located on the western boundary of the Dan River property. Public Staff recommended a total disallowance at the Dan River Plant of $59.3 million from DE Carolinas' coal ash expenditures during this recovery period, which reflected the costs that could have been avoided had DE Carolinas not transported ash to the Amelia Landfill. Tr. Vol 21, pp. 62-70.

In rebuttal, Company witness Jon Kerin explained that because of planning and permitting uncertainties and in order to ensure that the Company met the August 1, 2019 closure deadline established by CAMA, the Company promptly started excavating and transporting ash off-site from Dan River while the potential landfill options could be investigated. In 2015, the Company initiated transportation of ash by truck to Amelia Landfill operated by Waste Management in Jetersville, Virginia. Later, ash transportation transitioned to rail transport. The decision to build rail infrastructure on the Dan River Plant was consistent with the principle of minimizing impact to neighbors, significantly increased the transportation efficiency, and considered the fact that the Amelia Landfill was already rail ready. Tr. Vol. 14, 121-125 (Docket No. E-7, Sub 1146, NCUC).

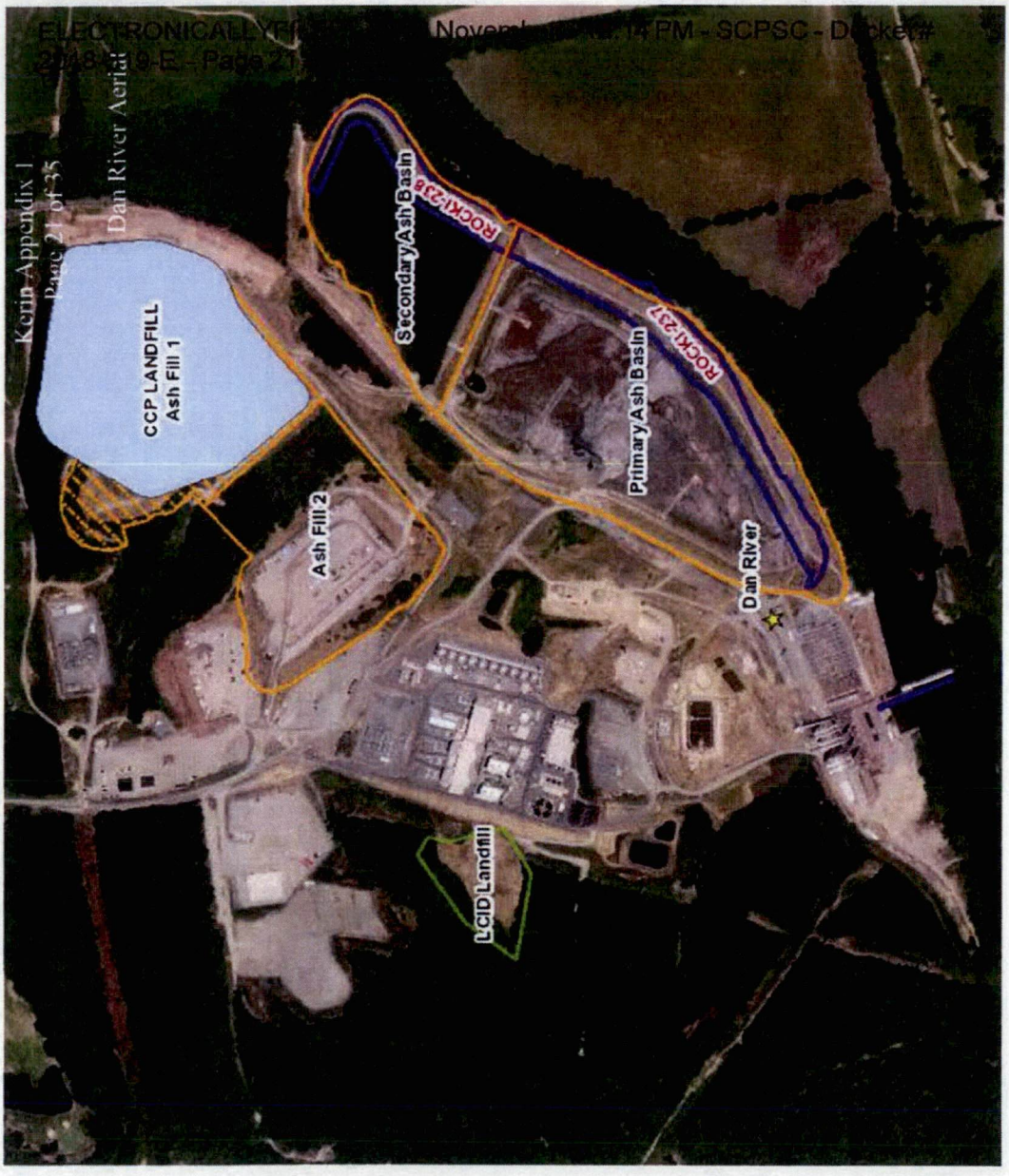
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Based on the Company's evaluation of CCR landfill locations, the Company ultimately decided to construct the landfill onsite following a complete validation of the location's technical suitability. The location for the CCR landfill is within the footprint of Ash Fill 1 and Ash Fill 2. All of Duke Energy's closure plans, including Dan River's plan, were developed to systematically prepare for executing ash basin closure, including the identification of necessary permits and approvals. All closure plans were submitted to the North Carolina Department of Environmental Quality ("NC DEQ") prior to beginning any ash excavations. The Company's closure plan for Dan River meets the national standards set forth by the CCR Rule as well as the more specific requirements determined by the NC DEQ under the CAMA regulatory process. Tr. Vol. 14, pp. 100-105, 113-114, 127-135.

In the NCUC's *Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction* issued on June 22, 2018 in Docket No. E-7, Sub 1146 (" *DE Carolinas NCUC Order*"), the Commission accepted witness Kerin's description of DE Carolinas' closure plans and resulting costs at Dan River as reasonable and prudent, and in doing so, rejected the Public Staff's contention otherwise. Specifically, the Commission found the Public Staff's contention that the Company should have built an onsite landfill on the western property boundary of the Dan River Plant to be infeasible, due to issues concerning asbestos contamination, wetland and stream impacts, geographical limitations, permitting uncertainties, and other impacts to additional properties. DE Carolinas' selected location, on the other hand, minimizes the site's ash footprint, avoids undue risk to workers, limits potential environmental impacts, and reduces impacts to surrounding properties. The Commission therefore rejected the Public Staff's proposed disallowance, stating that infeasible options do not support a finding of imprudence, and that witness Kerin's testimony adequately demonstrated that the Company's actions and real-time decisions regarding the Dan River Plant were in fact reasonable and prudent, and the associated costs were prudently incurred. *DE Carolinas NCUC Order* at 303-306.

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Dan River Aerial



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Marshall Steam Station

Location:

- **Catawba County, North Carolina**

Historic CCR Storage Areas:

- **Ash Basin**
- **Dry Ash Landfill (Phase 1, Cell 1)**
- **Dry Ash Landfill (Phase 2, Area 1 Fly Ash)**
- **FGD (Gypsum) Landfill**
- **Structural Fill**
- **Subgrade Fill**
- **Industrial Landfill**

Closure Option Selected:

- **Cap-in-place and excavation**

I. History of CCR Management

Duke Energy Carolinas, LLC's ("DE Carolinas" or the "Company") Marshall Steam Station ("Marshall Plant") is located along the west bank of Lake Norman in Terrell, Catawba County, North Carolina. The Company began commercial operations at the Marshall Plant in 1965 when its first coal-fired electric generation unit came on line. The plant's lone Ash Basin was put into service that same year to receive coal combustion residuals ("CCR") from the plant's coal-fired generation units. Three additional units were added in 1966, 1969, and 1970. The Ash Basin consists of a single cell that was impounded by an earthen dike located at the historic confluence of Holdsclaw Creek and the Catawba River. Since 1984, the Marshall Plant has only sluiced bottom ash to the Ash Basin.

In addition to wet ash, dry ash has been disposed of in six other areas at the Marshall Plant, including the dry ash landfill units, Phases 1 and 2, and Industrial Landfill No. 1. Flue gas desulfurization ("FGD") residuals – gypsum – were disposed of in the FGD Landfill. Fly ash has been utilized at the site as structural fill beneath portions of Industrial Landfill No. 1.

The Dry Ash Landfill Phase 1, Cell 1, was constructed in 1983 and 1984 with closure estimated taking place in 1986. The Dry Ash Landfill Phase 2 was constructed in 1983 and 1984 with closure taking place in 2001. The FGD Landfill was constructed in 2006 and is currently being capped for closure. The Industrial Landfill has five phases with a total of 13 cells and is permitted to receive fly ash, bottom ash, FGD gypsum, and other CCR. Construction began in 2010 and is designed with five phases of 13 cells. Phase 1 is currently in operation with Cells 1,

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2, 3 and 4. The structural fill area began receiving CCR in 1999 through the first quarter of 2013. The subgrade fill began receiving CCR in 2009 through the third quarter of 2013.

II. Closure Plan

DE Carolinas' closure plan for the Marshall Plant entails closing a large portion of the Ash Basin and the FGD Landfill in place and excavating a small portion of the Ash Basin, pursuant to state and federal regulatory requirements. *See* 80 Fed. Reg. 21301 (CCR Rule); North Carolina Coal Ash Management Act ("CAMA"), S.B. 729 (2014) & H.B. 630 (2016). The closure in place method is also referred to as the "cap-in-place" closure method.

Under CAMA, the North Carolina Department of Environmental Quality ("NC DEQ") classified the Marshall Plant as an "intermediate risk" site. However, DE Carolinas is in the process of establishing replacement water supplies to neighboring properties and performing dam safety repair work that will make the site eligible for "low risk" classification under CAMA. A "low risk" classification will allow the Company to pursue a cap-in-place closure method for the Marshall Plant as described in the federal CCR Rule.

The cap-in-place closure method to close the Ash Basin will require: removal and treatment of the bulk water/free liquids; interstitial/pore dewatering (as needed) and treatment; stabilization of remaining CCR materials sufficient to support the final cover system; grading of in-place CCR materials to promote positive drainage (no ponding) and prevent sloughing or movement of the final cover system; installation of a final cover system, including stormwater management controls; partial lowering of the dam; and post-closure groundwater monitoring and cover system maintenance. This will likely involve the installation of a low permeability barrier layer and a vegetated soil cover to protect the barrier layer. *See* 40 C.F.R. § 257.102(d).

DE Carolinas' closure plan for the Marshall Plant, as described above, must be approved by NC DEQ. DE Carolinas expects a decision from NC DEQ on the Marshall Plant closure plan in 2020.

The Company has selected closure by excavation for the areas of the Ash Basin where Phases 2 through 4 of the Industrial Landfill are proposed to be constructed. CCRs from those areas will be placed in the Ash Basin to be closed-in-place pursuant to the CCR Rule.

III. Issues Addressed in the North Carolina Rate Proceeding

The issues surrounding the DE Carolinas' selected closure option and associated costs for the Marshall Plant were fully litigated in the North Carolina rate proceeding, North Carolina Utilities Commission ("NCUC" or the "Commission") Docket No. E-7, Sub 1146. Three intervenors, the Sierra Club, the North Carolina Attorney General's Office ("AGO") and the Public Staff of the NCUC ("Public Staff"), submitted testimony and evidence regarding the Company's proposed closure plan and cost-recovery relating to the Marshall Plant.

The Sierra Club disagreed with DE Carolinas' selection of the cap-in-place closure method for the Marshall Plant. The Sierra Club asserted that continued storage of coal ash at

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Marshall poses significant environmental risks, and that removal of coal ash from the Ash Basin would be more protective of the environment. The Sierra Club also contended that there are documented impacts to groundwater at these basins and that a cap will not prevent lateral inflow of groundwater from adjacent areas, and concluded that closure in place at the Marshall Plant will allow continued contamination of downgradient groundwater and violate the technical standards of the CCR Rule. The Sierra Club also criticized the Company for continuing to operate unlined disposal areas after the mid-1970s, arguing that it was more cost-effective and commonplace to build lined landfills beginning since the mid-1970s. NCUC Docket No. E-7, Sub 1146, Tr. Vol. 6, pp. 19-118, 120-124.

At the hearing, the Sierra Club, however, did not dispute on cross examination by the Company's counsel that the EPA had concluded in 1988 that only about 25% of all facilities had liners to reduce offsite mitigation of leachate, that only 40% of generating units built since 1975 had liners, that only 15% had leachate collection systems, that only one-third had groundwater monitoring systems and that such systems were more common at newer facilities, and that coal combustion waste streams generally do not exhibit hazardous characteristics. The Sierra Club witness also confirmed that he did not conduct a site-by-site engineering analysis of the cost to the Company to close and remediate its ash basins and construct new, lined dry landfills. Tr. Vol. 6, pp. 143-50.

The AGO alleged that DE Carolinas violated dam safety standards because, between 1996 and 2009, inspectors expressed concerns regarding stability of the ash basin dams. The AGO also alleged water quality violations at the Marshall Plant. Tr. Vol. 11, pp. 259-267. The AGO admitted that its analysis did not identify any specific costs that could have been lower or should be disallowed, and that it was not in a position to say what the Company should or should not have done with respect to environmental compliance at the time the Company's CCR remediation costs were incurred. Yet, the AGO contended that it *could* opine on how the Company should have managed its coal ash in the past. Vol. 11, pp. 279 – Tr. Vol. 12, pp. 13-24.

The Public Staff did not recommend any specific disallowances to the Company's proposed cost-recovery relating to the Marshall Plant. The Public Staff argued that, because CAMA does not require the submission of proposed closure plans for low and intermediate risk impoundments until December 31, 2019, a prudence review of the Marshall Plant's closure plans at this time would be premature. The Public Staff therefore took no exception in the case to DE Carolinas' current proposed closure method for the coal ash basins located at Marshall. Tr. Vol. 21, pp. 54-57.

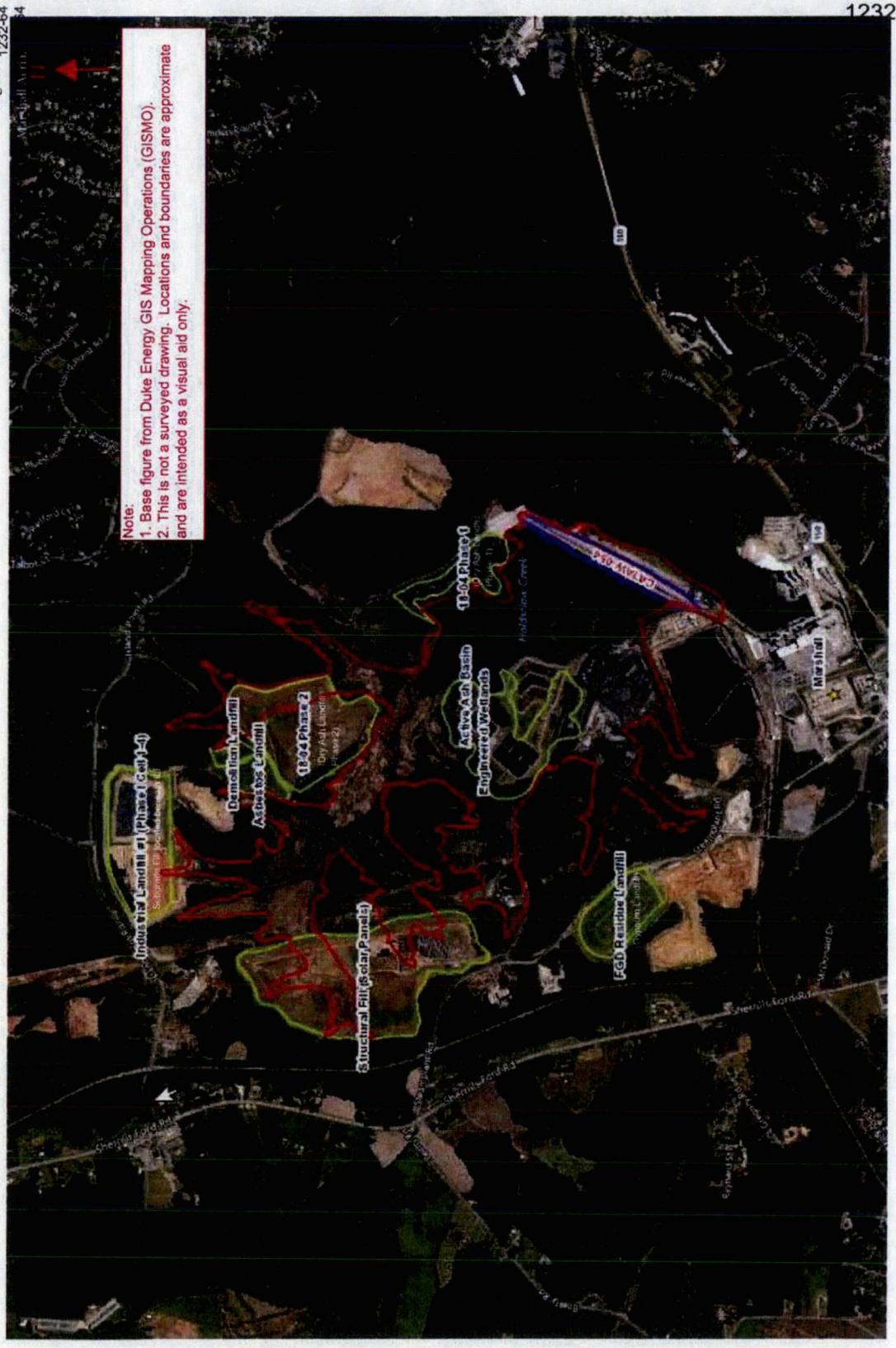
After reviewing the testimony and evidence offered by the Company and intervenors regarding proposed costs for recovery in relation to the Marshall Plant, the Commission held that the closure plan for the Marshall Plant was appropriate. *Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction* ("NCUC Order") issued on June, 22, 2018 in Docket No. E-7, Sub 1146. As an initial matter, the NCUC rejected the Public Staff's argument that because DE Carolinas was not yet required to submit its closure plans for Marshall to DEQ until 2019, review of the Marshall Plant was immature. Specifically, with respect to pending determinations by DEQ, the Commission stated that they would not "delay [their] work in order to wait for [the] agenc[y] to complete their work," and concluded that review of

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Marshall was proper at this time and that CCR cost recovery would not be provisional. NCUC Order at 323-324.

The NCUC also rejected the Sierra Club's contentions, and found that witnesses for the Sierra Club had made no effort to quantify the economic impact of their recommendation, which was found to actually increase costs for customers if accepted. Instead, the Commission found Company witness Jon Kerin's testimony was "persuas[ive]" and approved the closure plan for the Marshall Plant. The Commission, therefore, held that the requested costs for Marshall Plant were reasonably and prudently incurred. NCUC Order at 270.

Additionally, the Commission rejected the AGO's proposed disallowance theory outright. As noted by the Commission, the various intervenor's theories relating to disallowance were "all over the map" and "deficiently inconsistent." *Id.* at 317. Therefore, no costs proposed by the Company for recovery in DE Carolinas' general cost of service rate relating to the Marshall Plant's ash management practices or closure plans were disallowed. *Id.* at 270.


Note:
1. Base figure from Duke Energy GIS Mapping Operations (GISMO).
2. This is not a surveyed drawing. Locations and boundaries are approximate and are intended as a visual aid only.
Industrial Landfill #1 (Phase I Cell 1-4)
Domestic Landfill
Asbestos Landfill
1964 Phase 2
Dry Ash Landfill Phase 2
Active Ash Basin
Engineered Wetlands
1964 Phase 1
Dry Ash Landfill
Structural Fill (Solar Panels)
FGD Residue Landfill
Marshall
Sherrills Ford Rd

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Riverbend Steam Station

Location:

- **Gaston County, North Carolina**

Historic CCR Storage Areas:

- **Primary Ash Basin**
- **Secondary Ash Basin**
- **Cinder Pit Storage Area**
- **Dry Ash Stack**

Closure Option Selected:

- **Excavation**

I. History of CCR Management

Duke Energy Carolinas, LLC's ("DE Carolinas" or the "Company") Riverbend Steam Station ("Riverbend Plant") is located in Mt. Holly, Gaston County, North Carolina along the western bank of the Catawba River. Commercial operations at the Riverbend Plant began in 1929 when its two original coal-fired electric generation units went on line. The Company added five additional generation units in 1954. Coal combustion residuals ("CCR") from the two original units were stored within the Cinder Pit Storage Area from 1929 to 1957. The CCR were transported to the Cinder Pit Storage Area via rail car. The Cinder Pit Storage Area predominately contains dry bottom ash because this area predates the installation of precipitators and wet sluicing. In 1957, the Company constructed a single cell ash basin and began sluicing CCR. The single cell ash basin was vertically expanded and divided in 1979 to create what are referred to now as the Primary Ash Basin and the Secondary Ash Basin. When CCR were sluiced at the Riverbend Plant, the Primary Ash Basin was generally used for initial treatment of wastewater, with secondary treatment occurring in the Secondary Ash Basin before discharge to the Catawba River. During the time when the Riverbend Plant was actively sluicing CCR to the ash basins, the Company would periodically remove ash to prolong the life of the basins. The Dry Ash Stack was constructed using the removed CCR from the basins. The Riverbend Plant stopped sluicing CCRs in 2013 when all of the facility's coal-fired units were retired.

II. Closure Plan

DE Carolinas' closure plan for the Riverbend Plant entails complete excavation of all CCR storage areas and placement offsite pursuant to state and federal regulatory requirements.

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The Riverbend Plant is not currently subject to CCR Rule provisions regarding basin closure. However, in response to the United States Court of Appeals for the District of Columbia Circuit's August 21, 2018 decision in *USWAG v. EPA* (No. 15-1219), EPA is expected to undertake a rulemaking that would regulate inactive impoundments at closed power plants, including the Riverbend basins.

Due to the Riverbend Plant's designation as a "high priority site" by the North Carolina General Assembly, closure of its ash basins must be completed by August 2019. *See* Coal Ash Management Act, Senate Bill 729. DE Carolinas initially contracted with Waste Management Inc. to begin removing CCR from the Dry Ash Stack at the Riverbend Plant and transporting them to the R&B Landfill in Homer, Georgia via truck. DE Carolinas also commenced transporting excavated CCR from Riverbend to the Company's permitted landfill at Marshall Steam Station ("Marshall Plant") in July 2015. Transportation of CCR to R&B Landfill ceased in September 2015, and the Company then initiated the transportation of ash to the Brickhaven Mine Structural Fill in Chatham County, North Carolina. The Company ended transports of CCR to Marshall in the first quarter of 2016. DE Carolinas continue to transport excavated ash to the Brickhaven Mine via rail, which will continue until all CCR are removed.

III. Issues Addressed in the North Carolina Rate Proceeding

The issues surrounding the Company's selection of a closure option for the Riverbend Plant and the associated costs were fully litigated in the North Carolina rate proceeding, North Carolina Utilities Commission ("NCUC" or the "Commission") Docket No. E-7, Sub 1146.

The Public Staff of the NCUC ("Public Staff") took no exception to DE Carolinas' overall ash management plan at the Riverbend Plant, including its decision to remove CCR material from the ash stack area or the cinder pit, even though those units are not subject to CAMA or CCR. The Public Staff did, however, object to DE Carolinas' decision to transport and dispose of CCR material from the ash stack to the R&B Landfill in Homer, Georgia and to the Brickhaven Mine. The Public Staff argued that the Brickhaven Mine did not present any scheduling advantages or reduced costs, and instead resulted in increased delays and litigation resulting from community opposition to the proposed project, and suggested that the Marshall Plant should have instead been utilized for the disposal of all ash from the Riverbend Plant. The Public Staff therefore recommended the Commission disallow the $489,000 as the premium that was paid to dispose of CCR material from the Dry Ash Stack at the R&B Landfill in Homer, Georgia versus the Marshall Plant. Tr. Vol. 21, pp. 70-86.

Company witness Jon Kerin rebutted the Public Staff's testimony and explained that the aggressive excavation schedule was due to the North Carolina Department of Environmental Quality's ("NC DEQ") requirement that DE Carolinas begin excavation of ash from the Riverbend Plant within 60 days of receiving its storm water permit from NC DEQ. When DE Carolinas received the permit in May 2015, the Marshall Plant was not available to accept Riverbend ash. While the Company was exploring long-term options to receive the Riverbend Plant's ash, it was still obligated to meet NC DEQ's deadline, meaning the Company needed to contract with a company to haul and dispose of the Riverbend Plant's ash within a minimal amount of time. DE Carolinas eventually received approval to dispose of the Riverbend Plant's

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ash at the Marshall Plant and began doing so in July 2015. The Commission was persuaded by witness Kerin's testimony that DE Carolinas would not have been able to send ash to the Marshall Plant within the timeframes required by NC DEQ. *Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction,* at 308-309, Docket No. E-7, Sub 1146 (Jun. 22, 2018) (*"DE Carolinas NCUC Order"*).

The Commission concluded that the Public Staff's recommended disallowance for the Riverbend Plant, similar to its recommended disallowances for other plants, was based on a "perfect world" scenario where the Company could have accurately predicted permitting uncertainties. *Id.* at 309. Further, the Commission declined to approve disallowances where DE Carolinas promptly achieved compliance with NC DEQ's 60-day excavation requirement, since it used the CAMA deadlines as the framework by which to access prudency relating to the Company's closure plans. In conclusion, the Commission held that the Company acted reasonably and prudently in beginning excavation at the Riverbend Plant as soon as practicable in order to ensure compliance with NC DEQ's requirements, and that the temporary disposal solution was therefore also reasonable and prudent. *Id.* at 308-309.

Riverbend Aerial Photo

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W.S. Lee Steam Station

Location:

- **Anderson County, South Carolina**

Historic CCR Storage Areas:

- **Inactive Ash Basin**
- **Old Ash Fill**
- **Primary Ash Basin**
- **Secondary Ash Basin**
- **Structural Fill**

Closure Option Selected:

- **Excavation**

I. History of CCR Management

Duke Energy Carolinas, LLC's ("DE Carolinas" or the "Company") W.S. Lee Steam Station ("W.S. Lee Plant") is located along the Saluda River in Anderson County, South Carolina. The W.S. Lee Plant began operations in 1951 and consisted of three coal-fired electric generating units. DE Carolinas retired the W.S. Lee Plant as a coal plant in 2014 and now operates a natural gas combined-cycle plant at the site.

The W.S. Lee Plant's first ash basin, now known as the Inactive Ash Basin, was constructed in 1951 and received coal combustion residuals ("CCR") from 1951 through 1974. The Primary and Secondary Ash Basins were constructed in 1974 and 1978 and received sluiced CCR and other wastewater streams until November 2014. Periodically, CCR were removed from the ash basins and placed at other locations onsite, including the Old Ash Fill and the Structural Fill. The W.S. Lee Plant has not generated CCR since the decommissioning of the site's coal-fired units in 2014. Since 2014, the Primary and Secondary Ash Basins have only received wastewater from the combined-cycle facilities and other associated facility wastewaters.

II. Closure Plan

DE Carolinas' closure plan for the W.S. Lee Plant entails excavation and placement of CCR in permitted offsite and onsite landfills consistent with South Carolina and federal regulatory requirements. CCR from the Inactive Ash Basin and the Old Ash Fill are being excavated pursuant to a Consent Agreement (14-13-HW) between DE Carolinas and the South Carolina Department of Health and Environmental Control ("SCDHEC"). On December 18, 2014 in a letter to SCDHEC, the Company provided its long-term strategy for managing CCR

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from the Primary and Secondary Ash Basins as well as the Structural Fill. In this letter, the Company committed to excavating the Primary and Secondary Ash Basins and the Structural Fill and placing the CCR in a lined, long-term solution. In addition to meeting its obligations under South Carolina regulatory requirements, the Company's closure plan for the Primary and Secondary Ash Basins satisfies the federal CCR Rule's closure requirements.

The majority of CCR from the W.S. Lee Plant will be excavated and placed in an onsite, permitted landfill located within the footprint of the Secondary Ash Basin. During the planning and permitting of the onsite landfill and in order to meet the deadlines of the Consent Agreement, CCR from the Inactive Ash Basin and Old Ash Fill have been excavated and transported to the R&B Landfill in Homer, Georgia. The remaining CCR from the Primary and Secondary Ash Basins and the Structural Fill will be consolidated and placed in the onsite landfill. When complete, the onsite landfill will be closed and vegetated.

III. Issues Addressed in the North Carolina Rate Proceeding

The issues surrounding the Company's selected closure option for the W.S. Lee Plant and the associated costs were fully litigated in the North Carolina rate proceeding, North Carolina Utility Commission ("NCUC" or the "Commission") Docket No. E-7, Sub 1146.

The Public Staff of the NCUC ("Public Staff") agreed with DE Carolinas' decision to utilize an onsite landfill to dispose of the CCR from the Primary Ash Basin and Secondary Ash Basin at the W.S. Lee Plant, noting that this approach was consistent with Duke Energy's stated guiding principles and provided a lower cost closure solution compared to an offsite landfill. NCUC Docket No. E-7, Sub 1146, Tr. Vol. 21, pp. 39-40. The Public Staff also concurred with DE Carolinas' decision to take remedial actions to address CCR stored in the Inactive Ash Basin and the Old Ash Fill to mitigate risk associated with long-term environmental issues at the site. However, the Public Staff took exception with DE Carolinas' decision to immediately begin excavation and transportation of CCR to the R&B landfill in Homer, Georgia.

Instead, the Public Staff testified that DE Carolinas could have repaired the dikes of the Inactive Ash Basin in 2014, and thereby avoided the need to immediately excavate the site. The Public Staff also contended that DE Carolinas failed to provide a regulatory or technical reason to substantiate immediate removal of the ash from the Inactive Ash Basin. The Public Staff recommended that the Commission disallow approximately $27 million from DE Carolinas' request, which represents the premium associated with the costs incurred by DE Carolinas to transport ash to Homer, Georgia, as opposed to excavating and landfilling on-site. *Id.* at pp. 40-41. Additionally, the Public Staff took exception with DE Carolinas' plan to excavate and dispose of the coal ash material contained in the Structural Fill area at the W.S. Lee Plant. *Id.*

In its *Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction* ("NCUC DE Carolinas Order"), issued on June 22, 2018, the Commission found that the Company's overall ash management plan for the W.S. Lee Plant, which includes building an onsite landfill to store ash from the Primary and Secondary ash basins, is reasonable and prudent. The Commission also agreed with the Company that action was necessary to excavate the Inactive Ash Basin and Old Ash Fill to mitigate risk associated with the long-term environmental

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issues, based on the proximity of the Inactive Ash Basin to the Saluda River. The Commission therefore declined to accept the Public Staff's conclusion that delaying excavation of those sites until after completion of the onsite landfill would have been acceptable to South Carolina regulators or would have eliminated the risk to the Saluda River. NCUC DE Carolinas Order at 309. Noting DE Carolinas' requirement to excavate the Inactive Ash Basin and Old Ash Fill by December 31, 2017, due to the Company's agreement with SCDHEC, the Commission held that the Public Staff's plan—which would have included a seven-year delay in excavation— was practically infeasible. Accordingly, the Commission rejected the Public Staff's contention that DE Carolinas' decision with regard to excavation was unreasonable or imprudent. *Id.* at 309-310.

Additionally, the Commission agreed with DE Carolinas that there were significant flaws in the Public Staff's plan, even assuming the plan would have been acceptable to South Carolina regulators. The Public Staff acknowledged that in certain areas of the Inactive Ash Basin that abut the Saluda River, the steep, 1:1 slopes are covered in trees and vegetation. Therefore, the Public Staff conceded that trees would have to be removed to execute its proposal, and that its analysis did not consider how the trees would be removed (with heavy equipment or chain saws) or how tree removal might affect slope stability. The Public Staff also conceded that soft, alluvial clays run beneath the Inactive Ash Basin and the steep slopes where the proposed work would occur, and that the dam itself is partially constructed from ash and sandy silt that would also have to be excavated. *Id.* at 310.

In contrast to the Public Staff's flawed analysis, the Commission found DE Carolinas' evidence "persuasive" and "credible" as presented in witness Jon Kerin's testimony, which explained that the Public Staff's proposed grading and stability project to delay excavation would have posed undue risk to bank stability, worker safety, and risk of an ash release into the Saluda River. The Commission therefore concluded that these new risks were understandably unacceptable to DE Carolinas, and that it was reasonable and prudent for the Company to immediately excavate the Inactive Ash Basin and Old Ash Fill, in compliance with its agreement with SCDHEC. Further, the Commission held that because no onsite landfill was available for the disposal of the Inactive Ash Basin and Old Ash Fill materials at the time they were excavated, that it was also reasonable and prudent for the Company to utilize the R&B landfill in Homer, Georgia for disposal of those materials. In conclusion, the Commission rejected all disallowances advocated by the Public Staff with respect to DE Carolinas' ash management and closure plans at W.S. Lee. *Id.* at 311.

Finally, while no party suggested any disallowances with respect to the Company's plan to mitigate future risk of operating two ash management structures, which would be the result if it did not excavate the Structural Fill Area at the W.S. Lee Plant in the future, again based on witness Kerin's testimony, the Commission agreed that this plan is reasonable and prudent. Witness Kerin's description of the Company's decision to consolidate all remaining ash at the W.S. Lee Plant through a single management structure—the landfill—in order to resolve SCDHEC's environmental concerns, was superior to the "piecemeal" approach proposed by the Public Staff. Additionally, requiring the Company to later excavate the Structural Fill area after the landfill project was completed, would cause the Company to incur greater costs than it would incur by managing the ash while the landfill project is ongoing. Therefore, the Commission held

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DE Carolinas' plan to excavate the area now as a reasonable and prudent approach to mitigation against potential future ash related liability and costs. *Id.*

W.S. Lee Aerial

A (KERIN) My rebuttal testimony on behalf of Duke Energy Carolinas, LLC, responds to direct testimony of Office of Regulatory Staff Witness Dan Wittliff and SCEUC Witness Kevin O'Donnell.

No witnesses in this case have challenged Duke Energy Carolinas' closure strategy or its ash basins under applicable federal or state regulatory requirements, nor have any witnesses in this case alleged that the Company has taken any actions that are unreasonable or imprudent. Instead, Witness Wittliff and O'Donnell asked the Commission to simply ignore the North Carolina Ash Management Act and its requirements based on their assertion that compliance with CAMA is too expensive for South Carolina customers.

I disagree with the recommendation that all compliance costs attributed to North Carolina's Coal Ash Management Act, CAMA, should be disallowed for the Company's Riverbend, Buck, and Dan River sites. Like South Carolina and other states in the country, North Carolina has adopted environmental policies and preferences for coal ash disposal that complement federal closure requirements under the CCR Rule. Duke Energy Carolinas is obligated to follow state regulations and is doing so in an

environmentally responsible and cost-effective manner. The suggestion that South Carolina customers can enjoy all the savings of sharing power generation units with North Carolina customers but can ignore any compliance costs with valid laws, would present great harm -- grave harm to South Carolina customers if taken to its logical conclusions. I also explain that in addition to their misguided proposals to ignore valid CAMA costs, Mr. Wittliff and Mr. O'Donnell's specific proposed disallowances are based on incorrect facts and unrealistic assumptions.

First, I disagree with ORS Witness Wittliff's erroneous conclusion that, absent CAMA, the Company could have left its ash basins at Riverbend untouched indefinitely because those basins are not covered by the federal CCR rule. The provisions that DE Carolinas could or would have taken a "do nothing" approach for Riverbend CCR units, when similar basins at the Company's South Carolina W.S. Lee station, that are also not covered by the federal CCR rule where -- were being excavated, is wholly unrealistic. I also explain that Mr. Wittliff has conveniently ignored the fact that provisions in the federal CCR rule that he relies

upon to support his "do nothing" approach at Riverbend site have been found to be arbitrary, capricious, and without factual support by the DC Federal Court of Appeals and have been remanded to the EPA.

I also disagree with ORS Witness Wittliff's contention that CAMA's ash beneficiation reuse ash recycling requirement and associated costs from its Duke Energy Carolinas' Buck site and Duke Energy Progress, LLC's, H.F. Lee, and Cape Fear sites are more costly to South Carolina customers than the federal CCR Rule. In fact, CAMA's ash beneficiation requirements actually result in a net savings for South Carolina customers, and under ORS's proposal, those net savings would all need to be given to North Carolina customers only.

Finally, I disagree with Witness Wittliff's contention that Dan River closure schedule under CAMA has increased costs for South Carolina customers. Mr. Wittliff incorrectly assumes that costs could've been started -- that -- excuse me -- closure could've been started much later at the Dan River under the CCR rule, and this is inaccurate. He compounds his error by assuming that, over time, resources become cheaper as demand for them grows

stronger, and this conclusion is logically unsound and factually inaccurate.

With respect to Witness O'Donnell, his analysis and recommendations of a 75 percent disallowance of DE Carolinas' coal ash costs relies on multiple analytical flaws and each -- and that are each fatal to his conclusion. Specifically, I do not agree with his conclusion and his national comparison of CCR asset retirement obligations, or ARO, amounts shown that DE Carolinas' ARO is overstated by 75 percent. I enumerate 22 factors that Mr. O'Donnell does not appear to have considered, which must be accounted for in order to seriously attempt this type of analysis. I explain that Mr. O'Donnell actually considered those factors if -- if -- excuse me. I explained that had Mr. O'Donnell actually considered those factors, he would have discovered that his analysis was invalid. I recommend that the Commission consider the reasonableness of Duke Energy Carolinas' ARO amount on its own merits, based on the facts of this case, without regard to Mr. O'Donnell's speculative proposal.

This concludes the summary of my rebuttal testimony.

(PURSUANT TO PREVIOUS INSTRUCTION,
THE PREFILED REBUTTAL TESTIMONY
OF JON F. KERIN FOLLOWS.)

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BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2018-319-E

IN THE MATTER OF:

Application of Duke Energy Carolinas, LLC	)	**REBUTTAL TESTIMONY OF**
For Adjustments in Electric Rate Schedules	)	**JON F. KERIN**
and Tariffs and Request for Accounting Order	)	**FOR DUKE ENERGY**
	)	**CAROLINAS, LLC**

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, OCCUPATION, TITLE, AND BUSINESS ADDRESS.

A. My name is Jon F. Kerin. My business address is 411 Fayetteville Street, Raleigh, North Carolina. I am employed by Duke Energy Business Services, LLC, as Vice President, Coal Combustion Products ("CCP") Operations, Maintenance and Governance.

Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS REBUTTAL TESTIMONY?

A. I am submitting this rebuttal testimony on behalf of Duke Energy Carolinas, LLC ("DE Carolinas," or the "Company").

Q. ARE YOU THE SAME JON KERIN WHO FILED DIRECT TESTIMONY IN THIS CASE?

A. Yes.

Q. PLEASE DISCUSS THE PURPOSE OF YOUR REBUTTAL TESTIMONY.

A. The purpose of my rebuttal testimony is to address several issues discussed in the direct testimony of intervenors that are related to the Company's request to recover its compliance expenses for managing coal combustion residuals ("CCR"). Specifically, I will address issues raised in the testimonies of Office of Regulatory Staff ("ORS") witness Dan J. Wittliff and South Carolina Energy Users Committee ("SCEUC") witness Kevin W. O'Donnell.

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Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY.

A. Mr. Wittliff proposes serious and financially harmful disallowances of costs the Company has prudently incurred in closing ash basins. He proposes disallowing a total of $469,894,472 for Riverbend, Dan River, and Buck based on the mere fact that there is a state border running through the Company's service territory, failing to appropriately acknowledge the shared costs and benefits of the generation serving DE Carolinas' customers in South Carolina and North Carolina. The single basis for Mr. Wittliff's recommended disallowances is that DE Carolinas is complying with a valid North Carolina law (the Coal Ash Management Act or "CAMA"). Mr. Wittliff contends that South Carolina customers should not pay for that compliance because, in his view, CAMA is too expensive. This position, that South Carolina customers can enjoy all the savings of sharing power generation units with North Carolina customers but can ignore any legal compliance costs that he deems too expensive, would present grave harm to South Carolina customers if taken to its logical conclusion (which Company witness Dr. Julius Wright will address in his rebuttal testimony). His recommendation also departs from accounting standards, as explained by Company witness Doss. In addition to being bad policy with dire consequences to the State, Mr. Wittliff's disallowance methodology and recommendations are based on incorrect and unrealistic assumptions, and I will reveal these errors and flaws in my rebuttal testimony.

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Mr. Wittliff also attempts to use this forum as new ground to rehash arguments before the Public Service Commission's ("PSC" or the "Commission") that were fully litigated in North Carolina and rejected by the North Carolina Utilities Commission ("NCUC") in DE Carolinas' North Carolina rate case (NCUC Docket No. E-7, Sub 1146). In that case, Mr. Wittliff's arguments were essentially a smear campaign directed at the Company presumably to punish the Company for the Dan River incident—the costs of which are not being charged to South Carolina customers. In fact, approximately two-thirds of Mr. Wittliff's testimony rehashes the same "Duke Energy is bad" arguments that he submitted on behalf of the Attorney General's Office to the NCUC. Those arguments were fully litigated and, for good reasons, rejected in the North Carolina case. Moreover, such assertions are not relevant to his recommended disallowances in this case and the Commission should not have to spend multiple days of hearing time listening to them as the NCUC had to endure.

Similar to Mr. Wittliff, SCEUC witness O'Donnell's coal ash testimony presents the same incorrect and rejected arguments that he made in the Company's North Carolina case. Like Mr. Wittliff, Mr. O'Donnell also contends that CAMA is more expensive than the federal CCR Rule and that South Carolina should be free to ignore any valid law that SCEUC deems to be too expensive. Mr. O'Donnell simply suggests that a 75 percent disallowance of all the Company's coal ash

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compliance costs seems correct to him based on his perusal of what he contends are national coal ash compliance costs in other states. Notwithstanding the obvious invalidity of this position, I will explain the multiple errors that Mr. O'Donnell commits and will demonstrate why his "thumb in the air" method of cost recovery cannot and should not be taken seriously by this Commission.

II. RESPONSE TO ORS WITNESS WITTLIFF

Q. IN GENERAL, WHAT IS YOUR OVERALL IMPRESSION OF MR. WITTLIFF'S TESTIMONY?

A. I do not believe that Mr. Wittliff's testimony is helpful to the Commission's assessment of DE Carolinas' reasonable and prudent coal ash expenses in this docket, and therefore should be rejected.

Q. WHY DO YOU BELIEVE THAT MR. WITTLIFF'S TESTIMONY IS NOT USEFUL?

A. Mr. Wittliff spends approximately four pages of his testimony discussing his engineering experience and his experience with coal ash, yet he offers no substantive engineering opinions. Mr. Wittliff's recommended disallowances are not based on any finding of imprudence regarding the Company's closure strategies or execution thereof. Instead, the disallowances are based entirely on a poor regulatory policy argument that the Company should not be able to recover expenses to comply with a North Carolina law. If the Commission rejects Mr. Wittliff's poor policy argument, which it

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should, then none of Mr. Wittliff's testimony matters in this proceeding because every conclusion and recommendation that he reaches in his testimony is dependent on the Commission accepting that ill-founded argument.

Q. HOW WOULD YOU CHARACTERIZE THE BULK OF MR. WITTLIFF'S TESTIMONY?

A. The first twenty-nine pages of Mr. Wittliff's testimony largely mirror his testimony in the North Carolina case and the rhetoric recycled in those pages has nothing at all to do with the theory that he is attempting to advance here. He discusses the evolution of environmental regulations relating to CCR, historic utility industry practices for managing CCR, the Company's historic management practices, and the genesis of CAMA. None of this testimony, however, is relevant to Mr. Wittliff's substantive recommendations to this Commission. While I vehemently disagree with Mr. Wittliff's mischaracterizations of the industry's and the Company's CCR management practices, they are not relevant to the Company's request to recover its compliance costs in this case.

Q. WHY DO YOU SAY THAT THE BULK OF MR. WITTLIFF'S TESTIMONY IS IRRELEVANT?

A. ORS's single recommendation to the Commission is to disallow costs that the Company has incurred to comply with North Carolina law, i.e. CAMA. Mr. Wittliff insinuates that DE Carolinas caused CAMA,

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which was an argument that completely failed in North Carolina and for good reason. Mr. Wittliff has apparently seen fit to raise a losing argument again here.[1] However, what is missing from Mr. Wittliff's testimony is most important. He does not allege that CAMA is a punitive law nor can he, because it is not. He does not allege that CAMA is an unreasonable or excessive law for North Carolina or if adopted elsewhere, because it is not and does not. He does not allege that CAMA reflects bad environmental policy, nor can he, because it does not. Nor does he allege that CAMA's closure requirements conflict with the closure options available under the EPA's CCR Rule, nor can he, because it does not. Further, he does not allege that the Company took any imprudent or unreasonable action to comply with CAMA and the CCR Rule, nor can he, because it did not. His recommended disallowances are entirely based on the fact that there is a border between South Carolina and North Carolina. Therefore, Mr. Wittliff's discussion of the Company's CCR management history is irrelevant to his recommended disallowances and is just a designed distraction from his flawed and irresponsible theory of disallowance.

[1] *See Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction*, Docket No. E-7, Sub 1146 at 270-72 (NCUC June 22, 2018).

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Q. ARE YOU ADDRESSING REGULATORY IMPLICATIONS OF THE ORS'S RECOMMENDED DISALLOWANCE POLICY?

A. No, not directly. Company witness Dr. Wright discusses the regulatory implications and flaws of ORS's recommended disallowance policy for CCR expenses in his rebuttal testimony, but I do not need to be a policy expert or a lawyer to know that Mr. Wittliff's poor policy proposal lacks fundamental fairness.

Q. DO YOU HAVE ANY GENERAL OBSERVATIONS REGARDING MR. WITTLIFF'S DISALLOWANCE TESTIMONY?

A. Yes. At the outset, I will note that Mr. Wittliff's reasoning is entirely dependent on speculating what the Company hypothetically would or would not have done in the absence of CAMA. That is not reality, and the reasonableness and prudence of the Company's costs should be judged in light of actual circumstances. Mr. Wittliff should be held to his own standard. (Wittliff Direct 31:2 ("speculation...should not be considered in this proceeding")). Keeping this in mind, I address the flawed assumptions upon which Mr. Wittliff's recommended disallowances are based and will demonstrate that his suggested disallowances (totaling $469,894,472 – Riverbend ($316,680,665), Dan River ($116,669,019), and Buck ($36,544,788)) are unfounded.

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Q. PLEASE SUMMARIZE MR. WITTLIFF'S BASIS FOR A DISALLOWANCE OF ALL RIVERBEND CCR COSTS.

A. Mr. Wittliff argues that the Company is only closing the ash basins at Riverbend because it is required to do so under CAMA. If CAMA did not exist, he argues, the Company would only be required to comply with the federal CCR Rule and would have left the ash basins at Riverbend untouched indefinitely. Accordingly, he recommends a disallowance of all Riverbend compliance costs incurred to-date.

Q. HOW DO YOU RESPOND TO MR. WITTLIFF'S RECOMMENDED DISALLOWANCE FOR RIVERBEND COSTS?

A. Mr. Wittliff's recommended disallowance of Riverbend expenses should be rejected because his position defies belief when considered in the context of the real world[2]. The suggestion that DE Carolinas could or would have taken a "do nothing" approach to Riverbend's ash basins, while at the same time closing all of its other ash basins in South Carolina and North Carolina, defies regulatory reality. Arguing this "do nothing" approach would have been reasonable and accepted by regulators and stakeholders for Riverbend's inactive CCR units, when similar inactive basins at the Company's W.S. Lee station were being

[2] I again note that my testimony here factually rebutting Mr. Wittliff's arguments is not an acceptance of his flawed policy suggestion that CAMA requirements can simply be ignored. Rather, my testimony demonstrates that Mr. Wittliff's theories fail no matter how ones considers them.

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excavated, is an absurd proposition. In fact, under Mr. Wittliff's faulty logic, it follows that South Carolina customers should refund North Carolina customers all money spent for excavating ash from the inactive basins at the W.S. Lee site in South Carolina because they were otherwise exempt from the CCR Rule.

Additionally, Mr. Wittliff acknowledges that after the CCR Rule was promulgated containing the provision that excluded retired ash basins such as those present at the Riverbend and the W.S. Lee sites, the EPA was sued in 2015. That lawsuit alleged, among other things, that the exclusion of inactive CCR surface impoundments at retired power plants from the CCR Rule was arbitrary and capricious because it failed to meet the Resource Conservation and Recovery Act's ("RCRA") standard of "no reasonable probability of adverse effects." In August 2018, the United States Court of Appeals for the District of Columbia Circuit found "the Rule's legacy ponds exemption is unreasoned, arbitrary, and capricious" and vacated and remanded these provisions of the CCR Rule to EPA. As a result, EPA will have to affirmatively undertake regulatory changes to the CCR Rule to implement the court's judgment, including adding new provisions to the rule specifically regulating legacy impoundments. Although Mr. Wittliff acknowledges this lawsuit and rulemaking, he tells the Commission to ignore these real-world facts and only focus on his hypothetical view of how the world may have turned out had CAMA never been passed.

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Q. PLEASE SUMMARIZE MR. WITTLIFF'S BASIS FOR A DISALLOWANCE OF DAN RIVER CCR COSTS.

A. Mr. Wittliff argues that, absent CAMA, DE Carolinas could have started closure of Dan River's CCR units later. He then recommends that the Commission disallow the Company's site closure costs that were incurred earlier than they allegedly would have been absent CAMA.

Q. HOW DO YOU RESPOND TO MR. WITTLIFF'S RECOMMENDED DISALLOWANCE FOR DAN RIVER COSTS?

A. Mr. Wittliff does not take issue with the closure strategy or the Company's costs at Dan River. Therefore, only the timing of the Company's costs are in dispute, and Mr. Wittliff apparently assumes that the price of labor, supplies, materials, and equipment gets cheaper as time passes and demand increases. This assertion, of course, defies common sense.

Q. WOULD MR. WITTLIFF'S PROPOSED TIMELINE FOR DAN RIVER CLOSURE UNDER THE CCR RULE HAVE REDUCED CLOSURE COSTS?

A. No. Mr. Wittliff alleges that CAMA accelerated DE Carolina's closure costs at Dan River. While an accelerated closure schedule would theoretically condense expenditures in the short term, an extended closure schedule, as proposed by Mr. Wittliff, would actually result in higher total project costs. These higher costs would be attributable to

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increased overhead and changing market conditions, like vendor and resource availability. The Company is ahead of most utilities in the region in terms of its progress in achieving ash basin closure. If the Company delayed its closure and extended the closure schedule as proposed by Mr. Wittliff, it would be competing with other utilities for limited, experienced vendors and specialized resources. In fact, the Company has seen these real-world price increases take place, a fact that Mr. Wittliff ignores in his hypothetical version of reality. For example, over the past three years labor costs for truck drivers and equipment operators have increased eight and nine percent, respectively.

Q. DO YOU TAKE ISSUE WITH HOW MR. WITTLIFF ATTEMPTED TO QUANTIFY COSTS AT DAN RIVER THAT HE ALLEGES WOULD NOT HAVE BEEN SPENT UNDER THE FEDERAL CCR RULE?

A. Yes.[3] Mr. Wittliff's theory that the Company would not have been required to commence closure under the CCR Rule until October 31, 2020 at Dan River is completely wrong. In fact, it seems that Mr. Wittliff has inadvertently proven his erroneous assumption with his own testimony where he cites Company Witness Kerin's Exhibit 10:

> "The last volume of CCR for beneficial use was removed from the Dan River Primary Ash Basin on April 4, 2018, and, within

[3] Again, I reiterate that by pointing out Mr. Wittliff's incorrect assumptions in my testimony, I am not endorsing his attempt to segregate hypothetical CCR Rule-only and CAMA–only closure costs or his methodology.

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thirty (30) days, the basin commenced closure pursuant to 40 CFR 257.102(e)(1)(ii)." (Wittliff Direct 36:12-14).

Therefore, contrary to Mr. Wittliff's assumption, the CCR Rule would have required the Company to commence closure on May 4, 2018.

Mr. Wittliff's entire disallowance methodology and recommendation for Dan River depends on his assumption that the Company would not have commenced closure until 2020. Because that assumption is wrong, as demonstrated by his own testimony, the remainder of his testimony regarding his proposed Dan River disallowance is wrong as well.

Q. PLEASE SUMMARIZE MR. WITTLIFF'S BASIS FOR A DISALLOWANCE OF BUCK CCR COSTS.

A. Mr. Wittliff states that the Company is beneficiating ash at the Buck site only because of CAMA, which is true. He then argues that beneficiation is not a requirement under the federal CCR Rule; therefore, the Company should not be able to recover costs related to beneficiation at Buck.

Q. DO YOU TAKE ISSUE WITH HOW MR. WITTLIFF ATTEMPTED TO QUANTIFY CAMA COSTS AT BUCK?

A. Yes. In his testimony (page 35, lines 7-8), Mr. Wittliff states that based on his visit to the Buck site it "appears" that most of the work he saw looks like beneficiation work and therefore recent costs at the site must

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be for beneficiation. This, of course, is not a valid method of determining costs.

Q. DOES CAMA'S BENEFICIATION REQUIREMENT RESULT IN INCREASED COSTS FOR SOUTH CAROLINA?

A. Yes, at the Buck site, but not for South Carolina as a whole. In total, for both DE Carolinas and Duke Energy Progress, LLC ("DE Progress"), CAMA's beneficiation requirement actually results in a net savings for South Carolina. Between DE Carolinas and DE Progress, the Company selected three sites for beneficiation projects: Buck (DE Carolinas), Cape Fear (DE Progress), and H.F. Lee (DE Progress). Those sites were selected based on the quality and quantity of ash present at the site; logistical factors; and proximity to relevant markets where the beneficiated ash can be sold. The ash basins at those sites are being closed by excavation, and the ash is being beneficiated as opposed to being disposed of in permitted landfills. For the Buck site, estimated beneficiation costs are approximately $131 million more expensive than closure without beneficiation on a total system basis. However, for the Cape Fear and H.F. Lee sites, beneficiation under CAMA is providing an estimated net savings compared to closure without beneficiation of approximately $703 million on a total system basis. Mr. Wittliff and the ORS appear to have overlooked this fatal flaw to their policy argument that CAMA be ignored as if it never existed. Under their theory, if South Carolina customers will not pay the increased costs of CAMA

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beneficiation at the Buck site, then they fairly cannot enjoy the superior savings afforded by CAMA beneficiation at the Cape Fear and H.F. Lee sites and would owe North Carolina customers a net refund for those costs savings. This demonstrates how the ORS's ill-advised policy of ignoring laws it does not like creates absurd results in the real world.

Q. IS CAMA'S BENEFICIATION REQUIREMENT UNREASONABLE AS SUGGESTED BY MR. WITTLIFF?

A. No. DE Carolinas beneficiation projects at Buck, Cape Fear, and H.F. Lee utilize technology that was first deployed and approved in South Carolina at SCANA coal ash facilities.

III. RESPONSE TO SCEUC WITNESS O'DONNELL

Q. WITNESS O'DONNELL RECOMMENDS A DISALLOWANCE OF 75% OF CCR EXPENSES BASED ON WHAT HE CALLS A NATIONAL COMPARISON OF CCR ASSET RETIREMENT OBLIGATION (ARO) AMOUNTS. DO YOU AGREE WITH HIS CONCLUSIONS?

A. I do not. Mr. O'Donnell has simply repackaged his failed inflammatory theory from DE Carolinas' North Carolina rate case. Mr. O'Donnell's "analysis" has the same significance of taking a list of home sales prices from around the Southeast and the country without regard to the size, location, features, or age of the houses; listing them out in order of greatest to least cost; and then concluding that houses in certain areas of the country are overpriced because they are not the same as house prices

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in other places in America. While Mr. O'Donnell claims that he has taken fair measures to make his comparison of national CCR ARO amounts valid (such as applying a random 65 percent capacity factor to coal plants located at various CCR sites), I do not see where Mr. O'Donnell has accounted for or even considered the following factors in his analysis:

a. The number of coal plants in the Company's fleet;

b. The type of coal plants in the Company's fleet;

c. The age of the plants in the Company's fleet;

d. The amount of coal at each of the plants in the Company's fleet;

e. The type of coal used in each of the plants in the Company's fleet;

f. The actual MW capacity of each coal plant, over their lifetime considering plant upgrades that may have occurred adding generation;

g. The type of environmental controls, if any, installed on the plants in the Company's fleet (*e.g.*, electrostatic precipitators, flue gas desulfurization);

h. Whether any plants in the Company's fleet utilize dry ash handling;

i. Whether any CCRs generated from the plants in the Company's fleet are being sold for beneficial reuse;

j. The type of CCR basins in the Company's fleet;

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k. The location of the CCR basins in the Company's fleet;

l. Whether other utilities have closed some of their coal ash basins;

m. Soil and other geologic conditions of the CCR basins in the Company's fleet;

n. State specific laws applicable to CCR basins in the Company's fleet;

o. Regulatory rules and regulations for each state applicable to the CCR costs and AROs in Table 8 of his testimony;

p. Whether any CCR costs have been excluded from the ARO amounts listed in Table 8 of his testimony (*e.g.*, write-offs);

q. ASPE Cost Estimate Classifications for each ARO amount stated in Table 8 of his testimony;

r. Macro-level assumptions used by each company in deriving the ARO amounts (*e.g.*, basin closure dates, closure methods, etc.);

s. The scope of work assumed in each ARO estimate;

t. Any contracts, RFPs, RFIs, or bidder responses for work to be performed;

u. Comparisons of actual, to-date costs to projected costs in the AROS when considering recently passed or proposed legislation;

v. Whether any CCR basins were excluded from the ARO amount (e.g. not subject to the federal CCR Rule) and if so, why; and

w. The amounts and types of CCRs in the basins for each company.

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Without consideration of these elements, I do not see any reasonable basis for taking Mr. O'Donnell's recommendation seriously. Further, many of the figures that Mr. O'Donnell uses in his comparison appear to be unreasonable on their face. For example, Mr. O'Donnell's SNL data shows Ohio Power Company's ARO to be $1.66 million. Even if it is assumed that Ohio Power used cap in-place for its ash basins, $1.66 million is a wildly unreasonable estimate for covering hundreds of acres of ash.

In addition to using incorrect figures in his "analysis," Witness O'Donnell did not consider the fact that the other utilities he listed in his testimony are in very different stages within their coal ash management timeline than DE Carolinas, as discussed in the rebuttal testimony of Dr. Wright. Witness O'Donnell mistakenly takes the ARO data he copied from SNL as gospel, as opposed to characterizing them for what they are, which are rough estimates. If Mr. O'Donnell had gone behind the numbers, he would likely have discovered that there is substantial uncertainty about the level of actual closure costs of many of the utilities listed. For example, his analysis does not consider legislation that was recently passed by the Virginia General Assembly that will significantly increase closure costs for Virginia Electric and Power Company ("VEPCO" d/b/a Dominion Energy). This legislation requires VEPCO to excavate allof its basins located in the Chesapeake Bay Watershed after the company had already submitted closure plans

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calling for cap-in-place at most of these sites. The total estimated costs for VEPCO to close these basins is $5.2 billion to $8.6 billion, which reflects an 897 to1,314 percent increase from the ARO estimate cited by Mr. O'Donnell for that company.

A further consideration that is absent from Mr. O'Donnell's table is that closure costs (such as labor, trucking) will vary greatly based on geographic regions, supply and demand, timing of closure, and many other factors that would have to be normalized to develop an accurate comparison (if it is even possible). DE Carolinas is much farther along in the closure process than most other utilities in other states. As a result, the comparison Mr. O'Donnell is trying to draw provides no value to this case.

I therefore recommend that the Commission determine the reasonableness of DE Carolinas' ARO amount on its own merits based on the facts in this case.

Q. DO YOU BELIEVE THAT SCEUC WITNESS O'DONNELL HAS A CREDIBLE BASIS FOR SAYING THAT DE CAROLINAS' COAL ASH AROS ARE HIGHER THAN AROS FOR UTILITIES IN OTHER STATES BECAUSE OF CAMA?

A. No. Witness O'Donnell made no attempt to quantify DE Carolinas' coal ash AROs resulting from CAMA, as compared to its obligations under the CCR Rule. Nor did he attempt to determine the impetus for coal ash AROs for the other utilities to which he compares DE Carolinas. Since

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Mr. O'Donnell cannot attribute any specific ARO coal ash costs to CAMA and cannot attribute ARO coal ash costs for other companies to any particular regulatory obligation, he cannot credibly testify that DE Carolinas' ARO coal ash costs are higher because of CAMA, even if that fact were relevant to this proceeding, which it is not.

Q. DOES MR. O'DONNELL PROVIDE ANY OTHER BASIS FOR A DISALLOWANCE OF DE CAROLINAS' CCR COMPLIANCE COSTS?

A. Yes. Mr. O'Donnell recommends a disallowance of $46.7 million, because he argues that the Company should have sought coal ash costs in prior cases. Dr. Wright will address this in his rebuttal testimony.

Mr. O'Donnell also states that he may recommend unspecified disallowances, presumably sometime before this case concludes, related to the Company's closure activities at Dan River and W.S. Lee based on discovery that he alleges he still needs to take and based on access to information that he mistakenly claims is confidential. I will address those disallowances below.

Q. DO YOU AGREE WITH MR. O'DONNELL'S FIRST CONTENTION THAT DE CAROLINAS SHOULD NOT HAVE EXCAVATED THE INACTIVE COAL ASH BASIN AT THE COMPANY'S W.S. LEE SITE IN ANDERSON COUNTY, SOUTH CAROLINA?

A. No. Under the same argument used by ORS (ignore state-specific

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regulation and only allow recovery for CCR compliance), Mr. O'Donnell argues that the Company should not have touched the inactive ash basin at W.S. Lee and should have left the ash there in the ground, as-is, because the CCR Rule would not have required it to be closed. Notably, the ORS did not take their "ignore everything except the CCR Rule" argument across the border into South Carolina, but Mr. O'Donnell does. DE Carolinas excavated the inactive ash basin at W.S. Lee pursuant to a consent agreement with the South Carolina Department of Environmental Control ("SCDHEC"). The terms of the agreement are consistent with South Carolina's closure expectations for all utilities with CCR units. North Carolina customers are paying for the work done under the terms and conditions of this consent agreement even though it was specific to South Carolina regulatory action and was not required in totality, under the CCR Rule. This again demonstrates the real-world implications of the flawed and dangerous policy advanced by Mr. O'Donnell's suggestion.

Q. DO YOU AGREE WITH MR. O'DONNELL'S SECOND CONTENTION THAT COSTS SHOULD BE DISALLOWED FOR DAN RIVER CLOSURE COSTS?

A. No. Mr. O'Donnell argues that DE Carolinas should have used an on-site "brownfield closure strategy" to deal with ash at the Dan River site, which means that he suggests that the Company was imprudent for not building an on-site landfill at Dan River to store ash that was excavated

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out of the ash basins there. The problem with Mr. O'Donnell's argument is that the Company did utilize a brownfield closure strategy at Dan River and did build an onsite landfill there, just as he suggests.

In order to construct a lined, permitted landfill at the Dan River location, the Company excavated ash from the Ash Fill 1 area and disposed of that CCR off-site. The Company took this action because the Ash Fill 1 area and the ash contained in it was on top of the site where the Company needed to build the new, on-site landfill that Mr. O'Donnell admits the Company needed to build. Once the onsite landfill at the site was constructed, the remainder of the ash at the site, including ash from the Primary Ash Basin, the Secondary Ash Basin, and Ash Fill 2, is being disposed of in Dan River's onsite, brownfield landfill. Therefore, it appears that Mr. O'Donnell does not have a real issue with the actions taken at Dan River, but instead does not fully understand how the onsite landfill was built and why some ash had to be moved to build it.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

Q Dr. Wright, do you have a summary of your direct testimony and your rebuttal testimony?
A (WRIGHT) Yes. I do.
Q Can you please read it to the Commission at this time?
A (WRIGHT) Yes.

Good morning, Mr. Chairman and fellow Commissioners. My direct testimony supports Duke Energy Carolinas, LLC, or DE Carolinas', request for recovery of costs related to coal ash disposal expenses that the Company has undertaken in response to new environmental regulations.

Environmental compliance costs are similar to other costs a utility spends to produce and deliver power, as they are a necessary cost of providing electric service. Specific to coal ash disposal costs, the coal plants associated with these costs have been used and useful in providing low-cost, reliable power to South Carolina customers for up to 70-plus years. Consequently, these types of costs, and, if any amount is a -- is deferred over time, a return would be appropriately recoverable in rates and consistent with how the Commission has historically allowed recovery of environmental expenditures.

The last decade has seen an evolution in coal ash disposal regulations, beginning with the EPA's publication of proposed new regulations for coal combustion residuals, or CCR, in June of 2010. In 2015, the EPA finalized those regulations, known as the "CCR Rule," which represented the first comprehensive federal regulation of CCR. The proposed and final CCR rule also strongly encouraged the states to adopt federal minimum criteria in their solid waste management plans. Accordingly, states in the region, including South Carolina and North Carolina, have developed their own regulations and policies for ash basin closure that complement the CCR Rule.

The fact that new standards have been established does not mean that DE Carolinas' past practices with regard to coal ash disposal were unreasonable. The Company's decisions related to coal ash disposal must be judged in accordance with the regulatory standards and industry practice as it existed at the time. To that end, the Company historically has complied with all coal ash disposal regulations and industry standards for its coal ash handling operations. Today -- today, these rules have simply changed, and the Company

must now comply with these new standards.

In summary, approval of the Company's recovery request is appropriate because these dollars are required to be spent in compliance with new coal ash disposal requirements.

That concludes my summary of my direct testimony.

(PURSUANT TO PREVIOUS INSTRUCTION, THE PREFILED DIRECT TESTIMONY, INCLUDING CORRECTION/AMENDMENT, OF JULIUS A. WRIGHT, PH.D., FOLLOWS.)

[Please note: Corrections noted on pgs 20 and 25 herein reflect the errata submitted 2/11/19]

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BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

DOCKET NO. 2018-319-E

In the Matter of Application of Duke Energy Carolinas, LLC For Adjustments in Electric Rate Schedules and Tariffs	)))))	**DIRECT TESTIMONY OF DR. JULIUS A. WRIGHT FOR DUKE ENERGY CAROLINAS, LLC**

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I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME, OCCUPATION, TITLE AND BUSINESS ADDRESS.

A. Julius A. Wright, Managing Partner, J. A. Wright & Associates, LLC, 18 Edgewater Drive, Cartersville GA, 30121. I am a consultant to regulated utilities and regulatory agencies and other public bodies on issues related to economics, economic modeling, regulatory policy, industry restructuring, demand-side investments, and resource planning.

Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS TESTIMONY?

A. I am submitting this testimony on behalf of Duke Energy Carolinas, LLC ("DE Carolinas," or the "Company").

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL EXPERIENCE.

A. I received an undergraduate degree from Valdosta State College (BS Chemistry), an MBA in Finance from Georgia State University, and a Master's and Ph.D. in Economics from North Carolina State University, where I focused on regulatory and environmental economics. Among other past experiences, I served as a Commissioner on the North Carolina Utilities Commission ("NCUC" or the "Commission") from 1985 to 1993. Prior to serving as a member of the Commission, I served three terms as a North Carolina State Senator and worked in process engineering for 12 years at three chemical plants, the last with Corning in Wilmington, NC.

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Over the past 25 plus years in my consulting practice, I have dealt extensively with electric and natural gas utilities focusing on a number of issues. In this context, I have testified before regulatory commissions and legislative bodies, presented studies and authored reports on issues related to electric and gas regulation, and I have been a guest speaker at the Bonbright Conference, other seminars, and at the Georgia Institute of Technology. I have been a visiting professor teaching both microeconomics and macroeconomics courses at the University of The Virgin Islands. I was also one of three economists engaged by the California State Auditor to examine the problems that led to that state's electric energy crisis in the summer and fall of 2000. I have worked for the last 20 plus years in the field of electric and gas regulation, primarily in the Southeast. A copy of my resume is attached as Wright Exhibit 1.

Q. PLEASE DISCUSS THE PURPOSE OF YOUR TESTIMONY.

A. The purpose of my direct testimony is to support DE Carolinas' request to recover costs incurred for coal ash disposal in response to new, more stringent environmental regulatory requirements.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. The next section of my testimony begins with a discussion of the general regulatory principles dealing with the recovery of environmental costs incurred by electric utilities in South Carolina. In Section III, I provide a brief historical review of coal ash disposal regulations, how these regulations have evolved over time, and how these evolving regulations have impacted the

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Company. I conclude in Section IV by discussing why I believe DE Carolinas' proposed coal ash related expenses in this filing should be recoverable as recommended in the application and Company witnesses' testimony.

II. BACKGROUND: RECOVERY OF ENVIRONMENTAL COSTS

Q. WHAT ARE RECOVERABLE COSTS AS THEY RELATE TO ELECTRIC UTILITY EXPENDITURES IN SOUTH CAROLINA?

A. Recoverable costs include costs that are just and reasonable and used and useful in the provision of adequate, safe, reliable, and reasonable electric service to a utility's customers. Specifically, South Carolina Code of Laws § 58-27-810 declares the "rates shall be just and reasonable," and this standard is repeated in S.C. Code Ann. § 58-27-850. With respect to the "used and useful" standard, South Carolina, like other states, has defined used and useful utility property as "property which it [the utility] necessarily devotes to rendering the regulated services" and has allowed recovery for such property in rates. *Hamm v. S.C. Pub. Serv. Comm'n*, 309 S.C. 282, 286 n. 1, 422 S.E.2d 110, 112 n. 1 (1992) (quoting *Southern Bell Tel. & Tel. Co. v. Pub. Serv. Comm'n of S.C.*, 270 S.C. 590, at 600, 244 S.E.2d 278, at 283 (1978)).

The "used and useful" standard in South Carolina was further clarified in a Commission Order as it relates to rate base as "[t]he rate base is comprised of the value of the Company's property used and useful in providing retail electric service to the public..." Order 87-1381, December 30, 1987, page 15.

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With respect to the provision of service standards, the Commission's Code of Regulations Section 103-301(2) states the purpose of the Code of Regulations is to *"to define good practice.....intended to insure adequate and reasonable service."* All of these policies, along with safety and reliability, are further embodied in the Code of Regulations in Sections 103-360 which states, *"[t]he electric plant of an electrical utility shall be constructed, installed, maintained and operated in accordance with good engineering practice to assure, as far as reasonably possible, continuity of service, uniformity in the quality of service, and the safety of persons and property."*

As I discuss further herein, because environmental compliance costs are a necessary used and useful cost of providing safe, reliable and adequate electric service, then it follows that these types of costs – and a return on those costs – are recoverable in rates.

Q. ARE ENVIRONMENTAL COMPLIANCE COSTS SIMILAR TO OTHER COSTS A UTILITY MIGHT SPEND IN PRODUCING AND DELIVERING POWER?

A. Yes. The Company incurs costs in compliance with environmental laws and regulations, similar to other costs necessary for the generation of electric power. This includes costs like scrubbers or coal ash facilities which can be rate base type expenses which costs would be recovered over time. Other environmental costs related to the treatment of pollutants, like ammonia and lime, or the cost of emission allowance for SO2, NOx, mercury, and particulates, are all variable environmental costs and are generally recoverable

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through the fuel adjustment rider in South Carolina. *See* S.C. Code Ann. § 58-27-865. All of these environmental costs are necessary for compliance with environmental standards and, like nuclear decommissioning costs or coal plant retirement costs, based on my experience and knowledge of fuel adjustment cost recovery mechanisms in many states, these types of costs have long been deemed recoverable by utilities across the country, including DE Carolinas.

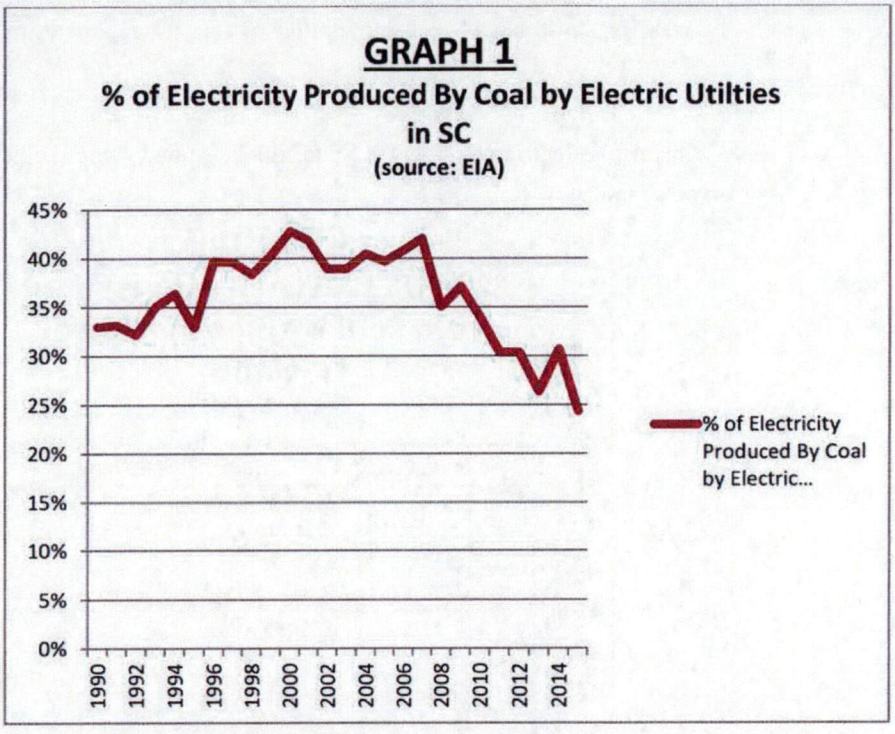
It should also be recognized that the coal plants associated with these costs have been used and useful in providing low-cost, reliable power to South Carolina customers for more than a century, and that is true regardless of whether the generating plant is located in South Carolina or North Carolina – all of the Company's generating units provide service on a systemwide basis to both states. Consequently, these types of costs and, if any amount is deferred over time, a return would be appropriately recoverable in rates to ensure that the Company received the equivalent of the full amount of those costs.

Q. PLEASE DISCUSS WHY YOU HAVE CONCLUDED THAT THESE COAL-FIRED ELECTRIC GENERATING PLANTS HAVE BEEN USED AND USEFUL AND PROVIDED BENEFICIAL ELECTRIC SERVICES TO CUSTOMERS IN SOUTH CAROLINA.

A. Coal-fired electric generation has been providing energy to South Carolina customers since the early 20th century. Since that time, coal-fired facilities have been a primary component of the fuel sources used to provide South

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Carolinians electric energy. Graph 1 shows that since 1990 (the earliest data available for the EIA) usually more than 30% of the South Carolina's electric generation was provided by coal-fired generation.[1]



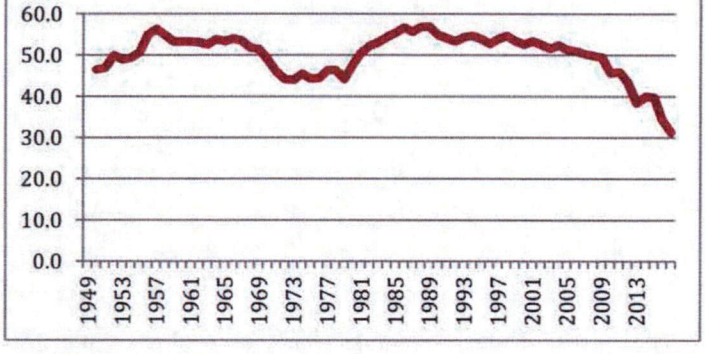
Though this dependence on coal has diminished in the past few years because of new environmental standards, coal-fired generation continues to be an important component of DE Carolinas' generation in South Carolina. For a more historic perspective on the importance of coal to the nation's electric industry, Graph 2 indicates that for the past seven decades coal has provided

[1] This was the latest statewide data available from the EIA when the first draft of this testimony was developed. See State Historical Tables for 2015 (October 2016 as revised November 2016) (https://www.eia.gov/electricity/data/state/).

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the fuel to produce about 50 % of the nation's electric energy.[2] It should be noted that coal was chosen as a fuel source, both in South Carolina and nationwide, primarily on the basis of economics, meaning that at the time it was the least costly, reliable option to use as a generation fuel resource. Because of this economic fact, but for the use of coal-fired generation, historical electric prices in the State and nationwide would have been higher.

GRAPH 2
% of US Electricity Generated from Coal By Electric Power Sector
(source: EIA)



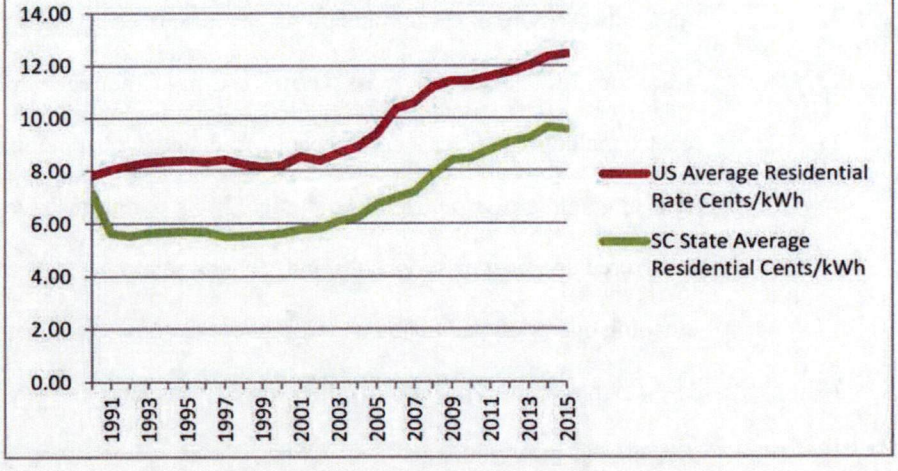
In addition, the use of DE Carolinas' coal-fired generation has directly benefitted the State's customers by virtue of the fact that South Carolina's average retail electric rates have historically been below the national average. This is shown in Graph 3, which provides a historical comparison of the State's average electric price to the nation's. As Graph 3 indicates, the State's average electric prices have been below the national average since at least

[2] This was the latest nationwide data available from the EIA. See April 2017 Monthly Energy Review, Table 7.2b Electricity Net Generation: Electric Power Sector (April 25, 2017) (https://www.eia.gov/totalenergy/data/monthly/archive/00351704.pdf).

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1990, which is the first year this state-level data was available at the EIA.[3] These below national average electric rates have been a significant economic benefit to South Carolina and its electric consumers. Because electric rates are determined by the underlying cost to produce the electricity, and recognizing that coal-fired plants were chosen and are dispatched primarily for economic reasons, this simply means that the State's "below average" electric rates have been achieved in large measure because of the State's use of its coal-fired electric generation.

GRAPH 3
South Carolina Average Total Price of Electricity Compared to US Average Total Price (source: EIA)



Q. HAS THE COMMISSION ALLOWED THE RECOVERY OF COSTS RELATED TO ENVIRONMENTAL EXPENDITURES?

A. Yes. I have already discussed how some environmental costs in South

[3] This was the latest statewide data available from the EIA. See https://www.eia.gov/totalenergy/data/annual/showtext.php?t=ptb0810.

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Carolina, such as ammonia, lime and other reagents, are recovered through the fuel adjustment rider. *See* S.C. Code Ann. § 58-27-865. Importantly, the recovery of other environmental costs, such as scrubbers,[4] related to environmental compliance would be consistent with the public policy of the South Carolina, which states it is "the public policy of the State to maintain reasonable standards of purity of the air and water resources of the State, consistent with the public health, safety and welfare of its citizens, maximum employment, the industrial development of the State..." (§ 48-1-20).

Consequently, in order to comply with both the State's public policy goals and remain compliant with environmental standards, the Company has made numerous investments over time in compliance with historical coal ash and other environmental regulations, as discussed at length in the direct testimony of Company Witness Kerin. It is my experience that these types of costs, including the reasonable costs associated with operating, maintaining and upgrading environmental equipment, plus a return, have been routinely recovered as a cost of service through general rate cases, whether as capital or ongoing operation and maintenance expense or some combination thereof.

In summary, when a utility invests in scrubbers to meet new and heightened environmental standards, these costs have routinely been recoverable. Similarly, when a utility invests dollars to meet new environmental coal ash remediation standards, these costs should likewise be recoverable. For example, in South Carolina the deferral balance of costs

[4] In this Commission's Docket No. 2011-271-E, costs associated with a Cliffside scrubber were amortized and in the rate base. In addition, in Docket No. 2009-226-E costs associated with scrubbers at the Allen Steam Station were amortized and in rate base.

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associated with a Cliffside Unit 5 scrubber were amortized and in the rate base (Settlement Agreement, Nov. 30, 2011, Docket No. 2011-271-E, Attachment A, page 2). In addition, in Docket No. 2009-226-E costs associated with scrubbers at the Allen Steam Station were amortized and in rate base (Settlement Agreement, Nov. 24, 2009, Docket No. 2009-226-E, Attachment A, page 2).

Where state specific requirements are indicated, those costs are often shared between the two states consistent with the manner in which electrons flow. In other words, shared costs for facilities that generate or have generated electricity to both North and South Carolina are allocated between the two states.

Q. HAS THIS COMMISSION ADDRESSED THE RECOVERY OF NEW COSTS ASSOCIATED WITH COAL ASH DISPOSAL?

A. Yes. In Docket No. 2016-227-E, DE Progress was allowed to recover coal ash expenses amortized over fifteen (15) years plus the Order's approved return, albeit the Order did state that this finding had no precedential effect and will not prejudice the position of any Party in any future proceeding before the Commission.[5] In this case, the Company is asking to be allowed to recover coal ash expenses amortized over five years.

Q. HOW ARE COSTS RECOVERED WHEN THE COSTS RELATE TO FACILITIES IN TWO DIFFERENT STATES, LIKE WITH THE ELECTRIC SYSTEM IN NORTH CAROLINA AND SOUTH

[5] Order in Docket No. 2016-227-E, Dec. 21, 2016, page 11, paragraph 15.

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CAROLINA?

A. Under this scenario, cost recovery depends on the type of cost. Some state specific costs, unless directly assigned, are shared, or allocated, between both states. In other words, shared costs for facilities that generate or have generated electricity to both North and South Carolina are usually allocated between the two states. These type of costs include a variety of things such as workers compensation type costs, differences in everyday operating costs like employees expenses, contractor expenses, fuel costs, and even costs like fuel transportation which can be different depending on the location of a generating station (for example, rail service from coal mines to North Carolina can be different, and usually cheaper because of distance, then rail service to South Carolina). In addition, property taxes in South Carolina are higher than property taxes in North Carolina, however these taxes for system assets like generation plants are allocated to the whole system and not recovered on a state specific basis.

Q. HAVE NORTH CAROLINA AND SOUTH CAROLINA SHARED ENVIRONMENTAL EXPENSES PRIOR TO THIS CASE?

A. Yes. For example, the Cliffside and Allen generating stations' scrubbers mentioned above have been costs shared between the two states. This cost sharing is common where a utility's operations span multiple states and the utility property used to provide one particular state's electric service may be located in another state. Also, the Company has entered into a Consent Agreement with the South Carolina Department of Health and Environmental

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Control (and a related Settlement Agreement with several environmental groups) dealing with coal ash at the W.S. Lee facility, and the costs associated these South Carolina agreements are shared with North Carolina customers. Additional examples of states sharing environmental costs would be the Southern Company utilities in Georgia, Alabama, Mississippi, and Florida, and Entergy with electric utility services in Mississippi, Arkansas, Louisiana, and Texas. In addition, coal ash disposal costs and beneficial reuse revenues have to date been allocated and shared between both states.

III. A BRIEF REVIEW OF THE HISTORY OF COAL ASH DISPOSAL STANDARDS

Q. PLEASE DISCUSS SOME OF THE INITIAL COAL ASH DISPOSAL STANDARDS.

A. The Company's electric power generation from burning coal dates back to the 1920's. All of the Company's coal plants produced coal combustion residuals or "CCRs" as fly ash and bottom ash as direct by-products of the coal combustion process. In the 1950's the electric utility industry began to transport bottom ash by water sluicing to constructed surface impoundments, which we commonly refer to as ash basins. Over time, as discussed in more detail in the direct testimony of Company Witness Kerin, the Company has consistently followed industry standard practices in compliance with coal ash regulation.

Q. DID THE COMMISSION ALLOW THE STATE'S ELECTRIC UTILITIES TO RECOVER THE COSTS ASSOCIATED WITH THESE EARLIER COAL ASH DISPOSAL REGULATIONS?

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A. Yes. As I mentioned earlier, these types of expenses have been routinely recovered as a cost of service and included in rate cases including the reasonable costs associated with operating, maintaining and upgrading environmental equipment. The cost recovery for these rate-based environmental costs also usually included a return. Also, as I mentioned earlier, in Docket No. 2016-227-E, the Commission allowed DE Progress to recover coal ash expense amortized over fifteen (15) years plus the Order's approved return.[6]

Q. HOW HAVE THE COAL ASH DISPOSAL STANDARDS CHANGED OVER THE PAST DECADE?

A. Coal ash use and disposal has been studied by the Environmental Protection Agency ("EPA") since the mid-1980s. After several studies and some limited regulatory standards, on May 22, 2000, the Environmental Protection Agency ("EPA") determined the need to regulate coal combustion wastes that are disposed in landfills and surface impoundments under Subtitle D (applicable to non-hazardous waste) of the Resource Conservation and Recovery Act.

On December 22, 2008, a dike at a surface impoundment at Tennessee Valley Authority's ("TVA") Kingston Fossil Plant in Harriman, Tennessee, failed. In part as a response to this TVA accident, on June 21, 2010, the EPA published in the Federal Register proposed new coal ash disposal regulations for CCRs.[7] The proposed regulations specifically referenced the TVA

[6] Order in Docket No. 2016-227-E, Dec. 21, 2016, page 11, paragraph 15.
[7] Federal Register/Vol. 75, No. 118/Monday, June 21, 2010/Proposed Rules, page 35128.

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incident as a major reason for the proposed rule.[8] The EPA's proposed coal ash disposal rule also discussed several other coal ash incidents that led to the promulgation of the rule:

> *"at the time of the May 2000 Regulatory Determination, the Agency was aware of 14 cases of proven damages and 36 cases of potential damages resulting from the disposal of CCRs. The Agency has since learned of an additional 13 cases of proven damages and 4 cases of potential damages, including a catastrophic release of CCRs from a disposal unit at the Tennessee Valley Authority (TVA) Kingston facility in Harriman, Tennessee in December 2008. In total, EPA has documented 27 cases of proven damages and 40 cases of potential damages resulting from the disposal of CCRs. Proven damage cases have been documented in 12 states, and potential damage cases—in 17 states."*[9]

A more thorough discussion of these newer coal ash disposal regulations is contained in the testimony of Company Witness Kerin.

Q. DID THE ACCIDENTAL COAL ASH SPILL AT THE COMPANY'S DAN RIVER FACILITY IMPACT THE FINAL CCR RULE?

A. No. First, it is important to note that the EPA's proposed rule's publication date precedes the February 2, 2014 coal ash release accident at the Dan River Steam Station ("Dan River"), and the Dan River accident was not mentioned in the EPA's proposed rule, nor could it have been, as a reason for establishing the rule. Later, the finalized EPA rule, signed on December 19, 2014, and published in the *Federal Register* (FR) on April 17, 2015 (the "CCR Rule"),[10] did reference the Dan River accident, but it did not indicate that the accident modified the proposed rule. Second, in promulgating the

[8] IBID, page 35132.
[9] IBID, pages 35143, 35143.
[10] See Federal Register/Vol. 80, No. 74/Friday, April 17, 2015/Rules and Regulations, page 21343; 21393-94.

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CCR Rule the EPA cited hundreds of potential risks or incidents with ash ponds similar to Dan River that led to the adoption of the Rule. Based on the citing of these numerous incidents along with the timing of the CCR Rule, I would conclude that the Dan River accident did not change the CCR regulations, although it probably added support for the EPA's proposals.

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Q. HOW DID THE ACCIDENTAL COAL ASH SPILL AT THE COMPANY'S DAN RIVER FACILITY IMPACT NORTH CAROLINA'S CAMA LAW?

A. Based on my review, it likely impacted the timing, but I cannot conclude that it impacted the substance of the standards. There is no doubt that the Dan River spill certainly helped prompt the North Carolina General Assembly to examine the State's and national coal ash disposal policies and regulations. Out of that legislative investigation came North Carolina's Coal Ash Management Act ("CAMA"). However, some four years prior to the Dan River accident, the EPA had already proposed, and was close to finalizing, its new coal ash regulations. I feel confident the EPA's proposed coal ash regulations helped inform the State's legislative leaders regarding the language contained in CAMA for several reasons. First, having served in the North Carolina General Assembly, I am sure that the legislative process leading to CAMA included an investigation of, and used where appropriate, the then current or proposed EPA coal ash standards. Second, there are many similarities between the proposed EPA rule and CAMA. For example, both discuss groundwater monitoring at length, both provide for the same two types of coal ash pond closure methods, the definitions used in both are very similar and sometimes use identical wording, and both contain three levels of hazardous potential classifications associated with coal ash ponds.[11]

[11] It should be noted that the risk levels identified in the EPA proposed rule were based on dam or dike structural integrity and the potential for loss of life or the level of economic harm. The levels of risk in CAMA considered structural integrity as one of several factors to consider and the risk was not strictly related to loss of life.

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Finally, the proposed CCR regulation also strongly encouraged the states to adopt at least the Federal minimum criteria in their solid waste management plans.[12] Therefore, even without the Dan River accident in 2014 and the enactment of CAMA shortly thereafter, had CAMA not been enacted in 2014, I believe that the State of North Carolina Legislature and/or the State's Department of Environmental Quality may have taken steps to adopt coal ash regulations similar to CAMA shortly after the CCR Rule was finalized in 2015. Regardless, the Company must comply with both the Federal and State coal ash disposal standards.

Q. ARE THERE ANY SOUTH CAROLINA STATE SPECIFIC LAWS OR GUIDELINES THAT THE COMPANY MUST FOLLOW IN ITS DISPOSAL OF CCRS?

A. Yes. On September 23, 2014, and later on April 23, 2015, the Company entered settlement agreements with the South Carolina Department of Environmental Control ("DHEC") and several conservation-related parties, such as the Save Our Saluda, that provided for management, disposal, and site remediation related to coal ash disposal facilities at the W. S. Lee Steam Station. The Company is obligated under these settlements to manage these particular coal ash site remediation sites as per the EPA CCR rules and any additional specific stipulations called for in the settlements.

Additionally, the South Carolina legislature passed H.B. 4857 in 2016, which requires utilities to dispose of coal combustion residuals resulting from

[12] Federal Register/Vol. 80, No. 74/Friday, April 17, 2015/Rules and Regulations, page 21430.

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the production of electricity to be placed in Class 3 landfills, except under limited circumstances.

Q. WHAT ARE THE SPECIFIC COAL ASH DISPOSAL STANDARDS THAT DE CAROLINAS MUST NOW MEET WITH RESPECT TO ITS CURRENT COAL ASH DISPOSAL SITES?

A. Company Witness Kerin discusses these standards in detail. In short, the Company must comply with the 2015 Federal CCR Rule adopted by the EPA, which established national minimum criteria for active CCR landfills and basins and inactive basins containing water. It must also comply with any CAMA obligations (which are similar to the CCR Rule as discussed by Company Witness Kerin) and it must comply with the Lee settlements, as well as, any other state agency requirements, such as those that may be required by DHEC.

IV. THE COMPANY'S PROPOSED COAL ASH COST RECOVERY PROPOSAL IS REASONABLE

Q. WHAT ARE THE COSTS THE COMPANY IS SEEKING TO RECOVER THAT YOUR TESTIMONY ADDRESSES?

A. DE Carolinas reasonably and prudently incurred and expects to incur a total of $958 million (on a system basis) related to incremental ash pond closure compliance costs from January 2015 through December 2018.

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Q. THE COMPANY IS ALSO ASKING THE COMMISSION TO ALLOW THE COMPANY TO DEFER COAL ASH RELATED EXPENSES PENDING RECOVERY ADJUDICATION IN A FUTURE RATE CASE. IS THIS A COMMON PRACTICE UNDER SOUTH CAROLINA REGULATORY PROCEDURES?

A. Yes. A deferred account mechanism is not unusual in ratemaking. In his book discussing utility regulation, Leonard Goodman indicates that "[t]he use of deferred cost accounting in the ratemaking context is so common and so fundamental a regulatory tool that no agency is likely to consider it necessary to study whether as a matter of policy costs should be deferred..."[13] In Docket No. 2015-96-E (Order No. 2015-308) this Commission allowed the DE Carolinas Company to defer costs associated with coal ash related environmental remediation costs. DE Carolinas also has a currently effective deferral approved in the Commission's Order in Docket No. 2016-196-E, dated July 13, 2016. DE Progress has a similar deferral that is ongoing, which was approved in the Order in Docket No. 2016-227-E, dated December 21, 2016.

Q. IS IT REASONABLE TO EXPECT CUSTOMERS TO PAY FOR THE DISPOSAL OF COAL ASH?

A. Yes. Those dollars are required to be spent in compliance with new coal ash disposal requirements. Such a circumstance is not new in the history of environmental regulations in the United States, where it is commonplace for restrictions to be modified and become more restrictive over time. For

[13] Goodman, Leonard, "The Process of Ratemaking," Public Utility Reports, Vienna, VA, 1998, p. 322.

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example, in our day-to-day life we have all directly experienced ever-tightening environmental restrictions on the automobiles we drive, as the emissions standards have grown increasingly stringent and more costly over the past few decades and the related costs have increased the costs of driving.

So, too, have electric utility generating plants been the focus of ever-tightening and more costly environmental standards. As an example, consider the evolution of coal gas smokestack emission standards, which are generally related to the federal Clean Air Act ("CAA") and its various updates or amendments.[14] The enactment of the CAA of 1970 resulted in a major shift in the federal government's role in air pollution control by authorizing the development of comprehensive federal and state regulations to limit emissions. The EPA was created on December 2, 1970, in large measure to implement the various requirements of the CAA.[15] Major revisions and stricter clean air standards were adopted as updates to the CAA in 1977 and 1990 and these new standards impacted coal-fired generating plants.[16]

Following the CAA 1990 amendments, the EPA devised a two-phased strategy to further reduce nitrogen oxide ("NOx") emissions from coal-fired power plants. Each phase imposed tighter NOx emissions standards on coal-fired generating plants and/or utilities. Additionally, in 1998, the EPA issued a rule that required 21 states (including South Carolina and North Carolina) to further reduce NOx emissions through the use of newer, cleaner control

[14] While sometimes the standards did not specifically target older coal-fired generating plants, invariably the more stringent standards would either impact a utility's total emissions limits, or a state's, consequently impacting even those older facilities that were not specifically targeted by newer emissions regulations.
[15] See: https://www.epa.gov/sites/production/files/2015-08/documents/peg.pdf.
[16] See: https://www.epa.gov/clean-air-act-overview/clean-air-act-requirements-and-history.

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strategies.[17]

Consequently, the history of environmental regulation is replete with examples of ever-tightening environmental regulations with the result being, with respect to utilities, the associated costs for meeting these ever-tightening environmental regulations usually becoming the responsibility of customers. Likewise, the issue of ever-tightening environmental regulations with respect to coal ash standards is the genesis of the Company's request as it relates to these new and additional coal ash disposal costs.

Q. ARE CERTAIN COAL ASH COSTS NOT RELATED TO COMPLIANCE WITH THE CCR RULE OR CAMA ALSO RECOVERABLE FROM CUSTOMERS?

A. Yes. As I mentioned earlier, the Company entered into a Consent Agreement with the South Carolina Department of Health and Environmental Control ("SCDHEC") covering the W.S. Lee Plant. Due to environmental concerns related to the Inactive Ash Basin and Ash Fill Area, DE Carolinas agreed to excavate ash from those areas. While excavation of these areas is not required by the CCR Rule, they are being excavated consistent with South Carolina environmental policy as articulated through the SCDHEC Consent Agreement. SCDHEC has since approved excavation plans for these areas. It is reasonable and prudent for DE Carolinas to take action to mitigate environmental risks from these areas even if it is not compelled to by environmental regulations.

[17] See: http://instituteforenergyresearch.org/studies/the-facts-about-air-quality-and-coal-fired-power-plants/.

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Q. ARE THERE ANY COSTS RELATED TO CAMA THAT ARE IN EXCESS OF THE FEDERAL CCR RULE'S COSTS THAT ARE BEING REQUESTED IN THIS FILING?

A. This is discussed in Company Witness Kerin's testimony. As he discusses, there are some CAMA costs that are considered a system cost whose recovery is being requested, but there are other North Carolina resident-specific costs related to CAMA and not required by the CCR that the Company is not seeking to recover from South Carolina customers.

Q. DOES THE FACT THAT NEW STANDARDS WERE ADOPTED MEAN THAT DE CAROLINAS' PAST PRACTICES WERE UNREASONABLE?

A. No. It is well established that the standard for determining the prudence of a utility's actions should be whether management decisions were made in a reasonable manner and at an appropriate time on the basis of what was reasonably known or reasonably should have been known at that time. To that end, the standard "must be based on a contemporaneous view of the action or decision under question. Perfection is not required. Hindsight analysis – the judging of events based on subsequent developments — is not permitted."[18] In short, the Company's decisions related to coal ash disposal must be judged in accordance with the regulatory standards and industry practice as it existed at the time the decisions were made based on the fact that this was the information available to the Company at that time.

[18] Phillips, Charles F., The Regulation of Public Utilities, Public Utilities Reports, Arlington, VA.,1993, p. 340.

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With respect to this prudence evaluation criteria, as discussed in the direct testimony of Company Witness Kerin, the Company historically has complied with all coal ash disposal regulations and used industry standard disposal operations for all its coal ash handling operations. Today, the coal ash disposal standards have simply changed and been updated as has occurred with many environmental standards over time. In the past, the Company was required to meet the coal ash disposal standards at the time, and so too it must now comply with the new coal ash disposal standards.

Q. IN YOUR OPINION ARE THE COAL ASH DISPOSAL COSTS THAT DE CAROLINAS IS SEEKING TO RECOVER IN THIS CASE "USED AND USEFUL" UTILITY COST?

A. Yes. DE Carolinas' coal ash disposal sites have always been used and useful as part of the coal-fired generation production process. As I discussed earlier, the Company's coal fired generating plants, whether located in South Carolina or North Carolina, have been used and useful and provided electric service that produced economic benefits to the customers in South Carolina for decades. In addition, as referenced in the direct testimony of Company Witness Kerin, the Company has historically spent dollars in order to comply with the coal ash disposal regulations in effect at the time, and these dollars were a necessary expenditure related to used and useful utility costs made in the provision of electric service at the time. The Company was, and continues to be, obligated to meet the needs of its customers. This obligation to serve requires the disposal of coal ash subject to the disposal standards at the time,

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thereby rendering the disposal sites for this coal ash, for which costs DE Carolinas seeks recovery in this case, "used and useful" in providing electric service. In addition, it should be noted that these same costs were just found to be "used and useful" in three different proceedings in North Carolina, including the Company's proceeding last year where the North Carolina Commission specifically stated that these type of costs were "used and useful in the provision of service to the Company's customers (Order, Docket E-7, Sub 1146, page 23).

Q. HAS THE COMMISSION ALREADY ADDRESSED THE RECOVERY OF THESE SPECIFIC TYPE OF COAL ASH DISPOSAL COSTS WITH ANOTHER ELECTRIC UTILITY?

A. Yes. In Docket No. 2016-227-E, the Commission allowed DE Progress to recover coal ash expenses amortized over fifteen (15) years plus an approved return, albeit the Order did state that this finding had no precedential effect and will not prejudice the position of any Party in any future proceeding before the Commission.[19]

[19] Order in Docket No. 2016-227-E, Dec. 21, 2016, page 11, paragraph 15.

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Q. ARE THERE EXAMPLES OF UTILITY INFRASTRUCTURE PROJECTS THAT DEALT WITH AN ENVIRONMENTAL ISSUE AND COST RECOVERY THAT IS SIMILAR IN NATURE TO THE COAL ASH ISSUE IN THIS FILING?

A. I believe a similar situation that is instructive are the ongoing costs related to gas pipeline safety and integrity. Like coal ash regulations, these pipeline safety and integrity regulations have changed and become more costly over the past few years. For example, in 2011 the DOT and Pipeline and Hazardous Materials Safety Administration ("PHMSA") promulgated regulations that require inspection, repair, rehabilitation and/or replacement of the highest risk natural gas pipeline infrastructure by pipeline operators. The program included an inventory of pipelines by type, system evaluation to identify risks, and an implementation plan to mitigate those risks. South Carolina natural gas systems have had expenditures to comply with these new regulations and South Carolina Electric & Gas Company has been allowed to collect these costs through a deferral mechanism, including a return, and collect these costs over time (Docket. No. 2014-461-G, see filings dated Dec. 3, 2014, ORS filing dated Dec. 10, 2014, and Commission Directive dated Dec. 17, 2014).

Q. ARE THERE OTHER EXAMPLES OF ENVIRONMENTAL COST RECOVERY SIMILAR TO THE COST RECOVERY OF COAL ASH DISPOSAL?

A. Yes. As I mentioned earlier in this testimony, in this Commission's Docket

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No. 2011-271-E, costs associated with a Cliffside scrubber were amortized and in the rate base. In addition, in Docket No. 2009-226-E costs associated with scrubbers at the Allen Steam Station were amortized and in rate base.

Q. ARE THERE POTENTIAL COST SHARING LIABILITIES RELATED TO THESE COAL ASH DISPOSAL COSTS THAT MIGHT MATERIALIZE AND THUS DIMINISH THE OVERALL COST IMPACTS ON CUSTOMERS?

A. Yes. The Company has filed insurance litigation. When and if those monies materialize, customers should see the benefit of those proceeds, like spent fuel litigation. However, these cases can take many years to finally resolve. It would be appropriate for the Commission to monitor these cases and ensure that any outcome benefits customers. It is my understanding that the Company has no objection to that approach.

Q. ARE THERE WAYS THAT THE COMPANY MIGHT SUGGEST THAT THE COMMISSION COULD ADOPT AS A MEANS OF MITIGATING THE OVERALL RATE IMPACT FROM THESE NEW ADDITIONAL COSTS?

A. Yes. For example, it is not unusual for such costs to be stretched out over a number of years so that the impact on rates is more manageable. If that type of option is adopted, however, then it is appropriate for the utility to receive carrying costs to ensure it is made whole for all costs.

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Q. BECAUSE ONLY PRUDENTLY INCURRED COSTS ARE RECOVERABLE, HAVE YOU EXAMINED WHETHER THE ACTUAL DOLLARS BEING REQUSTED BY THE COMPANY ARE REASONABLE AND PRUDENT?

A. I have examined the filing, many of the Federal and State laws related to coal ash disposal, the testimony of Company Witness Kerin and other Company witnesses, reviewed past Commission Orders regarding environmental cost recovery, discussed with the Company its history related to coal ash disposal, and reviewed the more recent settlement agreements related to coal ash disposal. Based on my review, I believe that the Company is in the best position to address the specific accounting methods and costs related to coal ash disposal and the related costs in conformance with State and Federal coal ash disposal requirements and I believe its actions in this regard are prudent.

Q. DO YOU BELIEVE THE COMPANY'S COAL ASH COST RECOVERY PROPOSAL IS REASONABLE?

A. Yes. I believe that the Company's proposals to recover its costs for complying with updated coal ash disposal regulations are reasonable and consistent with the historical regulatory treatment of similar costs.

Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY AT THIS TIME?

A. Yes.

A (WRIGHT) My rebuttal testimony on behalf of Duke Energy Carolinas, LLC, addresses several issues related to the recovery of costs associated with coal ash remediation expenses raised in the testimonies of ORS Witness Dan Wittliff, Michael Seaman-Huynh, Gaby Smith, SCEUC Witness Kevin O'Donnell, and Sierra Club Witness Ezra Hausman. I also address general issues on the deferral of recoverable costs raised by Zachary Payne.

Taken together, the testimonies of ORS Witness Wittliff and Seaman-Huynh recommend disallowances for ash basin closure costs for all activities that they contend were incurred solely to comply with North Carolina's Coal Ash Management Act, or CAMA. First, this recommendation does not align with the appropriate regulatory standard for denial of cost recovery, including recovery of environmental compliance costs, which requires a finding that specifically identified costs are imprudent or unreasonable. Nether ORS witness identified any specific cost as imprudently or unreasonably incurred.

Second, this recommendation would overturn sound regulatory policy that system costs be allocated to the jurisdictions that are served.

South Carolina customers have benefitted from coal-fired generation of electricity for decades, and ash basin closure is a necessary component of that service. If accepted, ORS's recommendation would have a profound and lasting detrimental impact on the sharing of assets between South Carolina and North Carolina and the customers of both states.

ORS Witness Smith recommends a disallowance of litigation expenses associated with alleged violations of environmental law. It is my understanding that the Company is not seeking costs associated with fines or penalties related to environmental violations, nor any legal expenses associated with them. Of the two categories of litigation costs identified by ORS Witness Smith for disallowance, one category does not relate to environmental violations at all, and the other category relates to ongoing litigation that the Company is reasonably defending, where there has been no finding of environmental violations. The Company has an obligation to its customers to prosecute and defend those litigation matters, and the associated costs should be recoverable.

ORS Witness Payne recommends that the Company not be allowed to earn a return on its deferred

costs during a deferral period. For several deferred expenses, ORS Witness Payne proposes longer amortization periods than DE Carolinas recommended. The Commission should reject the ORS's recommendation because it violates the regulatory compact in that it would not allow the Company to earn a fair rate of return on its capital expenses and recover the full value of prudently incurred costs.

SCEUC Witness O'Donnell recommends that 75 percent of DE Carolinas environmental-compliance costs should be disallowed based on a faulty comparison of alleged national asset retirement obligations, or ARO, amounts relating to CCRs. The Commission should reject any disallowances, especially one as substantial as the amount Mr. O'Donnell recommends, that is not based on facts in evidence that have been proven and verified as substantially significant, and Mr. O'Donnell's flawed proposal fails this test. To do otherwise, would constitute poor regulatory policy and would be arbitrary.

Sierra Club Witness Hausman contends that the Commission should condition the Company's recovery of coal ash costs on the future performance of a

comprehensive retirement analysis of the Company's coal-fired plants. Sierra Club's conditional cost-recovery proposal should also be rejected because it violates accepted ratemaking policy. It is a fundamental tenet of regulatory policy that utilities be allowed the chance to recover their prudently incurred expenses, and Sierra Club has not shown that any of the Company's coal ash costs are imprudent.

This concludes the summary of my rebuttal testimony.

(PURSUANT TO PREVIOUS INSTRUCTION, THE PREFILED REBUTTAL TESTIMONY OF JULIUS A. WRIGHT, PH.D. FOLLOWS.)

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BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

DOCKET NO. 2018-319-E

IN THE MATTER OF:		
Application of Duke Energy Carolinas, LLC For Adjustments in Electric Rate Schedules And Tariffs and Request for an Accounting Order	))))	**REBUTTAL TESTIMONY OF DR. JULIUS A. WRIGHT FOR DUKE ENERGY CAROLINAS, LLC**

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I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME, OCCUPATION, TITLE AND BUSINESS ADDRESS.

A. Julius A. Wright, Managing Partner, J. A. Wright & Associates, LLC, 18 Edgewater Drive, Cartersville, Georgia, 30121. I am a consultant to regulated utilities and regulatory agencies and other public bodies on issues related to economics, economic modeling, regulatory policy, industry restructuring, demand-side investments, and resource planning.

Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS TESTIMONY?

A. I am submitting this rebuttal testimony on behalf of Duke Energy Carolinas, LLC ("DE Carolinas," or the "Company").

Q. ARE YOU THE SAME JULIUS A. WRIGHT WHO FILED DIRECT TESTIMONY IN THIS CASE?

A. Yes.

Q. PLEASE DISCUSS THE PURPOSE OF YOUR REBUTTAL TESTIMONY.

A. The purpose of my rebuttal testimony is to address several issues discussed in the direct testimony of intervenors related to the recovery of costs associated with coal combustion residuals ("CCR"), also referred to as coal ash, remediation expenses.

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Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY.

A. First, my rebuttal testimony recommends that the Commission reject the cost recovery disallowances related to coal combustion residuals ("CCR") proposed by Office of Regulatory Staff ("ORS") witness Dan Wittliff.

Second, I respond to ORS witness Seaman-Huynh and his recommendation that the Commission disallow recovery of what he terms additional costs related to North Carolina laws and regulations. In my rebuttal, I discuss why his proposed segregation and disallowance of what he terms North Carolina allocated costs is incorrect and contrary to traditional regulatory policy and would ultimately result in increased costs for the Company's South Carolina customers.

Third, I respond to ORS witness Gaby Smith's recommended disallowance for litigation expenditures that she believes are related to the Company's violation of environmental laws.

Fourth, I will respond to ORS witness Zachary Payne's recommended accounting treatment of the Company's deferred costs, and I will show why his recommendation is contrary to long-standing recovery principles and policy.

Fifth, I respond to a several issues related to coal ash costs raised by South Carolina Energy Users Committee ("SCEUC") witness Kevin O'Donnell. I will respond to his claim that the Company's coal ash related costs are much higher than other electric utilities. I also discuss why his recommended disallowance of 75% of the Company's proposed coal ash costs is inconsistent with traditional regulatory cost recovery principles.

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Finally, I will respond to Sierra Club witness Ezra Hausman's contention that the Company's recovery of CCR expenses be conditioned on the Company's completion of a retirement analysis. My testimony will discuss why this proposal violates longstanding rate-making principles.

II. RESPONSE TO ORS WITNESS WITTLIFF

Q. WHAT ARE MR. WITTLIFF'S RECOMMENDATIONS RELATED TO THE COMPANY'S CCR MANAGEMENT THAT YOU ARE RESPONDING TO IN THIS REBUTTAL TESTIMONY?

A. I am responding to several of Mr. Wittliff's arguments. First, I respond to his (and ORS witness Seaman-Huynh's) overarching contention that South Carolina ratepayers should not be required to pay an allocated portion of costs incurred by the Company to comply with North Carolina environmental regulations. Next, I address the fact that Mr. Wittliff's argument for cost disallowance fails to meet the appropriate regulatory standard for excluding costs from recovery. Finally, I address Mr. Wittliff's specific recommendations related to the CCR management underway at the Riverbend, Dan River, and Buck facilities in North Carolina, where he identifies a percentage of CCR management costs that he claims were due to North Carolina law and should, therefore, not be allocated to South Carolina customers.

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A. Recovery of Environmental Compliance Costs For CCR Management

Q. DO YOU AGREE WITH MR. WITTLIFF'S CONCLUSION THAT THE COSTS HE RECOMMENDS BE EXCLUDED FROM RECOVERY IN THIS CASE ARE RELATED ONLY TO CAMA AND ARE NOT COSTS REQUIRED BY THE FEDERAL CCR RULE?

A. No. I do not agree that the only costs he wants to exclude are related to CAMA. I understand that the Company disagrees with Mr. Wittliff's apparent conclusion that there are substantial differences between costs that may be required by CAMA as compared to costs that are required by the Federal CCR Rule. This specific issue is addressed in the rebuttal testimony of Mr. Kerin.

Q. EVEN ASSUMING THERE ARE DIFFERENCES BETWEEN CAMA AND CCR RULE COSTS, DOES THAT JUSTIFY MR. WITTLIFF'S RECOMMENDATION TO DISALLOW CAMA-RELATED COSTS?

A. No. In my rebuttal testimony, I address the general concept that even if there are differences in the CAMA-related and Federal CCR Rule-related costs, these differences do not disqualify such CAMA-related costs from recovery from South Carolina customers.

Q. IS MR. WITTLIFF'S PROPOSAL FOR DISALLOWANCE OF WHAT HE TERMS "CAMA-RELATED COSTS" CONSISTENT WITH ESTABLISHED REGULATORY PRACTICES FOR MULTI-STATE UTILITIES?

A. No. Mr. Wittliff states (page 29, lines 13-15) that "it is the position of ORS that costs incurred as a result of jurisdictional laws should not lead to increased costs

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to ratepayers outside of that jurisdiction." ORS witness Seaman-Huynh (page 6, lines 11-15) makes this same argument. This position is extreme and incorrect, and neither witness offers any policy justification for wholesale disregarding costs to comply with another state's laws. It is my experience that costs are allocated and recovered from customers based on which customers are served or benefitted by the actions that led to those costs. In this case, it is undisputed that the coal ash located at all of the Company's coal sites was produced as a result of providing electric energy to the Company's customers in both South Carolina and North Carolina. Therefore, the costs related to the CCR unit closure should likewise be borne by customers in both states. Furthermore, even though some costs to serve electric customers may be incurred due to a jurisdiction-specific law, such as differences in property taxes, this does not mean that the costs of such a law are not recoverable from all customers who benefit from the electric service activity associated with the law. This is how South Carolina and North Carolina have historically treated such costs and this includes costs that may be the result of a particular state's laws or regulations.

Finally, the Company does not have the option to ignore South Carolina or North Carolina state law. If the Company is to continue to supply electric service it must comply with the environmental laws of both South Carolina and North Carolina. The Company cannot simply pick and choose which environmental laws with which to comply. It would, therefore, be unreasonable to disallow costs the Company has incurred to follow the law.

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Q. CAN YOU PROVIDE ANY EXAMPLES OF STATE SPECIFIC COSTS THAT ARE SHARED BY NORTH CAROLINA AND SOUTH CAROLINA CUSTOMERS?

A. Yes. Some state specific costs that are often shared between the states include property taxes, on generation and transmission assets, differences in everyday operating costs like employee expenses, contractor expenses, fuel costs, and even costs like fuel transportation, which can differ depending on the location of a generating station (for example, rail service from coal mines to North Carolina can be different, and usually cheaper because of distance, than rail service to South Carolina). In addition, it is my understanding that, in this case, the Company is proposing to return to South Carolina customers $87 million of excess deferred income taxes resulting from a decrease in the North Carolina state income tax rate. This decrease in the income tax rate is the result of North Carolina legislation. If it is the ORS's position that South Carolina customers should not pay for any costs due to North Carolina legislation, then they should also propose that South Carolina customers not receive any benefits due solely to North Carolina legislation, and remove the $87 million refund of North Carolina state income taxes from the case.

Q. HAVE NORTH CAROLINA AND SOUTH CAROLINA SHARED THE COMPANY'S ENVIRONMENTAL COMPLIANCE COSTS PRIOR TO THIS CASE?

A. Yes. In fact, it is my experience that most, if not all, of the environmental costs the Company has expended, absent some unusual circumstance, have been

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shared between the states. For example, coal ash beneficial reuse revenues have, to date, been allocated and shared between both states. Also, as I mentioned in my direct testimony, in this Commission's Docket No. 2011-271-E, costs associated with a Cliffside facility scrubber, located in North Carolina, were allocated to and recovered from South Carolina customers. Similarly, in Docket No. 2009-226-E, costs associated with scrubbers at the Allen Steam Station, also located in North Carolina, were likewise recovered from South Carolina customers.

Q. IS THIS TYPICAL IN OTHER STATES AS WELL?

A. Yes. This type of cost sharing is common where a utility's operations span multiple states and the utility property used to provide one particular state's electric service may be located in another state. Some examples of other states sharing environmental costs include:

Application of Southwestern Electric Power Company for Authority to Change Rates, SOAH Docket No. 473-17-64, PUC Docket No. 46449 (Sept. 21, 2017); Order on Rehearing (Mar. 19, 2018) (Allowed the environmental costs associated with retro-fitting a facility located in Louisiana in which a Texas utility owned an interest to be included in the Texas utility's rate base).

In re: Petition for approval of 2016 depreciation and dismantlement studies, approval of proposed depreciation rates and annual dismantlement accruals and Plant Smith Units 1 and 2 regulatory asset amortization, by Gulf Power Company, Order No. PSC-17-0178-S-EI, FL PSC

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Docket No. 160170-EI (May 16, 2017) (Base rate case where Florida PSC allowed Gulf Power cost recovery of environmental costs associated with a plant in Georgia in which Gulf Power had an ownership interest through Gulf Power's environmental cost recovery clause).

In Re Environmental Cost Recovery Clause, Docket No. 090007-EI, 2009 WL 2028575 (Mar. 31, 2009) (Florida Public Service Commission approves Gulf Power's inclusion of environmental costs (including costs related to closure of an ash pond) relating to a Mississippi coal-fired generating unit in which Gulf Power owned an interest in its environmental compliance program, which program costs Gulf Power recovers through its environmental cost recovery clause).

Q. HOW IS SOUTH CAROLINA ADDRESSING THE CCR UNITS THAT ARE LOCATED WITHIN THE STATE?

A. South Carolina stakeholders have demonstrated a strong preference for excavation of coal ash ponds through settlements or negotiations with its electric suppliers, which predate the adoption of the Federal CCR Rule and CAMA. This excavation preference is more prescriptive than the CAMA policies and reflects the most expensive type of closure option. For example, with respect to the Company's W.S. Lee facility in South Carolina, on September 23, 2014, the Company entered into a Consent Agreement with the South Carolina Department of Health and Environmental Control ("SCDHEC"), and on April 23, 2015, entered into a related Settlement

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Agreement with several environmental groups, both of which dealt with coal ash at the W.S. Lee facility. These agreements called for the excavation of all of this site's CCR units, even those inactive units which were not covered under the CCR Rule.

It is important to note that the costs associated with these South Carolina agreements are appropriately allocated and recovered from North Carolina customers as approved by the North Carolina Utilities Commission's June 22, 2018 Order in the Company's recent North Carolina general rate case (Docket No. E-7, Sub 1146, page 266, 332).

Q. WHAT DO YOU BELIEVE WOULD BE THE ULTIMATE RESULTS IF THIS COMMISSION WERE TO ADOPT MR. WITTLIFF'S RECOMMENDATIONS THAT ANY COSTS ASSOCIATED WITH NORTH CAROLINA'S CAMA LAW SHOULD BE EXCLUDED FROM RECOVERY IN SOUTH CAROLINA?

A. I discuss this in more detail in my response to ORS witness Seaman-Huynh. However, in brief, in the near term, the Company's financial condition would be negatively impacted, likely resulting in an increase in the Company's cost of capital. Over time, this would lead to additional costs for all of the Company's customers. In other words, over time both South Carolina's and North Carolina's customers' electric service costs would increase due to South Carolina customers failing to pay their fair share of these environmental costs.

In addition, the failure of South Carolina customers to pay their allocated share of these costs would certainly be an unwelcome result to North

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Carolina citizens and regulators, as it would mean that North Carolina customers are currently paying their share of costs related to South Carolina's coal ash standards, which is a more costly and extensive remediation than what is required by either CAMA or the Federal CCR Rule. Contemplating this result leads to the legitimate question of why it is appropriate for South Carolina and its citizens to require and have costs recovered for excavation of its coal ash ponds, but it is not appropriate for similar and even less costly remediation for North Carolina coal ash ponds? In the end, accepting Mr. Wittliff's recommendation would likely result in some state regulatory jurisdictional issues that could even cause both states and the Company to rethink whether sharing generation assets still makes sense.

Q. DOES MR. WITTLIFF CONTEND THAT CAMA REQUIREMENTS ARE UNREASONABLE OR OUT OF LINE WITH WHAT OTHER STATES ARE NOW REQUIRING REGARDING ASH BASIN CLOSURES?

A. No, he does not, nor could he credibly make such an arguments. For example, Virginia has recently adopted state-specific CCR unit closure legislation, similar to CAMA in requiring site specific closure standards and other requirements. Additionally, other states have adopted basin closure rules and regulations through their regulatory agencies that are more prescriptive than the Federal CCR Rule and/or reached settlements with their electric utilities regarding coal ash remediation that requires steps beyond those required by the Federal CCR Rule. These new environmental regulations and legal settlements

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of several disputes have resulted in South Carolina's surrounding states adopting coal ash remediation policies that achieve similar closure standards as required by CAMA. This is illustrated in the following list:

Georgia - Adopted the Federal CCR Rule, but it has additional guidelines adopted by the Georgia Department of Natural Resources in Oct. 2016 that are more restrictive than the Federal CCR Rule at the time in that these rules also related to inactive facilities not covered by the Federal CCR Rule. Georgia also has pending legislation, HB 94, which does address coal ash landfill restrictions. In addition, Georgia Power has agreed to close all 29 of its coal ash ponds. While Georgia Power initially agreed to cap 12 ponds in place and excavate 17, recently that utility has agreed to excavate two more large sites;

Virginia - Adopted the Federal CCR Rule, and then the state passed legislation that required Dominion Energy to excavate all of its coal ash sites in the Chesapeake Bay Watershed and also required beneficiation at two sites. The legislation also had a 15 year time limit on the excavation, and it allowed cost recovery (plus a return), employment requirements, and reporting requirements;

Tennessee – The Department of Environment and Conservation ("DEC") has adopted the Federal CCR Rule, but the Department's rule indicated that it would oversee TVA's coal ash closure and even if TVA was in compliance with the Federal CCR Rule that the Department may

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require additional actions. Recent court action is also requiring extensive excavations of various TVA sites;

Florida - The state adopted the Federal CCR Rule, however most of this state's coal ash is beneficiated. In addition, Tampa Electric Company recently decided to excavate its coal ash site at Big Bend Power Station and submitted its closure plan for the site on October 2018;

Alabama - According to the Alabama Public Service Commission, the Alabama Department of Environmental Management has not yet adopted the CCR Rule but is considering seeking EPA approval for a state program that must be as stringent as the Federal CCR Rule. In addition, Alabama Power currently is involved litigation that would require excavation of its CCR units.

Q. CAN YOU PLEASE COMPARE NORTH CAROLINA'S COAL ASH REGULATIONS TO THOSE IN SOUTH CAROLINA?

A. Through settlements with its electric utilities, South Carolina stakeholders have displayed a strong preference for the excavation of unlined coal ash basins – a result that is more prescriptive, more extensive, and more costly than what would have been allowed under CAMA or the Federal CCR Rule for some sites. Today, every unlined coal ash pond in South Carolina is being or will be excavated. For example, in addition to the example of the Company's W.S. Lee facility I discuss above, in 2013 Santee Cooper agreed to excavate its Grainger site. In 2012, SCE&G settled a lawsuit by agreeing to excavate its Wateree and Canadys sites.

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Q. DOES MR. WITTLIFF DISAGREE WITH SOUTH CAROLINA STAKEHOLDERS' APPROACH TO CCR CLOSURE?

A. No. Mr. Wittliff does not take issue with the Company's closure strategy for W.S. Lee. I find that position interesting considering his statement that "North Carolina law should not place an additional burden on the ratepayers of South Carolina" (page 29, lines 19-22). Therefore, I assume Mr. Wittliff would agree with the proposition that North Carolina could simply adopt South Carolina's coal ash closure preferences and excavate all of the sites in North Carolina with South Carolina paying its full share of the increased costs that would come with such a policy.

Q. IF NORTH CAROLINA SIMPLY FOLLOWED SOUTH CAROLINA'S CURRENT COAL ASH REMEDIATION PREFERENCES, WHAT WOULD BE THE RESULTING COMPLIANCE STANDARD AND COSTS?

A. As I indicated above, South Carolina's coal ash remediation policies require excavating every unlined coal ash site. Where CAMA and the Federal CCR Rule allow some North Carolina sites to be capped-in-place, which is generally a less costly option than excavation, these sites, if located in South Carolina, would likely be excavated. Therefore, if North Carolina adopted this policy the costs would far exceed what is being requested in this filing.

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B. The Appropriate Regulatory Standard For Disallowance of Costs

Q. IN YOUR OPINION, IS MR. WITTLIFF'S PROPOSAL FOR COST DISALLOWANCE AN APPROPRIATE BASIS FOR DISALLOWING MORE THAN HALF OF THE COMPANY'S COSTS FOR COMPLYING WITH CAMA AND THE FEDERAL CCR RULE?

A. No. The appropriate regulatory standard for denial of cost recovery is a finding that specifically identified costs were either not prudent,[1] the costs were unjust or unreasonable,[2] or the costs were for facilities or expenses that are not considered used and useful[3] in the provision of electric service. As I will explain, Mr. Wittliff fails to present an argument that meets any of these three regulatory cost disallowance standards.

Simply relying on a claim that the Company is responding to a North Carolina law and, therefore, these costs only relate to North Carolina, as Mr.

[1] "Regulators, in turn, agree to allow the utility to recover any costs that are "prudently" incurred in order to earn a "fair" return on its investment.", Public Utility Commission Study, EPA Contract No. EP-W-07—064, March 31, 2011, page 5. "Although the burden of proof of the reasonableness of all costs incurred which enter into a rate increase request rests with the utility, the utility's expenses are presumed to be reasonable and incurred in good faith. *Hamm v. S.C. Pub. Serv. Comm'n*, 309 S.C. 282, 286, 422 S.E.2d 110, 112 (1992) (citations omitted). "This presumption does not shift the burden of persuasion but shifts the burden of production on to the Commission or other contesting party to demonstrate a tenable basis for raising the specter of imprudence." *Id. See also Utils. Servs. of South Carolina, Inc. v. South Carolina Office of Regulatory Staff*, 392 S.C. 96, 109-10, 708 S.E.2d 755, 762-63 (2011) (confirming that the same standard applied after the formation of the ORS).

[2] Such a regulatory policy fails to meet the most basic regulatory requirement that rates are based on "known and measurable" dollars. *See Hamm v. S.C. Pub. Serv. Comm'n*, 309 S.C. 282, 291, 422 S.E.2d 110, 115 (1992) ("adjustments for known and measurable changes in expenses…must be known and measurable within a degree of reasonable certainty") and see §58-27-810 states that "Every rate made, demanded or received by any electrical utility or by any two or more electrical utilities jointly shall be just and reasonable."

[3] With respect to the "used and useful" standard, South Carolina, like other states, has defined used and useful utility property as "property which it [the utility] necessarily devotes to rendering the regulated services" and has allowed recovery for such property in rates. *Hamm v. S.C. Pub. Serv. Comm'n*, 309 S.C. 282, 286 n. 1, 422 S.E.2d 110, 112 n. 1 (1992) (quoting *Southern Bell Tel. & Tel. Co. v. Pub. Serv. Comm'n of S.C.*, 270 S.C. 590, at 600, 244 S.E.2d 278, at 283 (1978)).

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Wittliff suggests, could be seen as arbitrary and capricious when this coal ash and any related costs have clearly been incurred as a result of providing electric service to customers in both South Carolina and North Carolina.

Q. HAS MR. WITTLIFF PRESENTED ANY ARGUMENT OR FINDING THAT THE COSTS HE SEEKS TO EXCLUDE FROM RECOVERY ARE IMPRUDENT OR UNREASONABLE?

A. No. Mr. Wittliff has not performed a prudency analysis of DE Carolina's costs. The disallowances he recommends are entirely tied to whether costs are related to CAMA.

Q. HAS ANY REGULATORY JURISDICTION EVER EXAMINED AND RULED ON THE QUESTION OF WHETHER THE COSTS MR. WITTLIFF SEEKS TO DISALLOW IN THIS CASE WERE PRUDENTLY INCURRED?

A. Yes. The North Carolina Utilities Commission recently ruled on this same issue. After filings and extensive testimony from this same witness and cross examination, that body concluded "The expert witnesses sponsored in this case failed to support allegations of discrete actions constituting imprudence." (Order in Docket No. E-7, Sub 1146, June 22, 2018, page 262)

Q. HAS MR. WITTLIFF PRESENTED ANY ARGUMENT OR FINDING THAT THE COSTS HE SEEKS TO EXCLUDE FROM RECOVERY ARE NOT USED AND USEFUL?

A. No. The disallowances he recommends are entirely tied to whether costs are related to CAMA. Furthermore, it is undisputed in this case that the coal plants

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associated with these costs and the related coal disposal facilities have been used and useful in providing low-cost, reliable power to South Carolina customers for more than 70 years. Consequently, these types of costs and, if any amount is deferred over time, a return, would be appropriately recoverable in rates to ensure that the Company recovered the equivalent of the full amount of those costs.

C. Costs Related To Specific Plants

Q. ARE THE COSTS WHICH MR. WITTLIFF SEEKS TO DISALLOW RECOVERY IN THIS CASE RELATED TO SPECIFIC SITES?

A. Yes, he recommends disallowances for three sites: Dan River, Riverbend, and Buck.

Q. WHAT IS MR. WITTLIFF'S RECOMMENDATION WITH RESPECT TO THE DAN RIVER PLANT?

A. Mr. Wittliff indicates that the Federal CCR Rule would not have required closure actions at Dan River to start until October 31, 2020, while closure under CAMA is required to be completed by August 1, 2019. He essentially claims CAMA's accelerated schedule generated the Dan River costs too early, and thus he would exclude all Dan River costs except what he has calculated to be engineering and planning costs (see Wittliff Direct T. at 36 – 38). The result is that he would disallow recovery at this time of $116.7 million in Dan River CCR sites closure costs, for which he says the Company can seek recovery after 2020 (Wittliff Direct T. at 37:6-9).

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Q. IS MR. WITTLIFF'S ARGUMENT THAT THE COSTS ASSOCIATED WITH THE DAN RIVER PLANT ARE UNRECOVERABLE AT THIS TIME BECAUSE THEY ARE IN RESPONSE TO CAMA AND NOT THE FEDERAL CCR RULE REASONABLE?

A. No. This is not a reasonable argument from a regulatory cost recovery perspective in my opinion. Mr. Wittliff did not present evidence that the Company's Dan River closure strategy was unreasonable or imprudent. Assuming the Commission found the Dan River closure strategy to be prudent and reasonable, and there is no evidence to the contrary, then the costs should be recoverable at this time. The Company must comply with the laws of both North Carolina and South Carolina. ORS asks this Commission to conclude that DE Carolinas incurred costs too early at Dan River because it complied with CAMA. This effectively places the South Carolina Public Service Commission in the position of having to determine what is a reasonable coal ash compliance regulation for the state of North Carolina. For this case, the Commission would have to conclude that the CCR Rule is the only reasonable way to manage coal ash, and anything more prescriptive is excessive by definition. This ignores that the CCR Rule contemplates that states may develop more stringent regulation and it ignores the actions that South Carolina stakeholders have taken that are above and beyond the requirements of the CCR Rule.

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Q. WHAT IS MR. WITTLIFF'S RECOMMENDATION WITH RESPECT TO THE RIVERBEND PLANT?

A. Mr. Wittliff indicates that the Company should do nothing with respect to coal ash at Riverbend at this time and recommends a disallowance of $316,680,665, reflecting the entire amount spent at Riverbend to date. He argues that the "entire amount should be disallowed for recovery from South Carolina ratepayers absent any federal regulations directing the actions taken by DEC or similar actions."(Wittliff Direct T. at 31:6-8).

Q. ARE MR. WITTLIFF'S ARGUMENTS THAT COAL ASH COSTS AT RIVERBEND ARE NOT RECOVERABLE BECAUSE CCR SITE CLOSURE AT RIVERBEND IS NOT YET REQUIRED UNDER THE CCR RULES REASONABLE?

A. No. As is the case with my previous discussion of the Dan River site, Mr. Wittliff has presented no argument that DE Carolinas' closure methodology is unreasonable or imprudent; his only claim is that the costs are being incurred too soon. However, it is difficult to imagine that the Company should or would be allowed by regulators and courts to simply do nothing at Riverbend at this time, particularly given the current activity in neighboring states and given current coal ash remediation plans in South Carolina resulting in excavation of all unlined sites, including inactive basins.

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Q. WHAT IS MR. WITTLIFF'S RECOMMENDATION WITH RESPECT TO THE BUCK PLANT?

A. Mr. Wittliff essentially makes the same argument – that the beneficiation costs at Buck were only because of CAMA and unnecessary under the Federal CCR Rule. Thus, he recommends disallowance of what he has identified as the "CAMA-only beneficiation" costs of $36,544,788 (Wittliff Direct T. at 35: 21-23; 36: 1-3).

Q. IS MR. WITTLIFF'S ARGUMENT FOR HIS PROPOSED BUCK DISALLOWANCE REASONABLE?

A. No. Just as with the Dan River and Riverbend costs, the Company must comply with the laws of North Carolina just as it must comply with the W.S. Lee settlements in South Carolina. A Commission finding that the Buck costs are not recoverable because they were incurred to comply with CAMA would again suggest that CAMA is illegitimate. Mr. Wittliff does not suggest that the closure strategy is unreasonable or imprudent.

Moreover, I am informed by Company personnel that DE Progress's beneficiation projects at its Cape Fear and H. F. Lee sites will actually flow back a large cost savings to South Carolina customers. Because these sites are being beneficiated under CAMA, following Mr. Wittliff's recommendation in this case would mean these cost savings would go completely to North Carolina customers and not be realized by the Company's customers in South Carolina.

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III. RESPONSE TO ORS WITNESS SEAMAN-HUYNH

Q. WHAT IS MR. SEAMAN-HUYNH'S RECOMMENDATION REGARDING WHAT HE TERMS NORTH CAROLINA JURISDICTIONAL COSTS?

A. Mr. Seaman-Huynh's direct testimony (p. 6, lines 9-15) indicates that the ORS recommends the Commission disallow recovery of what he terms additional costs related to North Carolina laws and regulations. He refers to Mr. Wittliff for more discussion on this issue and the exact recommendations. The laws and regulations to which he is referring is the North Carolina's CAMA.

Q. AS A GENERAL REGULATORY PRINCIPLE, WHY DO YOU DISAGREE WITH THIS RECOMMENDATION?

A. While I have addressed this issue in my response to Mr. Wittliff, I will provide a more expansive response here. The Company acknowledges, and I agree, that there are times that direct allocation of costs between jurisdictions is appropriate; but, direct allocation of costs between jurisdictions for many, if not most, costs is the exception, and not the rule, when jurisdictions share joint assets and thus enjoy the mutual benefits that come from sharing those assets. However, aside from these limited exceptions, the coal ash that is related to these so-called CAMA costs was produced in providing electric service to customers in both South Carolina and North Carolina. There is no dispute that South Carolinians benefitted from the low electric rates and reliable service this Company has provided for decades, in large part due to its coal-fired electric generation. Therefore, just as those customers in South Carolina have

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benefitted from this coal-fired electric service, they should likewise pay for the costs associated with that service, including these new environmental compliance costs.

Q. CAN YOU CITE SOME SPECIFIC REASONS WHY MR. SEAMAN-HUYNH'S PROPOSED JURISDICTIONAL COST ALLOCATION RECOMMENDATION IS NOT IN THE CUSTOMERS' BEST INTEREST?

A. Yes. First, while Mr. Seaman-Huynh may think his proposal is saving South Carolina customers money; it is not, as further discussed in Mr. Kerin's rebuttal. Further, his proposal, if accepted, could call into question the equities of sharing assets and economies of scale across a multi-state structure. In other words, the "slippery slope" and the unintended consequences that come with ORS's ill-conceived proposal far outweigh any perceived benefit that ORS may believe customers will see due to their suggested disallowances.

Second, if the Commission followed this recommendation, it would cause investors to reevaluate their views on this Commission's regulatory policies. As numerous return on equity experts have testified, the investment community does evaluate how regulatory commissions respond to utility filings and these evaluations are reflected in a utility's perceived riskiness and, in turn, in its cost of capital. I believe that if this Commission were to accept Mr. Seaman-Huynh's recommendation, it would negatively impact investors' perceptions of this Commission, which would likely increase the Company's cost of capital, resulting in increased rates.

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Q. CAN YOU CITE ANY OTHER SPECIFIC REASONS WHY MR. SEAMAN-HUYNH'S PROPOSED JURISDICTIONAL COST ALLOCATION RECOMMENDATION IS NOT IN THE CUSTOMERS' BEST INTEREST?

A. Yes. A very important third reason, as I discussed briefly in response to Mr. Wittliff, is that such a ruling may result in a negative reaction from North Carolina regulators. It is reasonable to assume the North Carolina Utilities Commission would likely take umbrage at such a ruling and see it as South Carolina taking advantage of North Carolina's customers. To wit, most of the Company's generating facilities are located in North Carolina and, yet, for decades these facilities have served citizens in both states. To now disallow legitimate environmental regulations and related costs, regulations that as I have discussed are less stringent and less costly than regulations currently applied in South Carolina, would likely be perceived as North Carolina customers essentially subsidizing South Carolina customers.

In the end, I believe accepting this recommendation would likely result in jurisdictional allocation controversies between South Carolina and North Carolina; would result in increased rates over time; and could call into question the equities of sharing assets and economies of scale across a multi-state structure.

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IV. RESPONSE TO ORS WITNESS SMITH

Q. WHAT ISSUE ARE YOU ADDRESSING RELATED TO ORS WITNESS SMITH'S SUPPLEMENTAL DIRECT TESTIMONY?

A. I am responding to ORS witness Smith's updated Adjustment #36. This is an updated adjustment operations and maintenance ("O&M") expenses for the removal of ($575,000) of litigation expenses purportedly attributable to legal actions related to coal ash.

Q. WHAT IS HER BASIS FOR THIS ADJUSTMENT?

A. ORS witness Smith references ORS witness Wittliff's direct testimony and his claim that "the Company violated state and federal laws resulting in damages to the environment." (ORS witness Smith Supplemental Direct Test. 2:15-16). Relying on Mr. Wittliff's testimony, ORS witness Smith concludes that:

> "Customers should not bear the burden of legal costs related to the Company's failure to operate its coal ash basin in accordance with state and federal rules and regulations. Inclusion of the legal costs as an allowable expense forces ratepayers to pay for Duke Energy Carolinas, LLC's ("DEC" or "Company") failure to comply with the law. Furthermore, the legal expenses are not related to providing adequate electrical service and the customers derived no benefit from the expenditures. These legal costs should be the shareholders responsibility which in turn incentivizes the regulated utilities to operate in compliance with federal, state and local laws."

(ORS witness Smith Supplemental Direct Test. 2:17-3:2).

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Q. CAN YOU PLEASE DESCRIBE EXACTLY WHAT LEGAL FEES ARE ASSOCIATED WITH THIS PROPOSED $575,000 DISALLOWANCE?

A. The proposed disallowance appears to derive from litigation expenditures that are listed in DE Carolinas' Confidential response to ORS Audit request number 55. The expenditures listed in that response relate to two matters involving the Company: 1) the ongoing insurance recovery litigation and 2) defense of state enforcement actions.

Q. DO YOU AGREE THAT THESE LEGAL FEES SHOULD BE EXCLUDED FROM RECOVERY?

A. No. These legal fees should be recoverable from ratepayers.

Q. WHY DO YOU BELIEVE THAT THESE LEGAL FEES SHOULD BE RECOVERED FROM RATEPAYERS?

A. There are two basic reasons for this conclusion. First, as a general matter, legal fees should be recoverable because they represent a legitimate, reasonable, and prudent business expenditure and, absent a finding that a specific legal expense was imprudent or unreasonable, these expenses should be recoverable. The Company must be afforded the opportunity to defend itself from lawsuits especially from non-government related parties that is the origination of much of the Company's legal expenses, including those in this case. Indeed, the Company might even be considered a "target" so to speak for lawsuits and must be allowed to vigorously defend itself.

Second, Mr. Wittliff's testimony does not support ORS witness Smith's rationale for the recommended disallowance. I believe that a cost disallowance

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must be based on the specific facts and circumstances that support such a proposed cost disallowance. With respect to this criterion, ORS witness Smith claims "[c]ustomers should not bear the burden of legal costs related to the Company's failure to operate its coal ash basin in accordance with state and federal rules and regulations. (page 2, lines 17-19)." To support this claim and related proposed cost disallowance, she references Mr. Wittliff's direct testimony and what he claims are environmental violations. The ongoing insurance litigation was initiated by the Company for the benefit of its customers to enforce insurance policies and obtain indemnity from insurers for costs incurred associated with coal ash remediation. The insurance case is focused on legal liability on account of property damage caused by an occurrence, not environmental violations. If the Company prevails in this litigation, the costs it recoups from its insurers will be passed along to benefit its customers.

Q. DOES MR. WITTLIFF IDENTIFY OR DISCUSS THE LITIGATED MATTERS FOR WHICH ORS WITNESS SMITH IS RECOMMENDING DISALLOWANCES?

A. Only partially. There are three primary places in Mr. Wittliff's direct testimony where he discusses litigation relating the Company's alleged environmental violation (page 15, lines 21-23, page 16, lines 1-8, and page 17, lines 2-5). In these three sections of Mr. Wittliff's direct testimony, he cites his Exhibits 5.1, 5.2.1, 5.3.1, 5.3.2, 5.3.4 as legal actions that he believes indicate the Company committed violations of environmental regulations. Only two of those exhibits,

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Exhibits 5.3.1 and 5.3.2, relate to the state enforcement actions for which ORS is recommending its disallowance.

Mr. Wittliff's Exhibits 5.3.1 and 5.3.2 are summary judgment orders from state enforcement actions that were filed against the Company in 2013. These state enforcement actions preceded the passage of both the federal CCR Rule and the CAMA. It is my opinion that the Company has a legitimate right and an obligation to defend itself from allegations of wrongdoing when the Company believes it is in compliance with the then current coal ash regulations. Moreover, the Company should defend itself and ratepayers in a legal proceeding when the potential result could be the requirement that the Company undertake coal ash remediation procedures that are beyond the current regulatory requirements, and, which in the end, could prove far more costly to customers then what would be required by either CAMA or the CCR. Importantly, there has been no finding by the Court in these actions that the Company violated any environmental statute or rule. Therefore, it is my opinion that these legal fees are a legitimate and recoverable expense.

V. RESPONSE TO ORS WITNESS PAYNE

Q. WHAT IS MR. PAYNE'S RECOMMENDATION WITH RESPECT TO RECOVERY OF DEFERRED COSTS?

A. Generally speaking, Mr. Payne recommends that any cost deferrals, except those related to deferred income tax, be categorized as either an operating-related or capital-related cost. He has further recommended that what he has identified as depreciation expense not be included in rate base and be recovered over time with no return on the deferred costs during the time period when these

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costs are being recovered (amortization period). He has also recommended no return on the deferred balancesduring the deferral period. Finally, for several of his deferred expense costs, he has proposed amortization periods much longer than what the Company is proposing.

Q. WHAT IS THE ULTIMATE MONETARY IMPACT OF HIS RECOMMENDATION?

A. His recommendation does not allow the Company the opportunity to recover its true costs for two reasons. First, by not allowing the recovery of a return on uncollected deferred costs during the deferral period, the Company does not have the opportunity to recover all of its costs associated with these deferred accounts. Second, increasing the amortization period and not allowing a return over the time period the costs are being recovered, prevents the Company from recovering its costs associated with the cost of money.

Q. IS HIS RECOMMENDATION CONSISTENT WITH YOUR UNDERSTANDING OF THE USUAL METHODOLOGY EMPLOYED AS IT RELATES TO THE RECOVERY OF DEFERRED COSTS?

A. No. In my experience, his recommendation to disallow the recovery of a return on a large portion of the Company's deferred costs is inconsistent with the normal cost recovery allowed by regulatory bodies. Specifically, it violates the basic regulatory compact, which can be stated as follows: "*A rate - regulated entity incurs costs in order to provide reliable service to customers within its approved service territory in a not unduly discriminatory manner* ***with the expectation that it will have the right to recover those prudently incurred***

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costs, plus earn a fair rate of return on the capital that has been invested in the business to support reliable utility service." (emphasis added) [4]

Q. HOW DOES MR. PAYNE'S RECOMMENDATION VIOLATE THE BASIC REGULATORY COMPACT?

A. It does not allow the Company the opportunity to recover its costs.

Q. MR. PAYNE INDICATES IN SEVERAL PLACES IN HIS TESTIMONY THAT ORS'S RECOMMENDATION "STILL ALLOWS THE COMPANY TO RECOVER ITS ACTUAL DEFERRED COSTS" (page 6, lines 15-17, page 8, lines 6-8, page 11, lines 15-17). IS HE CORRECT?

A. He is not correct when he does not allow the Company to recover in rates a return on portions of the deferred accounts. A basic understanding of accounting, finance, and economics tells us that there is a cost of money. In our daily life, this is the interest rate on our credit cards or the interest rate we pay on our home loans. In the context of utility regulation, we have cost of capital witnesses that explain the costs of a utility's capital. In addition, regulation accounting has various accounts like rate base and working capital accounts for which a cost of capital, represented by a return, is computed. So, too, the dollars the Company has spent and placed in a deferred account, have a cost – these dollars were not borrowed from investors for free and the Company is paying those costs. Therefore, if a return on these deferred expenses is not allowed,

[4] "Accounting for the Effects of Rate Regulation," Edison Electric Institute, July 2011, page 5. *See also S. Bell Tel. & Tel. Co. v. Pub. Serv. Comm'n*, 270 S.C. 590, 595, 244 S.E.2d 278, 280-81 (1978) ("the governing principle for determining rates to be charged by a public utility is the right of the public on one hand to be served at a reasonable charge, and the right of the utility on the other to a fair return on the value of its property used in the service") (citing *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n of West Virginia*, 262 U.S. 679 (1923)).

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then it means the Company has not been allowed the opportunity to recover its legitimate and prudent costs.

Q. CAN YOU PROVIDE ANOTHER REASON WHY NOT ALLOWING A RETURN PREVENTS THE COMPANY FROM RECOVERING ITS TRUE COSTS?

A. Yes. The most basic reason is it completely ignores the effect of inflation over time; and, this impact is aggravated by Mr. Payne's other recommendation to stretch out the Company's proposed cost recovery amortization periods, often by decades. Thus, Mr. Payne's recommendations not only ignore the fact that dollars the Company invests cost money, but he even ignores the impact of inflation on the recovery of those costs. In the most basic economic terms, if one ignores the impact of inflation and spreads over many future years the recovery of dollars spent today, this means the Company can never recover its true costs and never be made whole.

Q. DO YOU HAVE ANY OTHER COMMENTS REGARDING MR. PAYNE'S TESTIMONY?

A. Yes. In several places he comments that the ORS recommendation "still allows the Company to recover its actual deferred costs through amortization of the proposed deferral balance which is a sufficient level of cost recovery." (page 6, lines 15-17, page 8, lines 6-8, page 11, lines 15-17). I am at a loss to understand what he means by the term "a sufficient level of cost recovery." I am also unfamiliar with this term being the standard of cost recovery applied in a regulatory forum because it seems to require a subjective opinion. In my

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experience, the standard of cost recovery in regulation is the recovery of all prudent and reasonable costs plus a reasonable return on those costs recovered over time.

Even accepting Mr. Payne's concept that a sufficient level of cost recovery is an appropriate regulatory standard, he provides no indication as to how to measure "sufficient." Unless it is totally subjective, I am left to ponder what financial or other metrics were used by ORS in its determination of sufficiency? I believe that adopting sufficiency as a regulatory guideline, along with the adoption of Mr. Payne's recommendations regarding no return on much of the Company's deferred costs, would elicit a negative response from the investment community. This would result in an increase in the Company's cost to borrow money or attract equity investors, resulting in higher future rates for all of its customers.

VI. RESPONSE TO SOUTH CAROLINA ENERGY USERS COMMITTEE WITNESS O'DONNELL

Q. WHAT ISSUES ARE YOU RESPONDING TO WITH RESPECT TO MR. O'DONNELL?

A. I am responding to the four basic issues that he raises regarding coal ash compliance costs. First, I dispute his policy conclusion that the Company should not be allowed to recover the costs associated with the W.S. Lee or Dan River remediations. Second, I dispute his conclusion that the Company should have been recovering coal ash closure costs in a cost of removal fund years ago and his conclusion that failure to do so should result in a $46.7 million cost disallowance (page 44, lines 11-17). Third, I dispute his conclusion that the

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Company's coal ash remediation costs "are MUCH greater than the coal ash AROs from other utilities...[and this] implies that the North Carolina CAMA legislation is much more stringent than the Federal CCR Rule requirements." (page 47, lines 4-7) Finally, I dispute his overall recommendation that 75% of the of the Company's coal ash remediation costs requested in this case be disallowed.

A. Disallowance of Lee and Dan River CCR Site Closure Cost

Q. DO YOU AGREE WITH MR. O'DONNELL THAT COAL ASH BASINS ASSOCIATED WITH THE W.S. LEE FACILITY SHOULD BE DISALLOWED FOR RECOVERY (page 41, line 23-24)?

A. No. As I stated earlier, the inactive CCR unit closures at the W.S. Lee facility were the result of a Consent Agreement signed on September 23, 2014, between the Company and the SCDHEC and later on April 23, 2015, a related Settlement Agreement with several environmental groups. I believe the regulatory authorities and policy makers at SCDHEC are far more qualified to determine the appropriate coal ash remediation policy for South Carolina than Mr. O'Donnell. Consequently, the costs associated with these decisions should be recoverable.

Q. DO YOU AGREE WITH MR. O'DONNELL THAT CCR SITE CLOSURE COSTS AT THE DAN RIVER FACILITY SHOULD BE DISALLOWED FOR RECOVERY (page 42, line 23-26)?

A. No. Mr. O'Donnell has not claimed that these Dan River costs are imprudent or unreasonable, which is the general requirement to disallow a specific cost.

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His whole argument is that the Dan River accident created CAMA and thus any related costs are not recoverable. This, however, is not an accepted or permissible basis upon which to deny costs and was properly rejected by the North Carolina Utilities Commission when he made the same argument before them.

B. Timing of the Company's Request for Recovery of Coal Ash Disposal Costs

Q. MR. O'DONNELL CONCLUDES THAT THE COMPANY SHOULD HAVE BEEN COLLECTING COAL ASH DISPOSAL COSTS SOONER. DO YOU AGREE?

A. I disagree. In fact, the North Carolina Utilities Commission addressed this very issue and completely rejected the idea that some historical hypothetical start date could be chosen, absent any regulations, at which time the Company should have begun collecting ratepayer dollars in reserve for some future unknown environmental costs. Such a regulatory policy fails to meet the most basic regulatory requirement that rates are based on "known and measurable" dollars. *See Hamm v. S.C. Pub. Serv. Comm'n*, 309 S.C. 282, 291, 422 S.E.2d 110, 115 (1992) ("adjustments for known and measurable changes in expenses...must be known and measurable within a degree of reasonable certainty"). In denying this proposed hypothetical collection of ratepayer dollars that should have occurred at some time in the past for some hypothetical future environmental expense that was going to possibly occur at some unknowable future date, the North Carolina Utilities Commission stated:

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"Efforts to identify what DEC should have done prior to EPA CCR and CAMA, when it should have done so and what the costs should have been even with the benefit of 20/20 hindsight pose insurmountable obstacles. Without statutory or regulatory standards and guidelines to follow, no one can say what the prudent course would have been even if one acts on the assumption that DEC was imprudent to await promulgation of the definitive environmental regulatory requirements...." Order in Docket No. E-7, Sub 1146, June 22, 2018, page 263.

I agree with the North Carolina Utilities Commission's rejection of this type of recommendation that is now being proposed by Mr. O'Donnell's in South Carolina.

C. DE Carolinas' Coal Ash Costs Relative to Other Utilities

Q. MR. O'DONNELL INDICATES THAT THE COMPANY'S CCR SITE CLOSURE COSTS ARE MUCH GREATER THAN THE CLOSURE COSTS OF OTHER COMPANIES AND THIS IS DUE TO CAMA (page 47, lines 4-7). DO YOU AGREE?

A. I do not agree, and I believe that a fatal flaw with his argument is one of timing. To explain, he uses data from SNL Financial and 2017 financial statements to extract his data (page 46, lines 1-5). While this may seem to be current, in the context of coal ash, this is not true since there are ongoing regulatory and legal proceedings and various Company coal ash updates. For example, in the past thirty days Virginia adopted a very costly coal ash bill that will significantly impact Dominion Energy; and, Georgia Power, in October of 2018, updated the

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sites it is excavating by adding an additional 29 million tons of ash to be excavated. These laws in other states are evolving since the passage of the Federal CCR Rule, as evidenced by the legislation recently adopted in Virginia, the recent introduction of a bill in Georgia, and the numerous ongoing legal proceedings in other jurisdictions. It just so happens that South Carolina and North Carolina began the process earlier, and, in fact, South Carolina essentially leads the Southeast as it began excavation of its sites in 2012.

To illustrate the current state of cost estimates, refer to the following table that compares Mr. O'Donnell's cost estimates to some updated cost estimates. Table JAW-1 shows that for three neighboring utilities, Georgia Power, Alabama Power, and Dominion Energy (in Virginia), Mr. O'Donnell's ARO coal ash compliance dollars are significantly less than what these utilities have recently reported. Mr. O'Donnell doesn't even report TVA, whose compliance costs are still in dispute but could range far in excess of the current $2 billion estimate if the least costly method of closure is not used. Therefore, because neighboring state utilities are just now beginning to get new rules, or settle cases, the coal ash costsMr. O'Donnell is reporting for these neighboring states are lower than the more current cost estimates. Consequently, Mr. O'Donnell's conclusion that the Company's "coal ash costs are MUCH greater than the coal ash AROs from other utilities" and that this increased cost is caused by CAMA (page 47, lines 4-7) is contradicted when one considers more recent coal ash cost data.

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TABLE JAW-1: COMPARISON OF O'DONNELL REPORTEDCOAL ASH COMPLIANCE COSTS

COMPANY	O'Donnell Reported Cost, Direct Testimony Table 8, page 46	Estimated Cost to Comply With CCR and State Regulations		Source
		Minimum	Maximum	
Dominion Energy Virginia	$624M	$5.6B to 8.2 B+ (note, with the passage of the recent legislation the costs is expected to approach the estimates for excavation, which the legislation requires)		AECOM Report in Response to SB 1398, Tables ES-1, ES- 2, Nov. 2017 and https://www.richmond.com/news/virginia/coal-ash-excavation-could-cost-dominion-ratepayers-an-extra-per/article_7e0269a2-c791-58d8-949c-5710083b1875.html December 17, 2018
GA Power	$1.424B	$1.5B	$2.0B (note, this does not include the recent 29 million tons to be excavated at two additional sites – to put this additional 29 million ton potential cost in perspective, the recent VA legislation calls for Dominion to excavate 28 million tons at a cost estimate of $5.6 B to over $ 8.2 B)	http://www.ajc.com/business/georgia-power-close-ash-lagoons-sooner-could-cost-billion/Un9uNUQFtsZZBJXV gKGNaK/, June 13, 2016
Al Power	$324M	$1.14B	No estimate provided	Docket No. 18117, Al Power Compliance Plan, Dec. 13, 2016
TVA	Not reported	$3.5M	$2.3B	http://www.powermag.com/tv a-backs-in-place-coal-ash- impoundment-closure-method-over-remo

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Q. EVEN IF THE COMMISSION WERE TO ACCEPT MR. O'DONNELL'S ASSERTION THAT THE COMPANY'S COAL ASH COMPLIANCE COSTS ARE IMPROPERLY HIGHER THAN OTHER ULITITES IN THE NATION, IS HIS PROPOSED 75% COST DISALLOWANCE A PROPER METHOD OF ADDRESSING THIS FACT?

A. No. The appropriate mechanism for adopting a cost disallowance is a finding that a specific level of costs is imprudent, unreasonable, or not used and useful. Mr. O'Donnell makes none of these arguments but simply advocates for a blanket 75% cost reduction with no identification of costs that were imprudent, unreasonable, or not used and useful.

VII. RESPONSE TO SIERRA CLUB WITNESS HAUSMAN

Q. SIERRA CLUB WITNESS DR. EZRA HAUSMAN CONTENDS THAT THE COMMISSION SHOULD REQUIRE THE COMPANY TO DO A COMPREHENSIVE RETIREMENT ANALYSIS AND THAT THE RECOVERY OF THE CCR COSTS BE CONDITIONED ON THE FILING OF THIS ANALYSIS (page 24, l. 1-14). DO YOU AGREE?

A. No. I disagree with his recommendation of conditional recovery for several reasons. First, allowing a "conditional cost recovery approval" is inconsistent with the facts of this proceeding. To wit, the Company is expending resources to meet environmental compliance deadlines. These expenditures are not optional, and they are time sensitive. Therefore, unless these costs have been demonstrated to be imprudent, unreasonable, or not used and useful, which no

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witness has contended or provided evidence to support, then the recovery of these costs should be allowed at this time.

Second, a conditional approval is inconsistent with the cost recovery standards under which this Commission has based its regulatory policies (discussed earlier in this testimony). Those policies are that costs are recoverable if they have been demonstrated to be prudent, reasonable, and used and useful. No witness has contended or provided evidence to dispute these costs meet this standard, thus the recovery of these costs should be allowed at this time.

Third, because these expenditures are required at this time in order to meet legal deadlines, as Mr. Kerin has explained in his direct testimony, then the Company has the legal right to seek recovery of these costs in a timely manner and has done so in this case. To accept Dr. Hausman's "conditional recovery" would essentially cast a shadow of delay on potential future refunds with respect to these now conditionally recovered expenses, which would likely elicit a negative reaction from the investment community. The reason is because of a risk that the Company's earnings would apparently be subject to restatements as a result of customer refunds if, in the future, the Commission did not approve of the comprehensive retirement analysis upon which Dr. Hausman conditions his cost recovery approval.

Finally, I am at a loss to understand how this "conditional recovery" idea would even work. I believe, at the very least, such a policy would be seen

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as retroactive ratemaking which is not allowed in most regulatory jurisdictions, including South Carolina.

Q. DOES THIS CONCLUDE YOUR PRE-FILED REBUTTAL TESTIMONY AT THIS TIME?

A. Yes.

MR. BURNETT: Mr. Chairman, this panel is available for questions.

CHAIRMAN RANDALL: Okay. I -- let me just get a little feel for where we're going from here, about who's going to cross. Ms. Ferguson, you have cross?

MS. FERGUSON: No, Mr. Chairman.

CHAIRMAN RANDALL: Okay. Ms. Lee?

MS. LEE: I do.

CHAIRMAN RANDALL: Okay. Mr. Elliott?

MR. ELLIOTT: Not likely.

CHAIRMAN RANDALL: Ms. Grundmann?

MS. GRUNDMANN: No cross.

CHAIRMAN RANDALL: Okay. All right. We're going to take -- we're going to take a break for lunch, and we will be back at 1:38.

(Witness stood aside)

(Off the record from 12:26 p.m. until 1:37 p.m.)

AFTERNOON PROCEEDINGS

CHAIRMAN RANDALL: Please be seated. Okay. We're at cross-examination time. (To Mr. Burnett) You need -- just stand. I was having a moment with my brain there, I couldn't remember.

MS. LEE: Take all the time you need, Mr. Chairman. Thank you.

THEREUPON came

JULIUS A. WRIGHT, PH.D.

JON F. KERIN,

re-called as a witnesses, who, having been previously duly affirmed, were examined and testified further as follows:

MS. LEE: Good afternoon, Mr. Chairman and Dr. Wright. My name is Bridget Lee. I'm here on behalf of the Sierra Club. I'm going to start with my questions for Mr. Kerin first, and then I'll turn to you Dr. Wright.

CROSS-EXAMINATION

BY MS. LEE:

Q Mr. Kerin, you've testified that since the early 1900s DE Carolinas has deposed of its CCR in compliance with then current regulatory requirements and industry practice; is that right?

A (KERIN) That is correct.
Q Okay. And throughout your testimony, you've repeated that opinion in sort of different ways.
A (KERIN) That is correct.
Q So with respect to those laws and regulations that govern the Company's actions before the North Carolina Coal Ash Management Act and before the federal CCR rule, just -- just briefly could you describe what those regulations and laws would be?
A (KERIN) I think it primarily would be the Clean Water Act and NPDES permitting system --
Q Okay.
A -- which is used on our ash basins.
Q Okay. And what about state law, would the North Carolina 2L Groundwater Rules be relevant to the Company's actions with respect to coal ash?
A (KERIN) Yes. It would.
Q Okay. And under those rules, would the Company have an obligation to monitor groundwater near its coal ash ponds?
A (KERIN) Yes. They would. I don't recall the exact time period that that requirement came into place. I know the 2L standard came in in 1979.
Q Okay. And do you know if the Company did undertake some -- some monitoring pursuant to those rules?

A (KERIN) Yes. We did.
Q And do you know the results of that monitoring?
A (KERIN) I don't have those results with me --
Q Okay.
A -- today.
Q Just, I guess, in a -- in a -- in a broad sense, not getting down to specific results, do you know if exceedances of any groundwater standards were found pursuant to that monitoring?
A (KERIN) Yeah. I don't have the results of that monitoring.
Q Okay.
A (KERIN) There may have been exceedances.
Q Okay. Thanks. Who at the Company would have those results?
A (KERIN) It'd be our environmental organization.
Q Okay. So none of the witnesses that are here today or throughout this hearing?
A (KERIN) I don't believe so.
Q Okay. And do you know if any coal ash constituents were found in groundwater near the W.S. Lee plant here in South Carolina?
A (KERIN) Under what time frame?
Q I guess I'm thinking specifically before the consent decree was entered into.

A (KERIN) Yeah. I'm not aware of any.
Q Okay. How about after that consent decree?
A (KERIN) We do have groundwater and watering wells, but I don't have the exact findings of those wells.
Q Okay. And pursuant to that consent agreement, the Company was required to excavate ash at the site; is that right?
A (KERIN) As part of that consent agreement, we excavated the 51 through 59 ash basin and ash fill area along the Saluda River.
Q Okay. And in your testimony -- I'm looking at Page 17 -- you also mentioned in addition to the inactive ash basin and the ash fill area the consent agreement required excavation at other areas where ash may have potentially migrated? Do you know if there was excavation at any other areas besides the basin and the fill area?
A (KERIN) The activities which took place were with the inactive ash basin and the fill area.
Q Okay. Turn back to the Clean Water Act. You've testified, and I think you, maybe, stated again in your summary this afternoon, that under the Clean Water Act, wet ash handling of coal ash is the "primary lawful and effective way to meet CCR needs and environmental regulatory requirements from 1974

until 2015"; is that right?
A (KERIN) I'm just going to go to that section.
Q Oh, sure. I was on Page 7, Line 11 through 15.
A (KERIN) That is my direct testimony?
Q Yes.
A (KERIN) Can you give me that line number?
Q Sure. Line 11. Starting at 11.
A (KERIN) On Page 7?
Q Yeah. This is where -- a line earlier starts describing the Clean Water Act, 1992 [sic]. You see that?
A (KERIN) Yeah. My Line 11 says, "The Clean Water Act of 1972."
Q Yeah.
A Okay.
Q Exactly.
A (KERIN) Yes.
Q Later in that sentence, I guess, is the -- the "primary lawful and effective" quote.
A (KERIN) Yes.
Q So would you agree with me that in order to be lawful, a coal ash basin would have to be designed to not to leak?
A (KERIN) What time frame were you talking about the design?

Q Around the time of the Clean Water Act, 1972.
A (KERIN) In the early '70s, and prior to that, when ash basins first started to be constructed to handle ash in the '40s, which is probably the first type of basins, they're primarily earthen dams and they're unlined.
Q Uh-huh.
A (KERIN) So you would -- under that circumstance, you would have the ability for some leachate at the bottom of an ash basin.
Q Okay. And then how about in -- once we're post-Clean Water Act enactment? So early '70s.
A (KERIN) Are you asking me the same question? Could those same basins --
Q Yeah.
A (KERIN) -- potentially leachate?
Q I guess -- I guess my question is this: As I understand your testimony, the coal ash basins were permitted with NPDES permits as wastewater treatment facilities, right?
A (KERIN) That is correct.
Q Okay. And an NPDES permit typically has -- it -- it designates a particular specific outfall where a discharge of wastewater is able to be released into a -- a surface water; is that right?

A (KERIN) That is generally correct, yes.
Q Okay. So if you had a wastewater treatment facility that had releases coming out at points other than a designated outfall, would those releases be in compliance with the Clean Water Act and its regulations?
A (KERIN) I think it depends on how those releases were and if they were determined to be a point source.
Q Okay. As currently -- are you familiar with the NPDES permits at the Company's coal ash sites?
A (KERIN) Generally, but not specifically into detail.
Q Okay. Do you know if any of them have any provisions that allow for discharge other than through an outfall?
A (KERIN) I'm not aware of that.
Q Okay. And, Mr. Kerin, are you familiar with the federal criminal investigation that followed the Dan River spill, and the fact that the Company entered into a plea agreement following that investigation?
A (KERIN) Yes. I am.
Q Okay. And I think we can agree that the plea agreement speaks for itself, but is it your

understanding that the Company pled guilty to multiple counts of criminal negligence with respect to its management of coal ash?

A (KERIN) We pled guilty to, I believe, nine misdemeanor counts at --

Q Okay.

A -- five different sites.

Q Okay. And did those misdemeanor counts include negligence?

A (KERIN) I don't have the document in front of me.

Q Okay. Sure. We can agree it speaks for itself. So when you make the statement that the Company has conducted its coal ash management in compliance with all regulatory requirements, how do you square that with those misdemeanor counts you just mentioned?

A (KERIN) The way I look at it is: We've been operating those coal facilities for over a hundred years. If I look at a hundred years' worth of time and I have one event, which is one sliver of time, one fraction of time that we were operating in accordance with company -- with industry practices and in compliance, I don't consider that a mismanagement of long-term operation of those facilities.

Q Okay. Was -- before the Dan River spill, are you aware of any investigations at Duke's plants?
A (KERIN) I'm not familiar with those.
Q So, maybe, if there had been one, other misdemeanors could have been uncovered?
A (KERIN) I'm -- I'm not sure what you're -- if that's a question?
Q Do you have any evidence of Duke's -- the Company's actions at the coal plants before 2014, when you joined the ABSAT Group?
A (KERIN) Again, can you clarify that question?
Q Sure. Let me do that. Mr. Kerin, I think you testified that you first got involved with coal ash in 2014; is that right?
A (KERIN) In February of 2014. That's correct.
Q Okay. So before 2014, before February 2014, the Company was obviously handling coal ash across the Carolinas, right?
A (KERIN) At our coal facilities, yes.
Q Okay. So do you have any direct knowledge of those activities?
A (KERIN) On how we managed the coal ash?
Q Sure. Yeah.
A (KERIN) Yes. I do.
Q Okay. And -- and how do you have that experience?

A (KERIN) Well, as part of my responsibility in ABSAT is I inspected every facility. I talked to individuals that were operating those facilities. I talked to other utilities. I formed a peer team with utilities in the Southeast, a southern company, TVA, AEP, and Dominion, and visited their sites and met with my peers at those sites and looked at how they were operating those sites.

I also look at the overall Duke Energy. It's made up of multiple companies. So when I look at how we were managing ash basins in Indiana, Ohio, Kentucky, North Carolina, South Carolina and Florida, we were all operating those facilities consistent in the same practices. So that also gave me the backup information that we were following industry standards, that we all were following the same processes in the Southeast.

Q Okay. I guess I'm just interested in the level of detail. I mean, a few minutes ago I asked you about exceedances of the North Carolina 2L rules, and you weren't sure when exceedances might have been discovered.

A (KERIN) Yeah. I wasn't -- I don't have that documentation or --

Q Okay. Mr. Kerin, you were involved with the

Company's rate cases before the North Carolina Utilities Commission, right?

A (KERIN) That is correct.

Q And are you familiar with the outcome of those cases? The orders that the Commission entered?

A (KERIN) I did review the orders, yes.

Q Okay. So are you aware that the Commission imposed a mismanagement penalty on the company?

A (KERIN) Yes. I am.

Q Okay. Do you know the reason for that?

A (KERIN) As I recall, the -- it was tied back to the plea agreement in the events of Dan River and they used statements, and I'm reading out of the order: "A mismanagement to which DEC pled guilty, was only a fraction of the time DEC operated its impoundments. There was no evidence was submitted that DEC's management was imprudent from the initial date of operations. And, consequently, having pled guilty to management criminal negligence, DEC cannot go without sanction in the form of a cost disallowance."

So that "mismanagement fee" was purely tied to the Dan River event.

Q Okay. And would you agree that this commission has an independent duty to review the facts and

determine whether the company's actions are reasonable and prudent?

A (KERIN) Yes. I believe that's their responsibility.

Q Switching gears a little bit, the -- the company's current plan for closure of the ash ponds at the Allen and Marshall plants, is that still to cap those in place?

A (KERIN) Our current plans, as we specified in the October 2016 CCR closure plan, which is posted to our operating record and to our website, indicated that we would cap those sites. And that is our current plan as we're preparing our detailed closure plans for submittal to the State of North Carolina DEQ later this year.

Q Okay. And has the company calculated the total cost of pond closure at those plants and at its other basins?

A (KERIN) As part of -- part of our ARO analysis, which we do on an annual basis, we do a very detailed bottoms-up cost estimate of the closure plans at those basins. So, yes. For all of our sites, we have a very detailed estimate.

Q Do you know ballpark what the total cost would be for the --

A (KERIN) I believe I have that with me.
Q Okay. Thanks.
A (KERIN) I thought I had that with me, but give me a second.
Q Sure.
A (KERIN) The cost of the Allen plant?
Q We can go plant by plant or if you just had a -- a total -- total cost of all the coal-ash cleanup for the DEC system.
A (KERIN) The total cost of our 4th quarter 2018 analysis was -- this is total cost. You'd have to -- this is not -- you'd have to subtract -- subtract current, already spent -- is approximately 2.7 billion.
Q Okay. And has the company estimated the timeline along which that 2.7 billion will be spent?
A (KERIN) Timing-wise will be when we begin closure of those plants and have approval of our closure strategies and the State approves. It'd be approximately ten years or so.
Q Okay. Thanks. And if the North Carolina DEQ were to require excavations instead of capping, we could expect those costs to be higher; is that fair?
A (KERIN) Excavation versus capping costs you would typically see higher.

Q Okay. And has the company calculated how much more expensive that scenario would be?
A (KERIN) I have not done -- part of my responsibilities, I have not done a detailed analysis.
Q Okay. Has the company analyzed whether different ash-handling practices in the past might have resulted in different costs today?
A (KERIN) Can you give me some specifics?
Q Sure. So, for example, if the company had switched to dry-ash handling sooner, I think we could agree that there would be fewer tons of coal ash sitting in wet ponds today and then the excavation costs of those ponds would be reduced; fair?
A (KERIN) If they were going to be excavated.
Q Sure.
A (KERIN) If they were going to be capped in place, it's based on acreage. So it's not the amount of coal, it's how much acreage. So if they were capped in place, you would not see a significant -- or any type of change in costs.
Q Okay. What about -- I mean, wouldn't a cap-in-place still have an opportunity for cost savings if the -- the pond wasn't as large? It's -- it's an acreage issue?

A (KERIN) Well, most of our ponds -- we did not expand those ponds horizontally, since the early 1970s or maybe early 1980s, so we did not see vertical or horizontal expansion of our basins. They would not have changed.

Q Okay. So -- but in the -- in the scenario of excavation, there could be some cost savings?

A (KERIN) If you were excavating, of course, it's based on tonnage and transportation of tonnage. So it would be tied to the tons in the basin.

Q Okay. Thanks, Mr. Kerin.

Dr. Wright, just a few questions for you.

A (WRIGHT) Thought you forgot me.

Q No, sir. Your advanced degrees are in finance and economics; is that right?

A (WRIGHT) Yes.

Q Okay. And you're not trained as an engineer or a hydrogeologist, are you?

A (WRIGHT) No. But my undergraduate degree is a BS in chemistry, and I worked 12 years in process engineering in the chemical industry for three large companies.

Q Okay. And how about legal training? You're not an attorney, are you?

A (WRIGHT) No. I'm not an attorney.

Q Okay. And before being retained by the Company with respect to the North Carolina Utilities Commission proceedings that commenced in 2017, did you have any direct experience with regard to the management of coal ash?

A (WRIGHT) Other than working as a utility commissioner for eight years, where we actually had some of these issues before us in some cases, because at that time, the eight years I was on the Commission, we had a rate case probably every two years with three different electric utilities. At that time it was Duke Energy, CP&L, and VEPCO. So we saw them every -- every two years, each one of them.

Q So other than rate cases --

A (WRIGHT) Other than rate cases and touring the facilities.

Q Okay. That's all my questions. Thank you, Mr. Wright.

CHAIRMAN RANDALL: Thank you, Ms. Lee. Energy users?

MR. ELLIOTT: No questions. Thank you.

CHAIRMAN RANDALL: Thank you. Ms. Grundmann?

MS. GRUNDMANN: No cross.

CHAIRMAN RANDALL: ORS?

CROSS-EXAMINATION

BY MS. PITTMAN:

Q Thank you, Mr. Chairman. Good afternoon, Dr. Wright and Mr. Kerin. I'm Jenny Pittman. I'm with the Office of Regulatory Staff. I'll start with a few questions for you, Dr. Wright, and then I'll move to you, Mr. Kerin.

Dr. Wright, to your knowledge, did any South Carolina stakeholders, like South Carolina environmental groups or South Carolina state agencies participate in the CAMA legislative process?

A (WRIGHT) I do -- I don't -- I just don't know. I know there were the Sierra Club and other entities like that were participating in it.

Q But you're not aware of any specific South Carolina agencies or organizations?

A (WRIGHT) A state agency, I just -- I don't know.

Q Would you agree that CAMA imposes stricter or additional requirements governing coal-ash cleanup over and above those requirements of the federal government?

A (WRIGHT) CAMA does have some -- some more prescriptive requirements than the CCR. However, I would say that if you compare what CAMA does to

what the apparent preference for coal-ash remediation in South Carolina is, it's actually less prescriptive, because every single coal-ash pond in South Carolina that's unlined is being excavated. And that's not the case in North Carolina with CAMA.

Q And in South Carolina, is that -- is that due to the federal CCR regulations or is that an agreement with DHEC?

A (WRIGHT) Those are actually agreements with DHEC, and they started, as I recall, in 2012 with SCE&G and 2013 with Santee Cooper, and then 2014 or '15 with -- with the Duke companies.

Q Okay. Wouldn't you agree that South Carolina law governs what standards apply to South Carolina utilities, and that this commission is mandated with following the South Carolina law?

A (WRIGHT) Yes. They are. But at the same time, you have to recognize that this is a multistate utility, and that there will be some laws and rules in South Carolina that would be applicable to the cost that North Carolina ratepayers pay and also in the -- in the reverse, there will be laws and rules in North Carolina that would be applicable to costs that are shared in South Carolina.

Q Okay. Going back to the differences between CAMA and federal CCR rules, was it CAMA or the federal CCR rules that required the company to address drinking-water impacts at all seven of the company's North Carolina coal plants?

A (WRIGHT) As I recall, the -- if you're talking about giving drinking water to those people --

Q Yes.

A (WRIGHT) -- that was CAMA. And those costs have been excluded as I understand it, but Mr. Kerin could tell you specifically about those specific costs.

Q Okay. So do you know how much that cost the company to -- to get the drinking water, Dr. Wright?

A (WRIGHT) The drinking water I don't -- I don't know the cost dollars.

Q Okay. Do you know the impact of this drinking-water expense on the CAMA risk ratings -- rankings?

A (WRIGHT) No. I do not. Mr. Kerin may have some information about that.

Q Okay. All right. Was it CAMA or the federal CCR rules that drew inactive impoundments at inactive plants into a compliance strategy?

A (WRIGHT) The -- well, right now, it's CAMA. And

it's also the preferences shown in South Carolina under the agreements that they adopted. They would also, I think, apply to some of the inactive basins. But, as I understand it, the courts have kicked that issue back and it's still being litigated on the inactive basins. But, Mr. Kerin might be able to provide you information on what's -- what's the status of those sites.

Q Okay. Was it CAMA or the federal CCR rules that required ash beneficiation at three sites?

A (WRIGHT) CAMA.

Q And which DEC facility was affected by this decision?

A (WRIGHT) Cape Fear, H.F. Lee and Buck. But -- DEC, I'm sorry, would be Buck.

Q Okay. And what is the projected total cost of the beneficiation at Buck?

A (WRIGHT) I'm not sure. But Mr. Kerin may have those cost dollars.

Q Okay. And was it CAMA or the federal CCR rules that specifically designated Riverbend and Dan River as high priority sites?

A (WRIGHT) That was designated high priority by CAMA.

Q And what was the impact of this designation on the

CCR removal and remediation at these sites?
A (WRIGHT) Well, CAMA would require excavation, but I am told that under certain conditions, when you examine CCR, that some of those sites, because of the topography and other things about the site, you would have been excavating some of those sites under CCR.
Q Would you have been excavating at Riverbend under CCR?
A (WRIGHT) That's something you'll have -- I said I don't know which ones, but I know that there's some conditions that -- that the company would have been excavating some of their sites.
Q Okay. I'll direct that to Mr. Kerin.
And, Dr. Wright, to your knowledge, has any party to a Duke rate case in South Carolina ever contested the apportionment of property taxes?
A (WRIGHT) I do not know.
Q If SC -- if South Carolina were to radically increase its tax on utility property, do you believe that it would be reasonable for the North Carolina Commission to exclude that expense?
A (WRIGHT) Which property tax are you talking about? Transmission lines? Distribution sites? Generation stations? I just don't know which ones

you're talking about.
Q Well, how about for any of those?
A (WRIGHT) I think property tax, generally, has been allocated except maybe at the distribution level. And there has been -- I mean, I'm sorry, share, but -- except to -- at the distribution level.
Q Okay.
A (WRIGHT) What I'm informed by the company.
Q So is it your position that South Carolina customers are just at the mercy of the NC legislature?
A (WRIGHT) No. I think what you have to do is you have to ask yourself, when you're looking at these types of multistate utilities and laws, you have to ask yourself: Okay. Is it something that should be shared or not shared, allocated amongst the ratepayers?

There's an overarching principle, I guess I would say, that if it's related to the generation or the transmission, usually that would be something that would be shared between the states, because you can easily see that the ratepayers of South Carolina have been provided benefits by sharing these facilities for the last 70-plus years. And, so, they've gotten those benefits.

Now you have some environmental costs that also should be shared.

Then, beyond that, if -- if you wanted to look at a particular policy, I think you could say, "Okay. First off, does the policy make sense? And is it -- is it -- or is it a -- a bad policy?" No one in this case has said that CAMA is a bad regulatory policy. No one has said that.

Now, once you get past that, I think you have to ask the question, "Okay. Is it similar to what's being used in other states, in our neighboring states? Or is it totally different?" And the fact of the matter is, if we look today at what other states are doing in the -- in the surrounding area, most states are -- have adopted policies very similar or even beyond CAMA.

Virginia just passed a law that said they're going to excavate all of VEPCO's unlined ponds and they're beneficiating two of them. So that's -- that's Virginia.

In Georgia, they've adopted policies to excavate 17 of the 29 ponds. Then Georgia Power just said, "Okay. We're going to excavate two more." The two more that they're excavating are as many tons as is being excavated in the state of

Virginia under the -- under the recently passed law in Virginia.

In Tennessee, they're excavating some ponds and their -- their environmental policy there, they've adopted the federal CCR, but they said, "But if we want you to do something more, then our environmental people can require you to do more." And because of lawsuits and other things, TVA is looking at excavating some -- some very large ponds.

So if you go around all the states and South Carolina, the preference in South Carolina is to excavate every single unlined pond, not just some of them, as under CAMA, but all of them.

So, the second problem with my test -- and number one, is it a reasonable policy? Number two: Is it like other states are doing? Yes. It is. It's -- it doesn't even go as far as South Carolina. And then third: Does it impose an unreasonable, uneconomic cost? And if it doesn't, then I think that you have to say, "Okay. North Carolina can adopt reasonable policies for its state just as South Carolina can do the same." And in the North Carolina cases I was just in, they didn't question the South Carolina costs. They

imposed excavation on unlined ponds, on all of them. They didn't question that. They -- they approved recovery of that cost.

And if North Carolina just adopted the South Carolina policy, then the cost would -- would be much greater than what they're asking for.

Q Okay. That's helpful. Thank you.

I'll turn to you now, Mr. Kerin. Could you briefly describe your relevant background experience?

A (KERIN) I've been in the utility industry since the early '80s, worked in a variety of functions, primarily in nuclear power. A third of that time was in nuclear operations. Also worked in numerous Corporate responsibilities: health and safety, audit, fleet services. Spent several years in our unregulated business at Progress Energy, primarily in the coal mines, terminals, so I do have experience with waste impoundments at our -- at the active coal mines we were operating in Kentucky at the time. From there, I went into major projects group and functioned in the major projects group, started up what we call the "Project Management Center of Excellence," which was mentioned last week. At Progress, that was adopted during the

merger with Duke. That's up and running today. And continued on in major projects until I was assigned to the ABSAT group in February of 2014, and then, ultimately, in the end of 2014, went to the newly designed coal-combustion products group.

Q Okay. And are --

A (KERIN) My responsibilities in the coal-combustion products group are the operations and maintenance. That includes about 52 basins across five states, 19 landfills, 2 under construction -- the operation of the -- those landfills, also the governance and oversight of our coal-combustion products operations.

Q Okay. And are you an engineer?

A (KERIN) No. I'm not.

Q And your experience with coal ash is limited since 2014, correct, not beyond?

A (KERIN) Just in coal ash is when I started with ABSAT.

Q Okay. Great. Thank you. Did the Company conduct engineering and planning activities simultaneously at all of the coal plants?

A (KERIN) What time frame?

Q 2015 to 2017.

A (KERIN) We did. As part of the ABSAT team, we

looked at our future closure strategies. We were closely monitoring what was happening at the federal level with the CCR rule and how that was being developed, and we anticipated that to be put into place, so we did conduct what we called "Phase 1" and "Phase 2" engineering assessments. Phase 1, we, with an independent engineering group and our own engineers, looked at every basin, put our eyes on them, looked at any risks at those basins, any advances, pipes, at those basins. And our Phase 2 inspections involved very detailed -- almost a reconstitution of the dam, where we did core borings, looked at how the dams originally were built, all the structures associated with those dams. That followed very closely what the CCR rule was going to require us to do in our factors of safety and safety stability analysis. So we were utilizing the requirements of CCR rule to do those assessments, which got us, actually, a head start on when we had to deliver those results in our operating record and our public website.

Q Okay. And were there any exceptions to that in any plants that you weren't doing the engineering and planning activities?

A (KERIN) I believe we looked at that for all of our

basins.
Q Okay. Are you familiar with ORS Witness Wittliff's direct and surrebuttal testimonies in this docket?
A (KERIN) Yes. I am.
Q Do you dispute Mr. Wittliff's math?
A (KERIN) If you could refer to his exact --
Q His calculations that he includes.
A (KERIN) I -- I don't know have reason to. I don't see -- I don't have the numbers in front of me, but . . .
Q But you didn't testify in your rebuttal that you felt any of his calculations were incorrect?
A (KERIN) I don't believe so.
Q Okay. Do you dispute the data that he used and the accuracy of the data that he used?
A (KERIN) I think he drew his cost analysis from my Exhibit 10 in my direct testimony.
Q Okay. In your rebuttal testimony -- Page 3, Lines 20 to 23, is one example. I'll let you get there.
A (KERIN) What page is that, again?
Q It is Page 3 in your rebuttal, Lines 20 to 23.
A (KERIN) I've got that.
Q Okay. So you dispute Mr. Wittliff's disallowance methodology. So what is the alternative methodology that you would recommend?

A (KERIN) Well, I think it's a -- Mr. Wittliff, as I recall, in his allowance, he looked at years when we were doing planning and engineering and came up with a percentage of time as a average of all the sites and then just tied that back to the individual sites. So I don't think it was a very detailed, site by site, did he go through and look at all the work that was going on, all the invoices, all the contracts, all the expenditures for all the activities of those sites. I think it was more of a general percentage average. I think it was like 19.2 percent he considered planning and engineering cost and just tied that to each one of the sites. So I would disagree that that is not the appropriate way to assign costs to a site.

Q In your rebuttal, did you provide the appropriate way to decide -- assign the costs?

A (KERIN) No. I did not. The way I would assign costs is like I just said: I would look at exact costs, the work that took place, the activities taking place, contracts, invoices, to determine the exact cost that took place at that site and the reason those costs were expended.

Q Okay.

A (WRIGHT) May I say something here?

Q Sure.
A (WRIGHT) When you're talking about Mr. Wittliff's cost disallowance, understand his cost disallowance was specifically because he said the laws were CAMA. Mr. Wittliff never said that CAMA was an unreasonable law. He never said that it was an imprudent law, nor did he ever identify any single cost and say, "This cost was imprudent." And I think that's very important. If you're going to try to disallow costs, you either have to say that the law is unreasonable or that there were some imprudent costs, and I never saw that because I also disputed his -- what he was recommending in terms of a disallowance.
Q Okay. Thank you.
Mr. Kerin, in your direct testimony -- I'll let you switch notebooks again. Page 37, Lines 3 through 9.
A (KERIN) Okay.
Q You mention that, "The costs associated with providing -- with providing clean drinking water to North Carolina residents will not be charged to South Carolina customers."
A (KERIN) That is --
Q How much are those costs?

A (KERIN) I don't have --
Q Do you have that?
A (KERIN) -- numbers with me because I didn't -- they're not part of this case. I didn't bring those with me.
Q Okay. Well, why is the Company choosing not to seek recovery of these costs from South Carolina customers?
A (KERIN) When I took a look at CAMA and the CCR rule -- but CAMA, particularly, is all about closing basins. So, when I saw what was added to House Bill 630 and the amended CAMA about drinking wells, to me, that was a very unusual and unique circumstance to a closure law. So, in that case, I didn't tie those back to how we would close the basins, and I didn't feel that they should be charged to the customers of South Carolina.
Q What other costs did the Company determine were unique or above and beyond what the federal requirements -- regulations required?
A (KERIN) Between CCR rule and CAMA?
Q Yes.
A (KERIN) Would be the beneficiation projects that are specified and very prescriptive in CAMA. And CAMA does have some different requirements for

groundwater monitoring well locations.
Q So why is the Company being selective of what it seeks to recover from South Carolina customers? Just because the drinking water was unique?
A (KERIN) Well, I'm just saying that, if I look at the law, to me, that was -- I would use the word "unusual" to have -- adding drinking water to individuals, a very small, about 750 residents, within a half-mile boundary of the compliance boundary of those basins to be tied to a closure plan because they're not a direct impact to closure.
Q But, if it's the North Carolina law, about this Utility, that's split between the states, why wouldn't you just -- how are you distinguishing and picking and choosing some things not to charge South Carolinians for and . . .
A (KERIN) Like I said, to me, it was very unique and unusual to have that requirement in a coal ash closure law.
Q Okay. Is it true that Riverbend is not currently subject to CCR rule provisions regarding basin closure?
A (KERIN) That is correct.
Q Did the DC Court of Appeals leave the current CCR

rules in place while the EPA is undertaking a new rulemaking to address its concerns?

A (KERIN) I don't have the details in front of me of that court case, but I believe they have remanded it back to the EPA to revise their rules.

Q And has the EPA completed their revision?

A (KERIN) I'm not aware that that's been posted yet.

Q So the current CCR rules, which Riverbend is not subject to, are still in effect right now, and no rules have been issued to replace them?

A (KERIN) Not that I'm aware of, but I would like to mention that the W.S. Lee inactive basin, which is a 51 through 59, and the ash fill area are also not under requirements of the CCR rule.

Q They're under an agreement with DHEC -- South Carolina DHEC, correct?

A (KERIN) Yeah. There's a consent agreement with DHEC to excavate those basins.

Q Okay.

A (KERIN) But I would've excavated those basins regardless of that consent agreement.

Q Okay. At the Riverbend site, would you say the Company has been working and continues to work on a significantly accelerated timeline to excavate the coal ash basins?

A (KERIN) Well, Riverbend plant retired in 2012, so it was like any retirement process: The first thing you do, you'll stop flowing sluiced ash, both fly ash and bottom ash, to the basin. Basins also receive a lot of other processed water, so you've got to go through the -- the whole scenario of a mass balance to identify all flows that are going to that basin, and that's what we would do under any circumstance when you start to close down a coal plant, is start to stop the flows to the basin. We know that stopping water flows into that basin will help with the dewatering of that basin. It adds to the factors of safety of that basin. You've got to dewater before you start to close, so I'm not saying it's accelerated, but that's normal process on closing a basin.

Q Under CAMA, when is the Company required to accomplish the excavation at Riverbend?

A (KERIN) August 1 of 2019.

Q If CAMA wasn't in the picture and it was only the CCR rules, what timeline would the Company be on to accomplish this excavation?

A (KERIN) We would've gone after that basin, probably -- wouldn't have had a specific timeline deadline, but we would've -- once we started, it

makes sense to continue on with the excavation. Just the faster you can get that done, you have less overhead, you have less contractor costs, less impact to the community, so, once you can -- you start to make that closure of a basement -- a basin, you dewater. Once you start the work, you want to continue that on in a expeditious manner.

Q But just to clarify, the CCR rules don't currently apply to Riverbend, correct?

A (KERIN) Under the current -- until the law is revised, they do not apply to Riverbend.

Q And, so, your argument is that accelerating a job is cheaper than if you have five years to do something instead of one year?

A (KERIN) No. What I'm saying is, once I start the closure of a basin and I stop the flows of that basin, I start to dewater that basin, it makes common sense to go ahead and start that closure.

Q And, if you're -- you're racing the clock to be done by August 1, 2019, you're going to have some expenses to get it done in a hurry, right?

A (KERIN) I don't -- I don't consider I'm racing the clock. In fact, I'm done with Riverbend right now.

Q But if the Company had more years to clean up at the site, do you think costs would've been

different?

A (KERIN) Again, I'm just speculating, but as long as -- as long as I draw that project out, I've got contractors on that site, I've got overhead on that site, I'm paying the contractor's equipment cost, equipment rental, impact to the community, so when I have a certain amount of tons to excavate and move offsite, whether I do it in a short period or a long period, I have those same tons. And cost is all based on the -- the tons to load, haul, transport, and then send to an offsite facility. So I have the same amount of tons to do, but, if I spread it out, I'm just adding potential escalation costs, inflation costs, and contractor overhead cost.

Q Could you have kept the ash onsite at Riverbend? Did you have to take it away?

A (KERIN) I would've taken -- I would've excavated and removed that ash from Riverbend. Riverbend's a Class 4 watershed. I would not even be allowed to build a new state-of-the-art, permitted, lined landfill on that property. I wouldn't want to leave that ash in basins on that property. It's close proximity to Charlotte. So yes. I would've excavated. I would've had to take the ash offsite

because I would not have been allowed or permitted to build an onsite landfill, so I would've shipped that ash offsite to a facility.

Q Even if you weren't required to do so under the CCR rules?

A (KERIN) I still had to close those basins, so I had to follow the science and engineering on what is the best way to safely close that basin and have that ash stored for the future.

Q Okay. Thank you. Are you familiar with the Utility Solid Waste Activities Group?

A (KERIN) I am. Yes.

Q Is DEC or its parent company, Duke Energy, a member of USWAG?

A (KERIN) I believe they are. I'm not involved with that organization.

Q Okay. So you don't know if Duke, through USWAG, contended that the CCR rules should not cover impoundments prior to the implementation of the CCR rules?

A (KERIN) I'd have to see the documentation.

Q In your rebuttal testimony, on Page 9 --

A (KERIN) Okay.

Q -- when you refer to the "real world," is this referring to the world after the Kingston Fossil

spill in December of 2008, or is it the world after the Dan River incident in February of 2014?

A (KERIN) Can you specify that line?

Q It is -- I've got that for you. Sorry; I didn't write the specifics down. Line 14 -- 12 to 14.

A (KERIN) What I say in that 12 to 14 -- I've got to put in context, so let me start up a couple lines before. It says, "The suggesting that DE Carolinas could or would have taken a 'do nothing' approach to Riverbend ash basins while at the same time closing all of its other ash basins in South Carolina and North Carolina, defies regulatory reality. Arguing this 'do nothing' approach would have been -- would -- approach would have been reasonably accepted by regulatory and stakeholders for Riverbend and active basins when similar basins at W.S. Lee were being excavated is an absurd proposition."

Q I think --

A (KERIN) Is that the section?

Q Yes. That is. I think I missed the answer to my question. What "real world" are you referring to?

A (KERIN) I'm referring in today's world on closing ash basins. And to leave Riverbend a do-nothing approach and walking away from Riverbend when we're

closing basins across South and North Carolina, would not have been acceptable.

Q Okay. Are you aware of any actions DEC was taking at Riverbend to safely close its impoundments after 2008, but prior to the Dan River incident?

A (KERIN) I know that the plant was retired in 2012, so we were stopping flows going to the basins. And that's, again, the normal process of retiring a coal plant.

Q Okay. Where is the Dan River plant located?

A (KERIN) In Eden, North Carolina.

Q And whereabouts is that?

A (KERIN) It's the northern part, up towards the -- above Greensboro, towards the Virginia line.

Q Okay. So how far is that from the nearest border with South Carolina?

A (KERIN) I -- I'd have to Google --

Q Not sure?

A (KERIN) -- map that or take a look at it.

Q But it's --

A (KERIN) I don't know the exact mileage.

Q -- on the other side of the state?

A (KERIN) It's on the northern portion of the state.

Q Okay. So is it likely that groundwater quality in South Carolina would be impacted in any detectable

manner by the additional actions pursued under CAMA at DEC's Dan River site?

A (KERIN) Can you repeat that? I'm not sure I understood.

Q Sure. Would the groundwater quality in South Carolina benefit -- under what CAMA's requiring be done at Dan River, would the groundwater quality in South Carolina benefit at all?

A (KERIN) Are you asking me would -- whether the excavation of Dan River would've impacted the groundwater of South Carolina?

Q Would it affect the quality of the groundwater here?

A (KERIN) I -- I don't believe so.

Q When were Dan River Units 1 and 2 retired, the coal-fired units?

A (KERIN) I may have that exact date, but I thought it was in the 2012 time frame.

Q If I told you October 2011 and April 2012, does that sound about right?

A (KERIN) Subject to check, but that sounds about right.

Q What actions were taken to close the impoundments at Dan River prior to February 2014?

A (KERIN) And that's a retired coal plant, so you

would've stopped the sluicing of ash, and you would've been starting the process of stopping the process flows to that plant.

Q Okay. Was Dan River designated as a high-priority site by CAMA?

A (KERIN) Yes. It was.

Q What prompted this designation by CAMA? Was it the direct result of the Dan River spill?

A (KERIN) I can't speak for the legislators on why they made that a high-priority site.

Q What actions were required at Dan River under CAMA, and when were they required?

A (KERIN) CAMA required that the two ash basins at Dan River be excavated, again, as a high-priority site, by August 1, 2019.

Q What actions were required at Dan River by the federal CCR rules, and when were they required to begin?

A (KERIN) The federal CCR rules would've required closure of Dan River. It would've been based on the site characteristics, the science, the engineering, and the environmental aspects of either cap-in-place or excavate. Dan River, we would've excavated under the CCR rule. That was an earlier plan, working with our outside engineers,

back in early 2013 time frame, into early 2014, options and how we would excavate Dan River. The reason we would've excavated Dan River, it sits along the Dan River. There's a lot of river scouring as the -- when the net river rises, so, for a long-term, safe storage of the Dan River ash, the plan was to move it out of those basins. But, also, anytime you have dams that are built along riverways, you think of the soils along the riverbank. It's called "alluvial soil." It's -- it can move. It's a sandy-type soil, so it's very difficult to have very strong factors of safety or structural stability of dams that are built along rivers. So the plan would've been -- for long-term storage, the issues with the river, is to move that ash out of the basins into a lined facility.

Q And when were those actions required to begin?

A (KERIN) When were they required to begin? Under?

Q -- the federal CCR rules.

A (KERIN) The federal CCR rules, it's -- there are several triggers. Some of the first triggers are factors of safety, so you have to do that analysis. I mentioned that Phase 2 analysis we did as part of ABSAT. You do the core borings, you look at how those basins were built. So first trigger would be

factors of safety.

If you pass the factors of safety, you go on to other triggers, such as location restrictions, wetland restrictions, aquifer-separation restrictions, and then, eventually, groundwater. At Dan River primary basin, we were doing some beneficiation work. We were taking ash from the Dan River primary basin and loading it in trucks and sending it to Roanoke Cement Company, in Roanoke, Virginia. We stopped taking ash out of the basin in -- I think it was April 4th of 2018. The flows have already been stopped. The way the CCR rule is, is when you stop all flows or if you're doing beneficiation, the last removal of beneficiated ash triggers closure, and you have to start closing in 30 days. So our timeline to start closing the primary basin would've been April 4th time frame of 2018.

Q Okay. And what date did closure activities commence at Dan River? You might've mentioned that just now. I think I . . .

A (KERIN) Probably, we started -- it was probably in the 20 -- we start -- well, first of all, you stop all flows, so you have to go through the process of stopping flows. And, if you look at Dan River,

there was an older power plant there, where the coal plant -- the sumps ran to the ash basin, so we had to demo, or demolish, the coal plant, stop all flows, re-route stormwater flows. I'm guessing probably the 2015/2016 time frame.

Q Okay. I told you it was October of 2105. Does that -- does that sound right, subject to check?

A (KERIN) Subject to check. That -- that seems about right.

Q Was this prior to the effective date of the federal CCR rules which went into effect, I believe, October 19th, 2015?

A (KERIN) I think the CCR rule -- the law came out. I think it was December of 2014. It became effective April 15th of 2015?

Q With amendment --

A (KERIN) Subject to check, but I believe it's -- that was the date.

Q I -- so, if I told you it was 10/19/2015, the official effective date --

A (KERIN) But I think it was that time frame before it became effective. Subject to check, it was around that time frame.

Q Okay. On -- but going to your rebuttal testimony -- I can't remember what notebook you have in front

of you right now.
A (KERIN) That's it.
Q All right. Page 14.
A (KERIN) Okay. I'm there.
Q Lines 15 through 20, where you state the cost -- cost and savings numbers, you don't really provide any substantiation for the numbers. You just say, "For the Cape Fear and H.F. Lee sites, beneficiation under CAMA is providing an estimated net savings compared to closure without beneficiation of approximation 703 million on a total system basis."
A (KERIN) I see that.
Q Is that --
A (KERIN) Yes.
Q Are the Cape Fear and H.F. Lee sites DEC facilities?
A (KERIN) No. They're DEP facilities.
Q Okay. And to what are those savings being compared? Are they being compared to closure costs incurred in compliance with CAMA or closure costs that would've been incurred under the CCR rules alone?
A (KERIN) Both those sites -- Cape Fear is not a CCR site; it's similar to Riverbend. H.F. Lee is a CCR

site, as well as CAMA. Both those sites, regardless of whether CAMA came into being or the CCR rule, the plans for those site would've been to excavate.

So, I mean, start with the H.F. Lee site. It sits along the Neuse River. We saw what happened during Hurricane Florence. We saw what happened during Hurricane Matthew. Neuse River floods. It's been flooding multiple times since Hurricane Fran. We would not have left the ash along the Neuse River for long-term storage, so the plan was to excavate that ash, and it would be taken to an offsite facility because we didn't have the location onsite to build a permanent lined landfill.

The same with the Cape Fear plant. It sits along the Cape Fear River. There was not a viable long-term storage of the ash at those Cape Fear basins at that site, so they would've been excavated. But House Bill 630 said we had to pick three sites across the state to beneficiate, building beneficiation process, each one capable of delivering 300,000 tons of ash, processed ash, within spec, to the ready-mix industry. The cost difference between excavating and taking that ash

from H.F. Lee and Cape Fear offsite to a lined, permitted facility versus beneficiation projects -- we were going to excavate that ash out of those basins; we're going to run it through this process known as "SEFA star" processes, which are used in South Carolina. That's where they got their start with the SEFA Corporation. And we're going to beneficiate that and sell it into the ready-mix market. And, by selling it into the ready-mix market, it will cover our operating expenses going forward, and that comes up to a savings of about 400 million at Cape Fear and about 300 million at H.F. Lee. So we look at an overall system impact. This will benefit -- it may not be the DEC customers, but it will benefit customers of South Carolina on the DEP side.

Q But it won't benefit the DEC customers?

A (KERIN) I think, just from a pure cost standpoint, because of the -- the DEP -- where H.F. Lee and Cape Fear are located, it's not in this case, but, overall, it not only benefits customers, it benefits the ability to provide in-spec ash for the concrete industry, which is in high demand right now, for a long term. It's very specific. We'll be providing 300,000 tons from each of these units,

900,000 tons total a year, to the ready-mix market. The long-term growth of construction -- if you're familiar with concrete, in the cement industry, when you spec concrete for a high-rise building, a bridge, you'll see the engineering firms specify how much fly ash has to be in that concrete. It strengthens the concrete. It can be poured when it's freezing temperatures. It's very viable to the ready-mix industry, so, by putting this 900,000 tons -- providing it to the ready-mix industry in the Carolinas is a benefit, I think, to all of us.

Q And, so, what -- I'm sorry if -- maybe I'm not catching on, but the estimated net savings compared to closure without beneficiation, that's -- you're talking about CAMA?

A (KERIN) I'm talking about excavating that site, which I would've done regardless of CAMA. The savings --

Q But you're required to do under CAMA?

A (KERIN) Required to do it under CAMA.

Q Okay.

A (KERIN) But the -- the science and engineering would've told me to excavate those sites.

Q Okay. And speaking of the beneficiation, what is the projected total cost of the beneficiation at

Buck, if you have that?

A (KERIN) I did have that paper here a minute ago. Let me find it. This is our ARO, our asset retirement obligation estimate, at Buck. This is based on having everything complete by 2029, but we would've -- that's what CAMA requires us, at -- all basins have to be closed by 2029. So this number does not take into consideration the variance allowance that CAMA provides us to go longer, so our -- if we finish by 2029, the total cost is -- for Buck, I've got at 577. Now, do I think I will stop at -- at 2029 and not receive a variance? I don't think so. I mean, these -- once this plant is up and running, it would not make any sense to me that anybody's going to come and say, "Stop processing that plant," when I still have two or three million tons on that site. So, to excavate that extra ash, move it to an offsite landfill at that -- at a very significant cost, I thinks it's very reasonable we'll be beneficiating the Buck site well into 2030s, probably about 2035, until the -- all the ash is beneficiated. So that -- that number is based on the 2029 because that's how we have to do the accounting for an ARO, but for realistic costs, it will be much less than that.

Q Okay. And how does that compare to the cost of the other options, like cap-in-place or the onsite landfilling or offsite disposal that are allowed under the federal CCR rules?

A (KERIN) I didn't bring those other estimates with me, but, typically, if you cap it, it'll be less costly than excavating.

Q Onsite landfilling less costly, as well, or . . .

A (KERIN) Well, if I'm putting on onsite landfill, I still have to excavate the basin, so I have of cost dewatering the basin, taking all the water out of that basin, excavating, loading it, transporting it to an offsite landfill, so there would be some less cost, but I still have to excavate that basin.

Q Okay. Thank you. In asking a question that I'd asked Dr. Wright, but he punted to you, was it CAMA or the federal CCR rules that specifically designated Riverbend and Dan River as high-priority sites?

A (KERIN) CAMA's the one who specifies the risk-ranking of sites.

Q And what was the impact of this designation on the CCR removal and remediation at these sites?

A (KERIN) At Dan River and Riverbend?

Q Yes.

A (KERIN) By being a high-priority site, they were required to be excavated.
Q And Riverbend was under -- is under no requirements from the federal CCR rules, correct?
A (KERIN) Riverbend is not a CCR required site --
Q Okay.
A (KERIN) -- currently. We expect very soon that the rewrite of the rule, due to the DC Court, will require that to be part of the CCR rule.
Q But not as this time?
A (KERIN) As of today, I'm not aware that that's been -- that rule's been published.
Q Okay. And, Mr. Kerin, can you show me where in Mr. Wittliff's testimony he claims that complying with CAMA is too expensive?
A (KERIN) Well, I think he spells out that -- when they talk about the costs above, it says, "Basic CCR rule is expensive," so --
Q But he's not saying it's too expensive and that's the reason why we shouldn't pay for it -- South Carolina ratepayers shouldn't pay for it?
A (KERIN) He alludes to the fact that those costs are much higher because of CAMA, so, to me, I just tied that back: That's too expensive.
Q Well, they are more expensive because of CAMA,

correct?

A (KERIN) Depending on how we would've done that. Buck is more expensive because we're a beneficiation site. I think the other sites I would've followed the same excavation or closure process.

Q Okay. Mr. Kerin, I think you kind of mentioned this earlier: Can you point to any other states in the Southeast that have passed laws similar to CAMA?

A (KERIN) Well, Virginia was just signed in by the governor a couple of days ago.

Q South Carolina have any laws similar to CAMA? Anybody else?

A (KERIN) I'm not -- I'm not aware of a law, but it's a preference in South Carolina to excavate and beneficiate where possible. As -- as Dr. Wright mentioned, Georgia is excavating the majority of their basins -- Georgia Power and Tennessee, also.

Q The all have laws in place that require them to do this; is that --

A (KERIN) Or they adopted the CCR rule, which is recommended by the Wind Act.

Q Okay.

A (WRIGHT) If I can address that --

Q Sure.

A (WRIGHT) I've done research on that. As he mentioned, Virginia just passed a law, and it's been adopted and signed into law. They're requiring excavation at all of -- all four of their Chesapeake Bay sites that VEPCO owns and beneficiation at two. That actually goes beyond what CAMA requires.

In Tennessee, the environmental policymakers in Tennessee have adopted the CCR, but, in their adoption, they have specific language which says that, when TVA or anyone who has a coal pond -- or coal ash pond files with the State and files their plan, if the environmental policy regulation arm there does not agree with the plan, then they will require them to change it. And because of what's happening in lawsuits and everything else, it is expected that TVA will be excavating most of their sites.

In Georgia, they have adopted the CCR, and they have also gone beyond the CCR to automatically also include the inactive sites in their policies in Georgia, which was beyond the CCR that was adopted, although that's under review by -- because of a federal lawsuit. Also, Georgia Power, as I

said, they're excavating 17 or their 29 ponds, originally. And, because of a settlement with the policymakers in Georgia, they agreed to excavate two more, and those two more are very, very large ponds. They've got like 28 million tons in those two sites alone. And to give you some idea of what that's equal to, in Virginia they're excavating 29 million tons. So just those two sites at Georgia Power are very, very large.

In Florida, the State actually adopted the CCR; however, they too, can go beyond what the CCR requires. And they don't have very many coal ash ponds in Florida because they didn't have many coal -- coal facilities, but all of the unlined ponds have been excavated to date. Tampa Electric just filed a plan. Under the CCR, they would've had to cap-in-place, but they just agreed and filed a plan to excavate the -- the site or the facility that they have left, that has not been excavated.

And then I mentioned -- I don't think I mentioned Alabama is reviewing their CCR or -- or their coal ash pond rules. They're going to adopt the CCR, and I'm informed that they're also going to adopt a policy that allows the State to go beyond that if -- if the environmental policy

regulators in Alabama don't agree with -- with what they've done.

And, in South Carolina, as I already mentioned, there is a preference shown because of the settlements in this state, to excavate every single unlined coal ash pond in the state, which also goes beyond the CAMA or the CCR.

Q Okay. So you say there's a preference, but is there a law in South Carolina similar to CAMA?

A (WRIGHT) They don't have a law, but when your policymakers reach a settlement with a company, it pretty much has the effect of a law. Having been in the Legislature and in -- on the utility commission, I understand what these settlements mean to the utilities involved.

Q Okay. Just no law on the books yet?

A (WRIGHT) You don't need a law when they've all been excavated.

Q Okay. Thank you.

MS. PITTMAN: No further questions.

CHAIRMAN RANDALL: Thank you. Commissioners? Okay. Commissioner Belser?

EXAMINATION

BY COMMISSIONER BELSER:

Q Good afternoon.

A (KERIN) Good afternoon.
(WRIGHT) Good afternoon.
Q Mr. Kerin, I'm going to start with you, and I may go back and forth, and I may just throw a couple of questions out to either one of you that want to field it, if you don't mind, so . . .
A (KERIN) Will do.
Q I believe, Mr. Kerin, in your prefiled testimony, on Page 9, there is a footnote that states, "This case excludes any fines or penalties incurred by DE Carolinas related to ash -- ash basin closure or management." That's a tongue-twister that could get us all in trouble, I'll tell you what. But -- and I know that there's been some discussion on that and I just want to be clear -- I want to understand this clearly. Are there any fines from Dan River or any other incident or handling of ash basins included in this case?
A (KERIN) I'm absolutely positive that there's nothing regarding Dan River. Penalties, fines, cleanup, or activities to deal with the Dan River event are not in this case. I'm not aware of any other violations or fines that are in this case, where the Company admitted to a crime or a violation.

Q And -- and, even though I mentioned Dan River and you mentioned Dan River, are there any costs in this case that are attributable to any fines or penalties levied for violation or going crossways of any state or federal law?
A That's my understanding.
Q Now, let's see. Where else are we here? Dr. Wright?
A (WRIGHT) Yes, ma'am.
Q You just made statement in response to a cross, "when your policymakers reach a settlement." And -- and I think we're referring here to South Carolina and the consent order with South Carolina Department of Health and Environmental Control, known as "DHEC."
A (WRIGHT) Yes.
Q Is that what you were referring --
A (WRIGHT) Yes, ma'am. The DHEC settlement.
Q Okay. So that's the -- the state agency and -- but not the Legislature, correct?
A (WRIGHT) Yes, ma'am.
Q Tell me about this consent order. Why did -- I believe you stated that some of the consent orders in South Carolina may've started back as early as 2012, and -- but the ones with DEC are around 2014?

Does that sound right?

A (WRIGHT) The -- as I recall, the -- well, SCE&G reached a settlement, and it may've been with DHEC or with some environmental groups or both because various states, I mean, you're seeing that type of activity. And, with SCE&G, it was like 2011, with Santee Cooper around 2012.

Q That's fine. What was the impetus for these settlement agreements is where I'm going with this. What brought about -- or these consent orders, settlements, what was bringing this about?

A (WRIGHT) Well --

Q What led to it?

A (WRIGHT) I -- I'm not sure. I've got the date for SCE&G was October in 2011, for Santee Cooper was in late 2013. Now, both of those were before the federal CCR rule was adopted. The final rule the EPA finalized and was published, I've got 12/19 of 2014. So the effective date may've been a couple of months prior.

Q These predated Dan River, did they not?

A (WRIGHT) Dan River was -- yes. They predated Dan River. The SCE&G and the Santee Cooper did. The -- the South Carolina DHEC agreement with DEC was in 2014, but it was like September of 2014. Dan

River was February of 2014, so the Company settlement came after Dan River, and the other two were before Dan River. All three were before the CCR rule was finalized.

Q The E&G -- SCE&G and Santee Cooper consent orders, were they essentially the same as the DEC? Were there any additional requirements in the DEC consent order that were in -- than were in the earlier ones? Are you aware?

A (WRIGHT) I don't -- I'm not aware of any. I haven't compared them. I don't know.

Q Are --

A (KERIN) I don't. Yeah. I'm not --

Q Okay.

A (KERIN) -- familiar with those earlier settlements.

Q That's fine. But there was some push prior to Dan River, the -- do you know if those earlier settlement agreements required excavation of -- of these ash ponds -- or ash basins that would -- would have ended up being exempt under the CCR?

A (WRIGHT) I don't --

(KERIN) I can't -- I don't --

Q You don't know?

A (KERIN) I'm not aware, no.

(WRIGHT) No.
Q That's fine. And, Dr. Wright, you've mentioned preferences in South Carolina with regard to excavation of -- of coal ash. Are -- that -- when you say "preferences," you're -- are you -- are you referring to these settlement or consent orders, settlement agreement/consent orders with DHEC?
A (WRIGHT) Yes.
Q Mr. Kerin, in your direct testimony -- it's toward the end. I think it was like Page 35 or 36 -- you make a reference to "$958 million from 2015 to December 2018 -- January 2015 to December 2018"?
A (KERIN) Yeah. I see it on Line 18.
Q Tell me what that -- that amount is. Is that what y'all are seeking recovery from?
A (KERIN) That would be the money that was incurred -- costs that were incurred during that -- that time frame of January -- I think it's 2015 through, originally, September of 2018, and then my errata, I think it went to December of 2018.
Q I missed the -- I missed the errata. So September of 2018? And that's what's being sought for recovery here?
A (KERIN) Yes, ma'am.
Q And y'all are seeking amortization over what

period? Do you know?

A (KERIN) I can't speak to that.

Q Ms. Smith's going to be busy when she gets back up here.

A (KERIN) Yeah.

Q I see her smiling back there. Let's see. Pulled together a few notes here.

I think that's all I have. I appreciate -- I appreciate y'all's time. Thank you.

CHAIRMAN RANDALL: Thank you. Commissioner Hamilton?

COMMISSIONER HAMILTON: Thank you, Mr. Chairman.

EXAMINATION

BY COMMISSIONER HAMILTON:

Q Good afternoon, gentlemen.

A (KERIN) Good afternoon.

(WRIGHT) Good afternoon.

Q Mr. Wright, I'll start with you. On Page 27 of your prefiled direct testimony, you mentioned the Company has filed insurance litigation?

A (WRIGHT) Yes, sir.

Q Can you tell us what this is, what claim this is in relation to?

A (WRIGHT) As I understand it -- I'm not an expert

in this particular field, but my discussions with the Company, they've got insurance policies that have been in place for a long time, and, under those policies, they believe that some of these coal-ash remediation costs may be recoverable. So they have -- they've negotiated with the companies, and it is my understanding that the insurance companies pretty much don't want to pay, and the Company says, "Well, we think you owe." So it's in litigation right now is the best way I can describe it.

Q So it's -- it's just hanging there waiting for a decision that --

A (WRIGHT) I think, right now, they're still in negotiations. I'm not sure that they've actually gone to trial yet. I don't know the status. Maybe there's somebody in the Company who -- who might can update you as to the status as far as whether it's in -- in trial or what that is. But I was thinking they were still in the negotiation phase or discovery phase.

Q Mr. Kerin, could you add to this?

A (KERIN) Yeah. My understanding is that they are in discovery phase, but they are going through some potential settlement discussions, and then there

could be a trial mid-2020.
Q Mid 2020. Do you have any idea about the amount the Company's seeking?
A (KERIN) I don't know. I don't have that with me, the total amount, but I know there's multiple insurance companies involved, and there is -- in the time frame. I just don't have those numbers.
Q It would be significant, though?
A (KERIN) I imagine it could be.
Q Oh, thank you, sir. My next question is -- and either one of you might want to chime in on this one. Does DE Carolinas realize a significant revenue from its coal ash, and in what form? I believe you mentioned about the cement.
A (KERIN) We do try to beneficiate as much ash today as we can. That's primarily production ash, not ponded ash. And there is some revenue from that, but there also are transportation costs, so it's not a significant revenue. We also will be at the Buck Station in DE Carolinas. That'll start processing, I would say, mid 2020 time frame, and we'll be selling up to 300,000 tons per year into the -- primarily that'll go to the ready-mix industry, not -- as a replacement for Portland cement, for their operations. And we anticipate

the revenues from that sale will be somewhat cost-neutral, and that will pay for the excavation and the running of those plants.

Q Coal ash is a lot different now. Back when it was -- years ago, we used for crush and run on rural routes.

A (KERIN) Yeah. You're right. It's -- it's becoming in very high demand, especially as more and more coal plants start to close down across the U.S.

Q Appreciate you gentleman. I've enjoyed your testimony.

COMMISSIONER HAMILTON: Thank you, Mr. Chairman.

CHAIRMAN RANDALL: Thank you. Commissioner Howard?

EXAMINATION

BY COMMISSIONER HOWARD:

Q Dr. Wright, good afternoon.

A (WRIGHT) Good afternoon.

Q Dr. Wright, in your prefiled testimony, you talked about sharing environmental expenses.

A (WRIGHT) Yes, sir.

Q How is that allocated made -- allocation made?

A (WRIGHT) Usually, the allocation is made, I think,

based on energy and where the cells are. So that's generally how the allocation is made between states.

Q Do you know what that comes to, percentage-wise, roughly?

A (WRIGHT) I think I've heard that, say, DEC is about -- in South Carolina, is about a third of the Company. And, if that's the case, a third of the energy, then I think it would be somewhere --

Q That's fine.

A (WRIGHT) -- in that range, but there's probably an accounting witness who can tell you specifically, but as -- what I have seen in --

Q We've had 25 percent. We've had other percentages.

A (WRIGHT) Yeah. So I'd say 25, maybe 30, or something. Depends on the -- how it's allocated, and, usually, it's allocated on energy -- or costs are allocated on energy.

Q Could you tell me Duke Energy Carolinas' estimate total system cost ash remediation the day prior to Dan Rivers?

A (WRIGHT) I wouldn't have that number. I don't --

(KERIN) Yeah. I don't have that.

Q Would anyone have that number, just -- how would . . .

A (KERIN) Yeah. I don't -- well, I wouldn't have that number. I --
Q Thank you. Mr. Kerin, I'll talk to you. First, let me get a simple question off my mind. Is coal ash considered hazardous waste, or what is the guideline for hazardous waste, and how do they fall in that guideline?
A (KERIN) No. It was not considered hazardous waste.
Q Is it close to being considered -- well, one time we had a conversation about if it was considered hazardous waste, I think I recall.
A (KERIN) Yeah. If -- in the original draft EPA federal CCR rule, there was two options. One was to be classified as hazardous waste, and one was non-hazardous waste. It ended up being determined at non-hazardous waste.
Q I know you speak highly of Energy Users Witness O'Donnell, but he conveyed two engineering firms to study that the coal ash did not be -- need to be evacuated from the Lee plant. And, so, the question is why should coal ash remediation cost be recommended by these firms --
A (KERIN) I don't have the --
Q -- not recommended by these firms, I'm talking

about.

A (KERIN) So I think what he was -- he may've been referencing, in the North Carolina case that we had last year at DEC, the public staff witness indicated that -- he didn't -- he agreed with us that we should excavate the 51 through 59 basin because of structural stability, the way the dam was built along the Saluda River and the impact of the Saluda River. He had a question on timing, that witness, that we could've waited and delayed that. Our argument was we should not have delayed that. We should've resolved that issue along the Saluda River and not had any risk or impact of that. So he didn't -- the witness in North Carolina did not disagree with how we did it or the means and methods or what we did. His question was on timing.

A (WRIGHT) And I would say -- I -- I discuss this a little bit in my rebuttal testimony. He -- Mr. O'Donnell said that he disagreed with -- that the Lee facility should've been, I guess, treated as it was, and -- and he said it should be disallowed for recovery. The Lee facility, W.S. Lee, was as a result of a consent agreement with the policymakers in the state of South Carolina. And my comments

were, basically, that I didn't think that Mr. O'Donnell was the proper person to set the policy decisions related to the environment in South Carolina. I thought the environmental policymakers were the ones. And that policy was to excavate that. And North Carolina policymakers took no exception to that. They thought that South Carolina should set South Carolina's policies.

COMMISSIONER HOWARD: Thank you both very much. I appreciate it.

CHAIRMAN RANDALL: Thank you. Before we continue with Commissioners' questions, we're going to take a ten-minute break.

(Off the record from 2:58 p.m. until 3:13 p.m.)

CHAIRMAN RANDALL: Please be seated. Please be seated. Okay. We'll call ourselves back to order. Let's see -- we've been -- Commissioner questions, I think. Let me just ask one, Mr. Kerin.

EXAMINATION

BY CHAIRMAN RANDALL:

Q Go back to Mr. O'Donnell's Table 9 on Page 48, I'm looking at. He calculates a ratio of coal ash AROs versus kilowatt-hours of coal generation for each utility, and my question is just: You know, Duke

Progress and Duke Carolinas are up at the top. Why are Duke's ratios so much higher than the other utilities around the nation?

A (KERIN) I think it's -- it's simple. For one, we're much further ahead than other utilities. Our numbers are based on our plans moving forward. They're very detailed estimates. We have contracts in place, so we're getting -- we're quite -- again, quite a bit farther ahead than others. Others -- and I talk to my peers, they are still doing their investigation. They haven't decided how they're going to close yet or how they're going to get approval through their state agencies. So they're using some very general cost assumptions in their ARO where ours are very -- very specific, management-approved; our independent auditor reviews and approves it, so it's gone through a pretty detailed scrutinization.

Q Okay. Thank you.

CHAIRMAN RANDALL: Commissioners, any other questions? Any redirect?

MR. BURNETT: Just a few, sir.

REDIRECT EXAMINATION

BY MR. BURNETT:

Q Mr. Kerin, Commissioner Hamilton asked you some

questions about the insurance litigation --

CHAIRMAN RANDALL: Just make sure your microphone's on.

MR. BURNETT: It is not.

THE EXAMINATION BY MR. BURNETT CONTINUES.

Q Mr. Kerin.

A (KERIN) Yes, sir.

Q Commissioner Hamilton asked you some questions about some pending insurance litigation that's going on. And you said -- you testified that you don't recall the specific amounts, but do you agree or disagree with me that the claims and questions are in the hundreds of millions of dollars, not just several dollars?

A (KERIN) I believe they're in the hundreds of millions of dollars.

Q And if the Company is successful in obtaining any money under any of those claims, is it your understanding that that money will go directly back to customers or is the Company going to keep that money?

A (KERIN) My understanding: It would be going to the customers.

Q Now, Mr. Kerin, Commissioner Hamilton was also talking to you about selling ash for beneficial

reuse, and you used two different terms there. I heard you say "beneficial reuse," and then I heard you use "beneficiation." Now, am I correct that beneficial reuse, like we're doing at the W.S. Lee site to sell unprocessed ash to the cement kilns down here in South Carolina, that's where you dig -- dig it up out of the ground, you shake it for rocks, and you just put it on a truck; is that right?

A (KERIN) That's correct.

Q And when you say "beneficiation," that's the thing that CAMA made you do, right?

A (KERIN) Yeah. Such as the Buck plant.

Q Okay. And that's where you put it in that machine you testified to -- that STAR machine coming out of South Carolina?

A (KERIN) That is correct.

Q Okay. And that's the stuff that's more valuable that you testified you're selling to the ready-mix market?

A (KERIN) Yes. Because it meets all their specs, and they can use it in lieu of a portion of their Portland cement.

Q I see. Now, Mr. Kerin, if you go to your rebuttal testimony for me, on Page 14.

A (KERIN) I'm there.
Q Okay. If you'd look at Lines -- just to orient you, Lines 15 -- starting at Line 15, counsel for ORS was asking you about the cost to beneficiate under CAMA. Remember that?
A (KERIN) Yes, sir.
Q And you had testified that, under a 2029 date, you thought it'd be somewhere in -- around about $500 million for accounting purposes when you put that on the ARO?
A (KERIN) I believe that's correct, yes.
Q Right. Well, read for me what you say there on Line 15 starting with "For the Buck site." Page 14, Line 15. Do you see it right there?
A (KERIN) "For the Buck site, estimated beneficiation costs are approximately 131 million more expensive than closure without beneficiation on a total system basis."
Q Okay. Now, that $131 million, is that the 2035 number you were talking about that you think's more realistic?
A (KERIN) I think that 131 number is if we would've capped the basin.
Q Okay. Now, if -- and another thing, you talk about system basis. I don't understand, necessarily what

that means, but I think, if I've got it right, that the whole amount of money -- when you talk about these numbers like 570 million or 131 million -- that's not what South Carolina customers are going to pay, right? They're going to only pay a percentage of that? Do I have that right?

A (KERIN) I believe you do, yes.

Q And for DEC, do you know if it's somewhere around 24 percent? Something like that?

A (KERIN) I don't know the exact number, but it -- that sounds -- sounds about right.

Q Okay. Thank you, sir.

CHAIRMAN RANDALL: Thank you. Any recross?

MS. PITTMAN: None from ORS.

CHAIRMAN RANDALL: Thank you. All right. Gentlemen, thank you for your testimony, and you may step down, and you are excused.

(Witnesses excused)

CHAIRMAN RANDALL: Okay. Next we are going to whom? To Mr. Nelson?

MR. NELSON: I -- I believe we're going to Mr. Wittliff as the next . . .

CHAIRMAN RANDALL: Okay.

(Witness affirmed)

MR. NELSON: Before we get started, I did have

some housekeeping issues because I know that y'all had asked us to bring copies of all exhibits with us. Do you want that introduced with each witness that comes up? Can we just give you a stack of those at the end of the day today or what? How -- how -- how does the Commission want to receive those?

CHAIRMAN RANDALL: I think we can do them at the end of the day. You're just going to enter them -- get them entered as you go?

MR. NELSON: We have a huge box full of exhibits down here, and we'll just -- we'll offer all those if -- if y'all will remind me, I would appreciate it.

Secondly, we also had two -- and it's kind of messed up with who's going when, but we had two witnesses who we had verified stipulated testimony, and that's Matthew Schellinger and Anthony Sandonato.

CHAIRMAN RANDALL: Right.

MR. NELSON: And if it's convenient to put them in at this point, I would ask that -- that the testimony and exhibits of both Mr. Schellinger and Mr. Sandonato be -- be read into the record and their exhibits

entered as the next hearing exhibits.

CHAIRMAN RANDALL: Okay. Then Mr. Anthony Sandonato and Mr. Matt Schellinger -- their prefiled testimony will be -- or stipulated testimony, excuse me, will be read into the record as if given orally from the stand, and their exhibits -- do you want them to do their exhibits together or separately?

MR. NELSON: I prefer that they be --

MR. ELLERBE: Separately.

MR. NELSON: -- separate.

(PURSUANT TO PREVIOUS INSTRUCTION, THE PREFILED DIRECT TESTIMONY, INCLUDING CORRECTION/AMENDMENT, OF ANTHONY SANDONATO FOLLOWS.)

CHAIRMAN RANDALL: All right. Mr. Sandonato's exhibits will be Hearing Exhibit Number 31; Mr. Schellinger will be Exhibit Number 32.

(Please note: Previous request and instruction were made in error, as the referenced prefiled documents do not exist.)

MR. NELSON: Can I pass these up, as well? These are summaries. Thank you.

THEREUPON came,

DAN J. WITTLIFF,

called as a witness, who, having been first duly affirmed, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. NELSON:

Q Mr. Wittliff, can you please state your full name and occupation for the Commission?

A I'm Dan Wittliff, managing director of environmental services for GDS Associates in Austin, Texas.

Q And are you the same Dan Wittliff who prefiled 40 pages of direct testimony in Docket 2018-319-E on February 26th of this year?

A Yes.

Q Do you have any changes, edits, or corrections to

your prefiled direct testimony?

A No.

Q And if I asked you the same questions today as those posed in your prefiled direct testimony, would your answers be the same?

A Yes.

MR. NELSON: ORS asks that the prefiled direct testimony of Mr. Wittliff be read into the record as if given orally from the stand.

CHAIRMAN RANDALL: Mr. Wittliff's prefiled direct testimony will be read into the record as though given orally from the stand.

THE EXAMINATION BY MR. NELSON CONTINUES.

Q Mr. Wittliff, did you also file, as an attachment to your testimony, a series of exhibits marked as DJW-1 through DJW-9.3?

A Yes.

Q Do you have any changes, edits, or corrections to any of those exhibits?

A Yes. I do.

Q Will you please go ahead and read them into the record for us?

A I have two changes to my exhibits. On Page 2 of the exhibit list, please strike Exhibit DJW-4.1, DJW-4.2, and DJW-4.3. And on Exhibit 4.7, the

effective date of the federal CCR rules should be changed from 10/06/2016 to 10/19/2015.

Q And just to clarify, Mr. Wittliff, those three exhibits that you asked to be struck from your exhibit list, that's just because there are no such exhibits; isn't that true? I mean, you --

A Yes.

Q -- you did not produce them as part of your testimony?

A No.

Q Okay.

MR. NELSON: Mr. Chairman, ORS asks that Exhibits DJW-1 through DJW-9.3, as amended from the stand, be marked for identification and entered into the record of this case as the next composite hearing exhibit.

CHAIRMAN RANDALL: Okay. These exhibits DJW-1 through 9.3, amended as we've just done, will be marked and entered into the record as Exhibit Number 33.

(WHEREUPON, Hearing Exhibit 33 was marked and received in evidence.)

MR. NELSON: Thank you, Mr. Chairman.

THE EXAMINATION BY MR. NELSON CONTINUES.

Q Mr. Wittliff, did you also prepare nine pages of

surrebuttal testimony in this docket which you filed with the Commission on March the 19th?

A Yes.

Q Do you have any changes, edits, or corrections to your prefiled surrebuttal testimony?

A I do. I have two changes to my surrebuttal testimony. On Page 9, strike -- Page 9, Line 5, strike the word "no." On Page 9, Line 14, strike the word "only," and replace it with the word "primarily." The line now reads, "The federal CCR rules and these protections accrue primarily to the benefit of North Carolina."

Q Thank you, Mr. Wittliff.

MR. NELSON: And for the Commission, we -- we will file an errata sheet on those subsequent to the hearing.

THE EXAMINATION BY MR. NELSON CONTINUES.

Q Did you also prepare two exhibits, Mr. Wittliff, to your surrebuttal testimony, which we'll mark as Surrebuttal Exhibits DJW-1 and DJW-2?

A Yes.

Q Do you have any changes, edits, or corrections to those exhibits?

A No.

MR. NELSON: ORS, Mr. Chairman, asks that

Surrebuttal Exhibits DJW-1 and DJW-2 be entered in the record in this case as the next composite hearing exhibit.

CHAIRMAN RANDALL: The Surrebuttal Exhibits DJ 1 and 2 will be entered into the record as Hearing Exhibit Number 34.

(WHEREUPON, Hearing Exhibit 34 was marked and received in evidence.)

MR. NELSON: Thank you, Mr. Chairman.

THE EXAMINATION BY MR. NELSON CONTINUES.

Q Mr. Wittliff, have you ever testified before the South Carolina Public Service Commission?

A No, sir.

Q Okay. So since this is your first time appearing here, can you give the Commission a brief synopsis of your educational background and work experience in the area of utility regulation?

A I graduated from --

CHAIRMAN RANDALL: Hang on one second. I just wanted to make sure -- I know we're going to have something additional filed. But I don't think we entered the surrebuttal. Do we want wait to enter the surrebuttal testimony?

MR. NELSON: The surrebuttal testimony.

CHAIRMAN RANDALL: Yeah.

MR. NELSON: I'll just ask that that be read into the record as if given orally, as amended, from the stand.

CHAIRMAN RANDALL: Okay. The surrebuttal testimony of Mr. Wittliff will be entered into the record, as amended, as though given orally from the stand.

MR. NELSON: Thank you very much, Mr. Chairman.

CHAIRMAN RANDALL: Thank you.

MR. NELSON: Appreciate it.

CHAIRMAN RANDALL: (To the witness) Sorry about that. Continue.

THE EXAMINATION BY MR. NELSON CONTINUES.

Q Mr. Wittliff, again, could you briefly give the Commission a synopsis of your educational background and experience?

A I have bachelor's degree in mechanical engineering from Southern Methodist University and a master's in business administration from the University of Oklahoma. I'm a licensed professional engineer, licensed to practice in Texas, Tennessee, and South Carolina. I've been a licensed professional engineer since 1980. I'm also a board-certified environmental engineer with the American Academy of

Environmental Engineers and Scientists where I served as a trustee from 2010 to 2015.

I'm a past president of the Texas Society of Professional Engineers and a past president of the National Society of Professional Engineers where I currently chair the Committee on Policy and Advocacy, which basically -- it promotes and -- positions of interest to professional engineers around the country.

My career in power began in 1981 when I went to work for West Texas Utilities Company as a results engineer. And I held different positions. I was a assistant superintendent, that's the operations supervisor, for a gas plant. Then I became the power plant engineering supervisor at a coal plant during the startup and initial operations of it. Then became the environmental manager for the utility where I served before going off to Austin to become the chief engineer of the Texas Natural Resource Conservation Commission. That's the senior technical officer in an organization second in size to the EPA, as an environmental regulator. I was there for 4 1/2 years as the chief engineer, and then I went into consulting with -- I've been with my current

employer since 2007. So I think that -- that kind of covers it.

Q All right. Thank you, Mr. Wittliff. Can you please tell us when you were retained by the ORS and for what purpose?

A We were -- we were approached and retained in the spring of 2017, but our work didn't actually begin until May of 2017. And our primary role was to answer questions regarding CCR increases to -- I'm sorry -- CAMA increases to CCR costs relative to the Duke Energy Carolinas and Duke Energy Progress.

Q Thank you, Mr. Wittliff. Did -- did you prepare a summary of your direct and your surrebuttal testimonies?

A I did.

Q Can you please present it for the Commission?

CHAIRMAN RANDALL: Let's get you a little closer to that mic, too, or point it --

WITNESS WITTLIFF: Sorry.

CHAIRMAN RANDALL: -- right at you. It's -- it's sort of --

WITNESS WITLIFF: If you'll excuse me just a moment, I'm going to freshen up. Oh, that's good. Okay.

THE EXAMINATION BY MR. NELSON CONTINUES.

A Good afternoon, Mr. Chairman and Commissioners. Thank you for this opportunity to speak to you about the request from Duke Energy Carolinas to recover expenses for activities associated with the coal combustion residuals at seven power plants in North Carolina and one plant in South Carolina. Now, rather than rehash the details of my direct and surrebuttal testimony filed earlier in this matter, I would like to use this time to explain, one, the primary purpose of my review; two, the underlying principle on which that review -- review was based; three, the complexities associated with meeting my purpose; and, four, the result -- my result -- excuse me -- my resulting recommendations regarding disallowances.

First, GDS Associates, Incorporated, which -- who is my employer, was engaged by ORS to answer a wide -- a wide array of questions regarding the cost impacts of the Company's CCR disposal and remediation activities. More specifically, we were asked to determine the marginal impact of the North Carolina Coal Ash Management Act of 2014 and subsequent amendments on CCR remediation and disposal costs. As you've heard today that the -- that coal -- that CAMA was passed in good measure

to the Dan River spill incident in February of 2014.

Second, in accomplishing this purpose, GDS relied upon the South Carolina regulatory context provided by ORS early on in our work. As stated in my direct testimony, I understood, "It is the position of the ORS that costs incurred as a result of jurisdictional laws should not lead to increased costs to the ratepayers outside of that jurisdiction. This matter is addressed in the testimony of ORS Witness Seaman-Huynh."

Third, the costs associated with CCR remediation and closure are affected in material ways by a complex set of court cases, consent agreements, Commission decisions, federal rules, state regulations, as well as state laws, such as CAMA and its subsequent amendments. Determining with great precision the CCR cost increases above and beyond what the federal CCR rules require based on the limited information I received during 12 rounds of discovery -- I mean it was a lot of information; it just missed the mark in some cases -- is a bit like performing brain surgery with a pickax. That said, I found that the increased CCR costs -- CAMA increased CCR-related costs in three

ways at DEC plants: (a) expenditures for plants not covered at all by the CCR rules, Riverbend falls into this category; (b) expenditures for closure or excavation options not required under the CCR rules but required under CAMA or North Carolina court decisions; and (c) expenditures for actions that would not have been required at this time under the CCR rules but are subject to accelerated schedules under CAMA.

Fourth, in quantifying these cost impacts, I relied on my information -- on information obtained during my site visits to all the plants, my review of relevant state and federal laws and regulations, my evaluation of Company responses to data requests relevant to CCR-management practices, my review -- and my review of other documents relevant to CCR management and remediation. Some or all of the expenses sought by DEC for compliance at Buck, Dan River, and Riverbend result solely from CAMA, and South Carolina ratepayers should not have to pay for increased costs incurred solely as a result of North Carolina laws.

Table 5.4 in my direct testimony summarizes what is being sought for recovery, my recommendations for disallowances, and the premise

on which these recommendations are based. I recommend that the Commission disallow at this time -- excuse me -- approximately 470 million of the more than 876 million systemwide in ARO deferrals being requested by the Company in this proceeding. Please note that no disallowance is recommended for Allen, Belews Creek, Cliffside, and Marshall whose closures are not increased as a result of CAMA. In addition, no disallowance was recommended for W.S. Lee, which was closed under a consent agreement with South Carolina DHEC.

On the recommended disallowances at Riverbend and Buck, I recommend that the Company be allowed to resubmit these closure costs when and if the federal CCR rules change to require such action at Riverbend or beneficiation as a remediation and closure option for Buck. Additionally, the Company should be allowed to recover prudent engineering and planning costs at Buck and Dan River to the extent they were prudently incurred. However, other costs at Dan River are the result of accelerated timelines caused by being designated as a high-priority site by CAMA. The Company should not be allowed to resubmit for recovery these additional costs in a future proceeding.

This concludes my summary testimony.
Q I want to go back over that last line there, Mr. Wittliff. Is it "The Company should be allowed to resubmit recovery for these additional costs in a future proceeding"?
A I'm sorry. The Company should -- the way I have written it -- I apologize. The -- the Company should be allowed to resubmit for recovery of these -- these additional costs in a -- a future proceeding. It's just, in my opinion, not ripe at this moment recovery.
Q Thank you, sir. Does that conclude your summary?
A Yes, sir.
Q Thank you.

(PURSUANT TO PREVIOUS INSTRUCTION, THE PREFILED DIRECT TESTIMONY OF DAN J. WITTLIFF FOLLOWS.)

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DIRECT TESTIMONY AND EXHIBITS OF

DAN J. WITTLIFF, BCEE

ON BEHALF OF

THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF

DOCKET NO. 2018-319-E

IN RE: APPLICATION OF DUKE ENERGY CAROLINAS, LLC

FOR ADJUSTMENT IN ELECTRIC RATE SCHEDULES AND TARIFFS

AND REQUEST FOR AN ACCOUNTING ORDER

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Dan Wittliff. My business address is 919 Congress Avenue, Suite 1110, Austin, Texas 78701.

Q. PLEASE OUTLINE YOUR FORMAL EDUCATION.

A. I am a 1972 graduate of Southern Methodist University where I earned a Bachelor of Science degree in mechanical engineering and membership in Pi Tau Sigma mechanical

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engineering honorary. In 1975, I earned a Master of Business Administration from the University of Oklahoma where I was elected to membership in the Beta Gamma Sigma business honorary society.

Q. WHAT IS YOUR PRESENT POSITION?

A. I am Managing Director of Environmental Services for GDS Associates, Inc. ("GDS") in Austin, Texas.

Q. WOULD YOU PLEASE DESCRIBE GDS?

A. GDS is an engineering and consulting firm headquartered in Marietta, Georgia with offices in Austin, Texas; Auburn, Alabama; Manchester, New Hampshire; Madison, Wisconsin; and Orlando, Florida. GDS provides technical and financial consulting services to a nationwide base of clients including utilities, Public Service Commissions, large consumers of energy, and various agencies. Areas of expertise include power generation support and management consulting, power supply and transmission planning, rate consulting, distribution services, least cost planning, environmental including permitting and compliance, and litigation support. Power generation support services provided by the firm include plant operational monitoring on behalf of co-owners of fossil and nuclear power plants, plant ownership feasibility studies, plant management audits, plant construction cost and schedule analyses, evaluations of power plant O&M costs and budgeting practices, production cost modeling and plant outage and replacement power cost evaluations, and environmental compliance.

Q. PLEASE STATE YOUR PROFESSIONAL EXPERIENCE.

A. I have been employed by GDS since January 2007. I manage complex and multi-media (e.g., air, water, wastewater, and solid waste) environmental projects including

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natural gas and coal power plant development, operations, and compliance. Experience previous to joining GDS includes serving as the first Chief Engineer for the Texas Natural Resource Conservation Commission, now known as the Texas Commission on Environmental Quality, which is second only to the Environmental Protection Agency in terms of size. During my four and half years as Chief Engineer, I advised the commissioners of the agency on all aspects of environmental permitting and compliance. This scope spanned the full range of utility plant operations including coal plant operations. In addition, I oversaw the functions of innovative technology, toxicology, and pollution control property tax abatements. Further, as Chief Engineer, I resolved technical disagreements between permittees and the agency and within the agency. Before my service with the Texas Natural Resource Conservation Commission, I served in numerous supervisory positions with West Texas Utilities Company, headquartered in Abilene, Texas, managing the company's multi-media environmental compliance program and overseeing power station performance including issues related to air pollution, water treatment, industrial hygiene, and solid waste disposal. Coal-fired plant operations and compliance were a major part of my responsibilities. Immediately prior to joining GDS Associates, I was Principal of Dan Wittliff Consulting, PLLC. This firm provided professional environmental engineering services that focused on related engineering, regulatory affairs, and energy systems operations, management, and compliance including coal-fired plant operations and compliance. I am a Board Certified Environmental Engineer through the American Academy of Environmental Engineers and Scientists, where I served as a member of the Board of Trustees from 2010 through 2015. I am also a licensed professional engineer. My resume and list of publications are included as Exhibit DJW-1.

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Q. HAVE YOU SERVED IN LEADERSHIP ROLES RELATED TO THE ENGINEERING PROFESSION?

A. Yes. I served in various state and national positions with the National Society of Professional Engineers ("NSPE"). I served as president of NSPE from 2012 to 2013 and served on the Board of Directors for eight years. I also served as president of the Texas Society of Professional Engineers from 2002 to 2003. From 2017 to 2018, I served as President of the Engineers' Week Foundation Board of Directors. Since 2015, I have chaired NSPE's Committee on Policy and Advocacy which develops policy and position statements on key issues affecting licensed engineers across the country. My committee and I recently rewrote the organization's professional policies for Energy and Environment along with eight other policies.

Q. HAVE YOU SERVED IN LEADERSHIP ROLES OUTSIDE OF YOUR PROFESSION?

A. Yes. I retired from the Air Force Reserve in 2002 at the rank of Colonel. I served nine years on active duty and 21 years in the reserves. The majority of my active duty was spent in communications maintenance and operations culminating in a stint as commander of a unit on a mountaintop in Central Turkey. When I transferred to the reserves, I joined a combat civil engineering squadron as chief of utilities and structures. From 1996 to 2002, I returned to environmental and civil engineering first as Senior Individual Mobilization Augmentee ("IMA") to the Environmental Director for the Ogden Air Logistics Center, then as Senior IMA to the Commander of the Civil Engineering Group at Hill Air Force Base ("AFB"), finishing my career as Senior IMA to the Command Civil Engineer of Air Force Materiel Command. At Hill AFB, I advised senior leadership on issues related to

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pollution plume remediation and interfaced with the Utah environmental regulators on air permitting and emissions from engines at the base.

Q. PLEASE DISCUSS YOUR COAL COMBUSTION RESIDUALS EXPERIENCE.

A. My coal combustion residuals experience includes the initial startup and testing of fly ash removal, storage, and disposal facilities when I was plant engineering supervisor at Oklaunion Power Station, a 720 MW coal-fired plant near Vernon, Texas from 1985 to 1990. When I served as manager of environmental services for West Texas Utilities Company, from 1991 to 1995, I chaired the Solid Waste Task Force for the Electric Reliability Council of Texas from 1994 to 1995 and participated in the Texas Coal Ash Utilization Group from 1993 to 1995. When I became chief engineer of Texas Natural Resource Conservation Commission in 1995, I led the resolution of coal ash beneficial reuse issues between the state' various electric utilities and the agency's solid waste program management and policy staff. I have also delivered a paper, "Regulatory Advances in Texas," Workshop on Coal Combustion Products, American Coal Ash Association. In the paper, I delineated the results of work between the agency and industry to further define and expand beneficial reuses of coal ash.

Q. HAVE YOU GIVEN TESTIMONY BEFORE?

A. Yes. I filed direct testimony and testified before the North Carolina Utilities Commission in No. E-7 Sub 1146 on January 23, 2018 and in Docket No. E-2 Sub 1142 on December 4, 2017. Recently, I also offered testimony before the Texas State Office of Administrative Hearings, Docket No. 473-14-2252, PUC Docket No. 42087, and before the Florida Public Service Commission, Docket No. 150075-EI.

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II. PURPOSE AND SUMMARY OF TESTIMONY

Q. BY WHOM HAVE YOU BEEN RETAINED IN THIS PROCEEDING?

A. GDS has been retained by the South Carolina Office of Regulatory Staff ("ORS").

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to address the certain issues regarding Duke Energy Carolinas, LLC's ("DEC" or "Company") and Duke Energy Progress, LLC's ("DEP") (collectively the "Companies") management of their Coal Combustion Residuals (CCR) impoundments including any related legal, regulatory, and cost consequences stemming from that management including:

1) The evolution of coal ash management and its regulations;
2) The evolution of the Coal Combustion Residuals Final Rule;
3) Company History & Current Activities;
4) North Carolina's Coal Ash Management Act ("CAMA") History;
5) A determination whether the Company met environmental compliance and/or best engineering/environmental management practices and if not, whether any resulting cost consequences were either avoidable or unreasonably high; and
6) A determination of the extent and timing of ash removal and other compliance costs attributable solely to North Carolina's CAMA or North Carolina court decisions.

Q. WHAT COAL ASH MANAGEMENT MATERIAL DID YOU REVIEW AND RELY ON TO DEVELOP YOUR TESTIMONY?

A. My review included:

- Information gained from site visits to DEC's Allen ("Allen"), Belews Creek ("Belews Creek"), Buck ("Buck"), Dan River ("Dan River"), Marshall ("Marshall"), Riverbend

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("Riverbend"), Cliffside ("Cliffside"), and W.S. Lee ("W.S. Lee") Steam Stations in North and South Carolina and associated CCR facilities;

- DEC responses to data requests addressing the Company's past and current coal combustion residual practices at each applicable Company facility;
- Inspection reports related to dam safety of CCR impoundments:
- Remediation options analyses;
- Ash Pond Closure plans;
- Testimonies of Company officials and representatives before the South Carolina Public Service Commission ("Commission") related to these matters;
- Relevant Court Orders, including but not limited to Federal and State Orders related to the Company's failure to comply with Federal and State laws regarding the management of coal ash prior to the enactment of CAMA;
- Environmental Protection Agency ("EPA") and other governmental reports;
- Utilities Solid Waste Activities Group documents;
- The rationale for the enactment of the federal CCR Rule and the enactment of CAMA contained in those and associated preambles;
- Insurance documents of the Company from 1996 that indicate the Company understood it had a significant legal exposure regarding discharges of pollutants from ash/coal combustion residual ponds at its coal-fired power plants;
- Information and documents provided by the Company in response to data requests;
- Duke Energy's SEC 10-K filings for the years 2008-2016; and
- Minutes of Environmental Review Commission of the North Carolina General Assembly meetings for the years 2010 through 2014.

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I also relied on my professional training and experience as a licensed engineer with over thirty (30) years of experience at coal-fired power plants including environmental controls, regulations, and compliance from the diverse perspectives of industry, regulatory agency, and consultant.

Q. PLEASE SUMMARIZE YOUR TESTIMONY IN THIS PROCEEDING.

A. In my testimony, I will lay out the evolution of coal ash management regulations to provide context for the development of the Federal CCR Rules and the North Carolina CAMA. I will also describe the role that the February 2014 spill at Dan River Steam Electric Station played in the development of CAMA. Additionally, I will delineate the CCR management solutions employed by coal-fired power plants generally and DEC specifically.

For more discussion on these jurisdictional allocations, please see ORS witness Seaman-Huynh's testimony regarding cost of service, and specifically the discussion related to jurisdictional allocations. While many of the costs requested by DEC in this case resulted from the necessity to comply with the federal CCR Rules or with requirements established by South Carolina authorities and have been recommended for recovery, some or all the expenses sought by DEC for compliance at Buck, Dan River, and Riverbend result solely from CAMA and South Carolina ratepayers haven't traditionally had to pay for costs incurred solely as a result of North Carolina laws.

Please note that, while I reviewed the CCR expenses (both Asset Retirement Obligation ("ARO") and non-ARO) provided by DEC through December 31, 2018 and forecasts beyond that time, my recommendations for allowances and disallowances are based on the actuals for ARO deferrals submitted by DEC in Kerin Exhibit 10 (see Exhibit

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DJW-3.1.2) and Non-ARO Expenses in DEC Schedule 1808 (see Exhibit DJW-3.5.8) through September 30, 2018. Any deferral amounts beyond that date should be addressed in a subsequent proceeding.

Regarding the non-ARO expenses claimed in Schedule 1808 (Exhibit DJW-3.5.8), DEC claims $107,485,857 from January 2015 through September 2018. The data provided by DEC in ORS 29-1 (see DJW-Exhibit 3.7) is in enough granularity to determine what project at what site was included in the numbers in Schedule 1808. While it appears that DEC removed expenses for two projects at Buck as well as Marshall Landfill Cells 3 and 4 from the expenses shown in ORS 29-1 in developing the numbers used in Schedule 1808, I recommend that the claim for $107,485,857 from January 2015 through September 2018 be allowed in this proceeding. Any non-ARO expenses beyond that date should be addressed in a subsequent proceeding.

Tables 5.2 and 5.4 summarize what is being sought for recovery, my recommended disallowances, and the premise on which these recommendations are based. I recommend that the Commission disallow $469,894,472 of the $876,206,294 in ARO deferrals being requested by the Company in this proceeding.

III. EVOLUTION OF COAL ASH MANAGEMENT REGULATIONS

Q. HOW DID COAL ASH MANAGEMENT AND ITS REGULATIONS EVOLVE?

A. Federal Surface Water and Wastewater Regulations – The Federal Water Pollution Control Act of 1948 was the first major U.S. law to address water pollution. Growing public awareness and concern for controlling water pollution led to sweeping amendments in 1972. As amended in 1972, the law became commonly known as the Clean Water Act

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("Clean Water Act"). Wastewater from steam electric power generating units is regulated under the Clean Water Act National Pollutant Discharge Elimination System ("NPDES").

The 1972 Clean Water Act established the basic structure for regulating pollutant discharges into the waters of the United States and gave the EPA the authority to implement pollution control programs such as setting wastewater standards for the electric utility industry based on the fact that CCRs and coal ash wastewater are pollutants. The Clean Water Act maintained existing requirements to set water quality standards for all contaminants in surface waters and made it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit was obtained under its provisions.

In accordance with 40 CFR 122.41, the following standard conditions are incorporated into all NPDES permits:

- **Duty to comply**. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (see 40 CFR 122.41(a))
- **Duty to mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. (see 40 CFR 122.41(d))
- **Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related

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appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit. (see 40 CFR 122.41(e))

- **North Carolina Groundwater (2L) Rules** – In 1979, North Carolina established rules (2L Rules) to protect, maintain, preserve, and enhance the quality of the groundwaters of the State, prevent and abate pollution and contamination of the waters of the state, and to protect public health. These rules require that all entities, including the utility industry, conducting or controlling an activity resulting in the discharge of a waste or hazardous substance to the groundwaters of the State take immediate action to terminate and control the discharge, mitigate any hazards resulting from exposure to the pollutants and notify the Department of Environmental Quality of any such discharge. If as the result of any entity conducting or controlling an activity not permitted by the North Carolina Department of Environmental Quality ("NC DEQ") which results in an increase in the concentration of a substance in excess of the 2L standards, that entity must implement an approved corrective action plan for restoration of groundwater quality.
- **1979 Los Alamos Report** – In May 30, 1979, the Department of Energy ("DOE") directed the University of California's Los Alamos Scientific Laboratory to prepare a paper on the topic of the disposal and reclamation of coal and uranium wastes (Exhibit DJW-4.8). The report indicated that there was a growing awareness that the discarded wastes from coal combustion were a serious potential source of surface and groundwater contamination and that the wastes have the potential for causing great environmental damage if not properly handled. Regarding disposal in ash basins, the authors concluded:

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The control of contaminated leachates and seepages from disposal ponds for fly ash and scrubber sludge represents, perhaps, the most significant environmental problem facing the southwestern coal and utilities industries. Many trace contaminants that are present in the fly ash or sludge can be mobilized by the waters in the ponds. The transport of contaminants from the disposal ponds into shallow or deep aquifers could result in the degradation of the quality of these waters. Frequently, ash and sludge disposal areas are lined with impermeable materials to reduce the loss of water from them. Nonetheless, careful monitoring of the surface and subsurface effluents from disposal ponds is a necessity in a well-planned disposal and reclamation scheme for coal combustion wastes.

- **1988 EPA Report to Congress** - The EPA submitted its report to Congress on "Wastes from the Combustion of Coal by Electric Utility Power Plants" in February 1988. This report addressed CCR from electric utility power plants, voicing concerns over the "substantial quantities of wastes" produced by these plants because of the "increasing reliance on coal for producing electricity." (see Exhibit DJW-4.6 p ES-2) The report forecasted a growth in the production of coal ash and flue gas desulfurization waste from a combined 80 million tons per year in 1984 to 170 million tons in 2000.

The report also observed that "[t]he primary concern regarding the disposal of wastes from coal-fired power plants is the potential for waste leachate to cause ground-water contamination" from the potentially toxic metals in the ash. (see Exhibit DJW-4.6 p ES-3) Furthermore, the report observed that "[m]ost utility waste management facilities were not designed to provide a high level of protection against leaching." (see Exhibit DJW-4.6 p ES-3) In 1988, only about twenty-five percent (25%) of all facilities had liners

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of any kind (e.g., clay, synthetic, or composite), although that number had increased to forty percent (40%) of facilities built since 1975. (see Exhibit DJW-4.6 p ES-3)

- **Federal Coal Combustion Residual Rule** – Throughout the evolution of the CCR Rule, beginning with the enactment of the Resource Conservation and Recovery Act ("RCRA") on October 21, 1976 and ending with the EPA publication of a final rule correcting the effective date of the disposal of coal combustion residuals final rule to October 19, 2015, the primary concern expressed in reports to Congress and others was that coal combustion residuals or products posed a growing environmental risk of groundwater contamination if left unattended.

From the beginning of this evolution, the EPA saw the country's increasing reliance on coal as a fuel for electrical power generation as presenting significant environmental concerns, as reflected in its February 1988 "Report to Congress on Wastes from the Combustion of Coal by Electric Utility Power Plants."

On December 22, 2008, a dike used to contain coal ash at the dewatering area of the Tennessee Valley Authority ("TVA") Kingston Fossil Plant in Roane County, Tennessee failed. Approximately 5.4 million cubic yards of coal ash was released into Swan Pond Embayment and three adjacent sloughs, eventually spilling into the main Emory River channel. The release extended approximately 300 acres outside of the fly ash dewatering and storage areas of the plant.

As a result of this failure, the EPA initiated comprehensive inspections of more than 500 CCR impoundments across the country to determine the condition and risk posed by a dam failure. These inspections took place from 2009 through 2011 and included all of the Company's surface impoundments. Among the risks posed by dam failures are: loss of

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life, injury to people and wildlife, loss or significant damage to public and private property, environmental damage to wetlands and waterways, and damage to infrastructure such as roads and bridges.

On March 9, 2009, the EPA began mailing information request letters to electric utilities and corporations that had surface impoundments or similar units that contained coal combustion residuals. These letters requested information to assist the EPA in evaluating the structural integrity of these management units.

On June 21, 2010, the EPA proposed regulations under RCRA to address the risks from the disposal of CCRs generated from the combustion of coal at electric utilities and independent power producers. This proposal contained two (2) regulatory options due to the significant and technical policy issues involved in regulating these wastes. Under the first, the EPA proposed to list these residuals as special wastes subject to regulation under Subtitle C of RCRA, when they are destined for disposal in landfills or surface impoundments. Under the second option, the EPA proposed to regulate disposal of such materials under Subtitle D of RCRA by issuing national minimum criteria. Under both alternatives, the EPA proposed to establish dam safety requirements to address the structural integrity of surface impoundments to prevent catastrophic releases. After extensive study and examination of all comments received during the rulemaking process, the EPA established regulations under Subtitle D of RCRA (Source EPA web site https://www.epa.gov/coalash/coal-ash-rule).

On December 19, 2014, the EPA signed the final rule on disposal of coal combustion residuals from electric power plants. The EPA finalized national regulations providing a comprehensive set of requirements for the disposal of coal combustion

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residuals as solid waste under subtitle D of RCRA. On April 17, 2015, the EPA published the final rule on disposal of coal combustion residuals from electric utilities in the *Federal Register*. On July 2, 2015, the EPA published a final rule correcting the effective date of the disposal of coal combustion residuals final rule to October 19, 2015.

Q. WHAT WAS THE SIGNIFICANCE OF THE COMPANY'S IMPOUNDMENT FAILURE AT DAN RIVER?

A. From February 2, 2014 through February 8, 2014, the unpermitted discharge of approximately 27 million gallons of coal ash wastewater and an estimated 39,000 tons of coal ash into the Dan River occurred through two pipes from Dan River's primary coal ash basin. The coal ash from the release traveled more than 62 miles down the Dan River. Until this event, the draft federal CCR Rule was the driving force in coal combustion residual remediation and closure, and the proposed CCR Rule provided latitude in remediating or closing coal combustion residuals impoundments. The Dan River spill, however, played a deciding role in the development of North Carolina's CAMA in its present form, not only accelerating the timing of action required, but also limiting the options to remediate and close coal combustion residuals impoundments more than would eventually occur under the CCR Rule. In fact, Dr. Wright on page 17, lines 5-7 of his testimony (see Exhibit DJW-3.6), states that there is no doubt that the Dan River spill certainly helped prompt the North Carolina General Assembly to examine the State's and national coal ash disposal policies and regulations.

As is demonstrated by the Company's own admissions and the Court's findings in the federal criminal actions, criminal negligence on the part of the Company at Dan River and Riverbend and state environmental rule violations at Dan River and Riverbend, as well

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as DEP's Asheville, Cape Fear, and H.F. Lee plants, resulted in damage to the environment. In addition to language contained within North Carolina's CAMA and legislative drafts of what eventually became CAMA, the court cases and subsequent plea agreements (see Exhibits DJW-5.1 – DJW-5.4) demonstrate that DEC and DEP were criminally and civilly negligent in their operations and maintenance of the impoundments for years prior to the enactment of CAMA, confirming that DEC and DEP failed to responsibly address and correct these issues adequately -- and consequently much less costly – manner than it is currently being required to do.

Q. HAVE THERE BEEN ANY SUBSEQUENT LEGAL ACTIONS THAT WOULD CAUSE THE EPA TO ALTER THE WAY CLOSURE WAS OR WILL BE HANDLED AT SITES THAT WERE INACTIVE AS OF APRIL 17, 2015? IF SO, PLEASE EXPLAIN.

A. Yes. On August 21, 2018, the DC Circuit Court found that the EPA had allowed utilities to close inactive ponds at coal plants which were shut down on or before April 17, 2015 to be capped in place without regard to whether the ponds were excavated, dewatered, or lined in some way so as to prevent contamination of groundwater by the inactive pond. The Court remanded the portion of the rule on inactive ponds at inactive sites to the EPA for reconsideration. However, until this issue has been addressed by the EPA, the current CCR Rules remain in effect.

Q. DID THE COMPANY'S ACTIONS IMPACT THE ENACTMENT OF CAMA IN ANY WAY? IF SO, PLEASE EXPLAIN.

A. Yes. In the aftermath of the 2008 CCR impoundment failure at TVA's Kingston Fossil plant and after the EPA's dam safety inspections of DEC's and DEP's coal-fired

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power plants in 2009, the Federal initiatives on CCR Rule development became the driving force in changes to coal ash management. Environmental lawsuits filed in State Courts in 2013 and 2014 brought issues associated with seepage, unpermitted discharges, groundwater violations, and drinking water impacts from Dan River, Belews Creek, Cliffside Riverbend, and (in 2015) Buck to the forefront. However, it was the Company's February 2014 impoundment failure at Dan River causing a release of as much as 39,000 tons of CCR and 27 million gallons of CCR wastewater into the Dan River that brought a prompt response by the North Carolina General Assembly as reflected in the preamble of an early May 14, 2014 version (see Exhibit DJW-4.4) of the Coal Ash Management Act (Senate Bill 729) which states:

> Whereas, the issue of coal ash storage has not been adequately addressed in North Carolina for more than six decades; and
>
> Whereas, on February 2, 2014, an estimated 39,000 tons of coal ash was released into the Dan River following the failure of a stormwater pipe under a utility coal ash impoundment pond in Eden, North Carolina; and
>
> Whereas, the Department of Environment and Natural Resources ("Department") finds that coal combustion products have settled into the sediment of the river bottom and will require an extensive clean-up plan to complete remediation; and
>
> Whereas, the Department is in the process of reassessing previous efforts at achieving compliance at coal ash facilities and developing short term and long term policies in light of the Dan River spill, violations discovered in light of increased inspections of coal combustion products disposal facilities and anticipated new federal regulations on coal combustion products; and
>
> Whereas, it is the intent of the Department to ensure that spills of wastewater are reported to the Department in a defined and adequate time frame; and
>
> Whereas, it is the intent of the Department to protect surface water and groundwater resources for their best usage; and

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Whereas, it is the intent of the Department to ensure that all unpermitted wastewater discharges are eliminated or addressed in an environmentally responsible manner; and

Whereas, it is the intent of the Department to equally subject all dams under jurisdiction of G.S. 143-215.23 to the requirements of statute and administrative code; and

Whereas, it is the intent of the Department for the owners of all dams under jurisdiction of G.S. 143-215.23 deemed intermediate and high hazard by the Department to prepare at their own cost documents that describe full and adequate response to emergency situations at their dams and to submit those documents to the Department; and

Whereas, it is the intent of the Department to ensure that emergency situations at dams are reported to the Department in a defined and adequate time frame; and

Whereas, the it is the intent of the Department to increase oversight of dam structure integrity to protect the health and safety of the public; and

Whereas, state law exempts coal combustion products removed from impoundments from being defined as a solid waste; and

Whereas, the Department finds that consistent environmental standards should apply to coal combustion products removed from impoundments for management or disposal and coal combustion products managed or disposed of as a solid waste; and

Whereas, the Department finds the federal Environmental Protection Agency is under consent decree to complete new regulations by December 2014 for coal combustion products that are proposed to bring consistency to requirements for large fills such as structural fills and landfills; and

Whereas, the Department finds that conversion and closure of coal ash storage ponds is necessary for protection of the health and safety of the public;

While the sentiment expressed in this document leaves no doubt in my mind that the spill from Dan River was the seminal event in stimulating the development of CAMA, the other examples of ash mismanagement also played a role in making CAMA as stringent as it became. As is demonstrated by the Company's own admissions and the Court's

findings in federal criminal actions, criminal negligence on the part of the Company at Dan River and Riverbend resulted in damage to the environment. All of these negligent actions on the part of the Company played a significant role in making CAMA more prescriptive and more stringent than enabling state environmental laws had been in North Carolina for a number of years immediately preceding its enactment.

Q. WAS THE NORTH CAROLINA GENERAL ASSEMBLY CONSIDERING LEGISLATION TO REGULATE COAL ASH DISPOSAL PRIOR TO THE DAN RIVER SPILL?

A. As noted in the preamble to CAMA included earlier in my testimony, the General Assembly acknowledged that the "issue of coal ash storage has not been adequately addressed in North Carolina for more than six decades." In addition, my research of the minutes of the Environmental Commission of the North Carolina General Assembly for the three (3) years prior to the Dan River spill and the month immediately preceding the spill led me to conclude that no legislation was being seriously considered up until the time of the failure. In fact, the only mentions of coal ash in the minutes from February 2010 through January 2014 were as follows:

> January 18, 2011
>
> Ms. Sullins said the effect of coal ash on groundwater was being reviewed as part of the renewal of permits for groundwater. Concerning the issue of coal ash, the EPA issued new [draft] rules for coal combustion residuals [in 2010] after the failure of an impoundment in Tennessee. Because of the types of containment of the residuals, the North Carolina Division of Waste Management, Division of Water Quality and the Division of Land Resources are severally involved in this issue. The three Divisions reviewed the EPA rules and submitted comments to the federal agency. The Division considers the EPA rules unsatisfactory, therefore the Division seeks to have EPA treat coal combustion residuals as solid waste and provide states with financial incentives to regulate them as solid waste to recognize state permitting requirements for the substances.

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Representative Harrison asked if the Division felt confident that toxins contained in recycled coal ash remained inert. Mr. Matthews said that the technical standards for hazardous and solid waste are similar and should be effective.

December 13, 2012

Representative Samuelson asked about the differences in types of landfills, specifically industrial landfills. Mr. Scott explained that sanitary landfills include municipal solid waste landfills, construction demolition landfills, and industrial landfills. In North Carolina, there are 16 industrial landfills, mostly for the power industry, coal ash, pulp and paper, and one specifically for battery products.

October 9, 2013

Representative Harrison wanted more information on the coal ash ponds and potential groundwater contamination by the power companies? Mr. Gillespie explained that North Carolina has filed a lawsuit against the power companies on this issue and the Southern Environmental Law Center has joined the suit. DENR has followed the guidelines when imposing fines on Progress Energy. The penalty DENR has imposed is five times higher than normal.

Q. HAS SOUTH CAROLINA PASSED LEGISLATION SIMILAR TO CAMA?

A. No. In fact, SC Code Regs 61-79.261 establishes regulations for CCR impoundments as exempt from solid waste designation. A table of my research into state-specific rules on CCR management and impoundments is included as Exhibit DJW-4.7.2 which shows that, in the region around North Carolina, Kentucky, West Virginia, and Georgia adopted the Federal CCR Rules. That said, on January 24, 2019, the State of Virginia reached a bipartisan agreement to move forward on a bill that would require Dominion Energy to excavate all the coal ash at their Virginia coal plants. See Exhibit DJW-9.1.

Q. HAVE YOU PREPARED A COMPARISON OF THE REQUIREMENTS CONTAINED WITHIN THE EPA'S CCR RULE AND CAMA?

A. Yes. Exhibit DJW-4.7.1 is a side-by-side comparison of the Federal CCR Rule, CAMA, and subsequent amendments. Table 4.1 in Exhibit DJW-4.7.1 summarizes and compares the provisions of CAMA and the CCR Rule. As indicated in the narrative below, CAMA is significantly more restrictive and stringent than the federal CCR Rule.

1) CLOSURE MANDATES. From this side-by-side comparison, it is readily apparent that CAMA focuses on basin closure for any impoundment not rated as "low risk" compared to the CCR Rule. CAMA requires closure only for active basins which cannot meet the various safety and environmental criteria, with a high priority on the stability evaluation. While none of the DEC impoundments were originally listed as "low risk," the Company was able to change the classifications of several of its sites by providing a water supply or water treatment system to neighboring communities) on ground water (see Exhibit DJW-8.5). In Kerin's Exhibit 10 (Exhibit DJW-3.1.2) indicated that DEC has removed $22,794,359 in "CAMA-related" from this request for reimbursement. See Table 3.1 below. We concur that these costs should not be reimbursed as should other "CAMA-related" costs that are more stringent than the Federal CCR Rules.

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Table 3.1: DEC Changes in Risk Classifications and Drinking Water Supply Spends				
Plant	**Basin**	**Risk Classification May 18, 2016**	**Risk Classification Nov 14, 2018**	**CAMA Water Supply Costs (source: discovery response 9-06)**
Allen	Active Ash Basin	Intermediate	Low	$12,966,496
	Retired Ash Basin	Intermediate	Low	
Belews Creek	Active Ash Basin	Intermediate	Low	$690,069
Buck	Ash Basin 1	Intermediate	Low	$5,291,799
	Ash Basin 2	Intermediate	Low	
	Ash Basin 3	Intermediate	Low	
Cliffside	Active Ash Basin	Intermediate	Low	$1,858,801
	Retired Unit 1-4 Basin	Intermediate	Low	
	Retired Unit 5 Basin	Intermediate	Low	
Dan River	Primary Ash Basin	High	no change	$24,378
	Secondary Ash Basin	High	no change	
Marshall	Ash Basin	Intermediate	Low	$1,955,527
Riverbend	Primary Ash Basin	High	no change	$7,289
	Secondary Ash Basin	High	no change	
			TOTAL	**$22,794,359**

2) CLOSURE METHODS. CAMA allows only "low risk" coal combustion residuals basins to be closed by cap in place while the CCR Rule allows for cap-in-place closure for a wider range of impoundments.

3) COMPLIANCE TIMING. CAMA directs accelerated timelines for compliance in comparison to the CCR Rule. Many of the expenditures for which DEC is seeking recovery in this proceeding would not be required until a number of years in the future, and others never incurred had CAMA not been passed in reaction to the Dan River spill. At Riverbend, the ash ponds were decanted, dewatered, excavated, and hauled by

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rail to an off-site mine with a scheduled completion date in mid-2019 under CAMA at considerable cost.

4) APPLICABILITY TO INACTIVE SITES. Because the CCR Rule currently applies only to sites that were active as of April 17, 2015. Riverbend was not impacted by the CCR Rule, but was designated for closure under CAMA.

5) BENEFICATION REQUIREMENTS. A North Carolina court order and CAMA require ash beneficiation at three (3) sites. One of these sites that have been designated is Buck. The Federal CCR Rules do not require beneficiation.

6) CONVERSION TO DRY ASH DISPOSAL. CAMA requires dry fly ash disposal by December 2018 and dry bottom ash disposal by December 2019. The CCR Rule does not expressly address conversion to dry ash disposal. However, in some cases, conversion is driven by basin closure requirements. Furthermore, the EPA extended timelines to accommodate Steam Electric Effluent Limitations Guidelines that propose to require conversion to dry ash disposal. No such extension has been made available in CAMA.

7) HIGH PRIORITY SITES. CAMA identified two (2) of the Company's facilities, Dan River and Riverbend, as "**HIGH PRIORITY**" sites, requiring that the time frame for the removal of all ash and the closure of those sites be further accelerated. As is apparent from Kerin's Exhibit 10 (Exhibit DJW-3.1.2), approximately 55 percent ($484 million out of the total Asset Retirement Obligation ("ARO") 2015-August 2018 expenditures of $876 million) of the monies spent by the Company in 2015-2018 were incurred due to an accelerated closure schedule of these two sites. On May 18, 2016, the NC DEQ released proposed classifications (Exhibit DJW-9.2) for all coal ash ponds

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in NC, while asking the General Assembly to allow the reconsideration of those classifications in 18 months. Table 3.1 lists the Company's High Priority sites designated by CAMA in 2014 (Dan River and Riverbend) that must be closed by August 1, 2019, and proposes the rest be classified as intermediate priority for which closure would be required by December 31, 2024.

On November 14, 2018, the NC DEQ (Exhibit DJW-9.3.) issued another press release which states that Duke Energy met the low-risk classification criteria set forth in CAMA for Allen, Belews Creek, Buck, Cliffside, and Marshall. Low-risk classification requires completion of closure by December 31, 2029.

IV. INDUSTRY AND COMPANY COAL ASH MANAGEMENT

Q. WHAT SOLUTIONS HAS THE INDUSTRY IMPLEMENTED FOR COMPLIANCE AND PROTECTION OF THE ENVIRONMENT FROM THE IMPACTS OF COAL ASH DISPOSAL?

A. Since the 1970's, industry practices have shown a shift away from surface impoundments and towards landfills and from unlined impoundments towards lined waste management units. In the EPA's 1988 and 1999 reports to Congress, the agency observed the percentage of generating units with lined landfills increased from thirty percent (30%) to fifty-seven percent (57%) between 1975 and 1995. Over the same time frame, lined surface impoundments rose from seventeen percent (17%) to twenty-eight percent (28%).

In my experience with coal plants and CCR management, which includes both wet and dry components, liners were placed in new ponds built since the mid-1980's and were placed in Subtitle D compliant landfills built since the mid-1990's. Table 4.1 below illustrates the Company's CCR handling and disposal methods employed at their facilities.

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Table 4.1: Coal Ash Disposal Basins at Duke Energy Carolinas Coal Fired Power Plants

Plant	Coal Plant Size (MW)	Basin Name	Combined Basin Surface Area (acres)	Basins Built	Lined (Y/N)	Features	Type of Disposal (Wet/Dry)	Total Ash Impounded (million tons)	NDPES Permit
Allen (NC) Steam Station	1,140								NC0004979
		Active Ash Basin	170	1972	N		Wet	10.46	
		Retired Ash Basin	133	1957	N		Wet	6.15	
		Retired Ash Basin LF	25	2009	Y		Dry	0.89	
		Distribution of Residual Solids 1-4		1995	N				
Belews Creek (NC) Steam Station	2,240								NC0024406
		Active Ash Basin	283	1973	N		Wet	12.24	
		Pine Hill Landfill	52.4	1983	N		Dry		
		FGD Landfill	24	2008	Y		Wet		
		Craig Road Landfill	68	2008	Y		Dry		
		Structural Fill		2003	N		Dry		
Buck (NC) Steam Station (RET)	256								NC0004774
		New Additional Primary Basin	71	1982	N		Wet	3.55	
		Primary Basin	58	1957	N		Wet	2.00	
		Secondary Basin	21	1977	N		Wet	0.86	
Dan River (NC) Steam Station (RET)	278								NC0003468
		Primary Basin	27	1956	N		Wet	1.21	
		Secondary Basin	12	1968	N		Wet	0.39	
		Ash Fill Areas			N		Dry		
Marshall (NC) Steam Station	2,090								NC0004987
		Active Ash Basin	450	1965	N		Wet	16.70	
		Industrial Landfill	35.5		Y	Leachate collection	Wet		
		FGD Residual Landfill	20.6		Y	Leachate collection	Wet		
		Dry CCP Ash Landfill 1		1984	N		Dry		
		Dry CCP Ash Landfill 2		1986	N		Dry		

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Table 4.1: Coal Ash Disposal Basins at Duke Energy Carolinas Coal Fired Power Plants

Plant	Coal Plant Size (MW)	Basin Name	Combined Basin Surface Area (acres)	Basins Built	Lined (Y/N)	Features	Type of Disposal (Wet/Dry)	Total Ash Impounded (million tons)	NDPES Permit
Marshall (NC) Steam Station (continued)	2,090								NC0004987
		Asbestos Landfill		1987	N		Dry		
		Demolition Landfill		1984	N		Dry		
		PV Structural Fill	80	2000	N		Dry		
		Road Structural Fill		1997	N		Dry		
Rogers (NC) Energy Complex (formerly Cliffside)	1,387								NC0005088
		Units 1-4 Basin	14	1940	N		Wet	0.42	
		Unit 5 Basin	46	1972	N		Wet	2.35	
		Astice Ash Basin	86	1974	N		Wet	5.06	
		Landfill	182	2016	Y		Dry	2.00	
		Ash Stack 1			N				
		Ash Discovery Area	1.4	2016					
Riverbend (NC) Steam Electric Plant (RET)	454								NC0004961
		Primary Basin	41	1957	N		Wet	2.62	
		Secondary Basin	27	1957	N		Wet	1.00	
		Dry Ash Stack	29	2007					
		Cinder Pit	13	1957					
W.S. Lee (SC) Steam Station (RET)									SCR003705
		Primary Basin	48	1973	N		Wet	2.17	
		Secondary Basin	37	1975	N		Wet	0.03	
		Inactive Ash Basin	19	1951	N		Wet	1.14	
		Ash Fill/Borrow Area	16		N		Dry		
		Dry Stacking Interim Fill Area	13		N		Dry		
TOTAL								71.24	

Q. HAS THE COMPANY KEPT PACE WITH THE REST OF THE INDUSTRY IN ITS COMPLIANCE WITH ITS PERMITS AND WITH ENVIRONMENTAL LAWS GOVERNING COAL ASH MANAGEMENT?

A. No. The Company has been disposing of CCR for at least sixty (60) years. The Company built its first coal-fired power plant (Buck) in October 1926 and built the first of

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its currently listed surface impoundments (Dan River Number 1, Primary Ash Basin) in 1956. Except for impoundments and landfills built in response to CAMA and the federal CCR Rule, the most recent of the Company's impoundments was built in 1982, The Company did not vary from its established practice of building, expanding, and continuing to utilize unlined wet surface impoundments despite the increasing concerns reported in industry studies, noted above, with potential ground water impacts from CCR impoundment seeps and leachate. During my December 2018 site visits to the eight (8) DEC plants in North and South Carolina, Company officials contended that the flow coming from the seeps is a small fraction of the flow coming out of the ash basin outfalls permitted under NPDES. While this observation appeared to be true, this does not relieve the Company from complying with the terms of its permits. It is also noteworthy that the engineered (constructed) seeps have been included as permitted outfalls in each plant's NPDES permit while non-constructed seeps have been largely addressed through agreed orders for each plant.

Q. PLEASE SUMMARIZE THE CLOSURE OPTIONS CONSIDERED BY THE COMPANY TO ADDRESS ITS CCR IMPOUNDMENTS AND LANDFILLS.

A. There are essentially four options to closing CCR impoundments: (1) Cap-In-Place, (2) Hybrid Closure, (3) Excavate and Landfill On-Site, and (4) Excavate and Dispose of Off-Site. In addition, there is a process to remove and beneficiate the ash for resale to concrete plants. A description of the closure options follows:

1) OPTION 1: HYBRID CLOSURE – Consists of excavating ash materials from the proposed Closure-by-Removal Areas and the subsequent placement of these ash materials within the proposed consolidated Hybrid Ash Closure Area. Following these

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excavation and placement activities, the Hybrid Ash Closure Area will be capped with an infiltration barrier/cap system meeting the requirements of the Federal CCR Rule and CAMA.

2) OPTION 2: CLOSURE-IN-PLACE – Consists of leaving the ash material within the Ash Basin, which will be capped with an infiltration barrier/cap system meeting the requirements of the Federal CCR Rule and CAMA.

3) OPTION 3A: CLOSURE-BY-REMOVAL TO EXISTING ON-SITE LANDFILL – Consists of the excavating all ash materials from the proposed Closure-by-Removal Area and placing these ash materials in a new phase of liner within the Existing On-Site Landfill. The existing landfill will be capped with an infiltration barrier/cap system meeting the requirements of the Federal CCR Rule and CAMA.

4) OPTION 3B: CLOSURE-BY-REMOVAL TO EXISTING & NEW ON-SITE LANDFILLS – Consists of excavating ash materials from the proposed Closure-by-Removal Area, placing those ash materials in a new phase of liner within the Existing On-Site Landfill. Once the new Industrial Landfill is permitted and constructed, excavated ash materials from the proposed Closure-by-Removal Area can subsequently be placed within the new Industrial Landfill. The new phase of the existing landfill and the new Industrial Landfill will be capped with an infiltration barrier/cap system meeting the requirements of the Federal CCR Rule and CAMA.

5) OPTION 4: CLOSURE-BY-REMOVAL TO OFF-SITE THIRD-PARTY LANDFILL – Consists of excavating the entire Ash Basin and the disposal of the ash material in an existing, off-site, and appropriately lined landfill system.

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Q. HOW DID THE CAMA RULES IMPACT ASH BASIN CLOSURE COSTS, STRATEGY, AND SCHEDULE?

A. The CAMA rules enacted accelerated closure schedules for **HIGH PRIORITY** Sites (i.e., Dan River and Riverbend) which had the effect of removing cap-in-place as a viable closure strategy at these sites. This, in turn, forced some sites such as Riverbend, to completely excavate and ship train and truck loads of CCR from the ash ponds to an off-site landfill as much as 125 miles away. Consequently, the CAMA rules resulted in costs exceeding what would have been the costs under the Federal CCR Rules alone.

V. EXPENDITURES ATTRIBUTABLE ONLY TO CAMA

Q. SHOULD SOUTH CAROLINA RATEPAYERS BE REQUIRED TO REIMBURSE DEC FOR EXPENDITURES INCURRED SOLELY DUE TO NORTH CAROLINA'S CAMA OR NORTH CAROLINA COURT DECISIONS?

A. No. It is the position of ORS that costs incurred as a result of jurisdictional laws should not lead to increased costs to ratepayers outside of that jurisdiction. This matter is addressed in the cost of service testimony of ORS witness Seaman-Huynh.

As identified by DEC witness Kerin, DEC has attempted to isolate specific costs associated with CAMA and is not seeking recovery of those costs from South Carolina ratepayers. Additional costs above and beyond those identified by DEC solely attributable to CAMA are further identified below. ORS is not taking the position that South Carolina ratepayers should not pay any costs related to environmental compliance and cleanup at DEC's coal fired generation facilities, only that North Carolina law should not place an additional burden on the ratepayers of South Carolina.

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Q. WHAT TYPE OF EXPENDITURES HAVE YOU IDENTIFIED AS BEING SOLELY ATTRIBUTABLE TO CAMA?

A. I have identified the following types of expenditures as being solely attributable to CAMA and not the Federal CCR rules:

1) Expenditures for plants not covered at all by the CCR rules. For DEC, Riverbend falls into this category.

2) Expenditures for closure and/or excavation options not required under the CCR Rules, but required under CAMA or North Carolina court decisions.

3) Expenditures for actions that would not have been required at this time under the CCR rules, but are subject to **accelerated schedules** under CAMA.

Q. ARE ANY DEC PLANTS NOT COVERED BY THE FEDERAL CCR RULES?

A. Yes. Company witness Kerin's Exhibit 10 (Exhibit DJW-3.1.2) states "Riverbend is not currently subject to CCR provisions regarding basin closure." While witness Kerin goes on to state "However, in response to the United States Court of Appeals for the District of Columbia Circuit's August 21, 2018 decision in *USWAG vs. EPA* (No. 15-1219), the EPA is expected to undertake a rulemaking that would regulate inactive impoundments at closed power plants, including the Riverbend basin", this statement is irrelevant to this proceeding.

Q. WOULD THE REGULATION OF INACTIVE INPOUNDMENTS NECESSARILY LEAD TO THE FORCED CLOSURE AND/OR EXCAVATION OF THE RIVERBEND IMPOUNDMENTS IN A MANNER SIMILAR TO THAT DIRECTED BY CAMA?

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A. No. Any speculation as to what regulations the EPA will issue in response to the Court Order is solely that – speculation – and should not be considered in this proceeding.

Q. HOW MUCH HAS DEC REQUESTED IN THIS PROCEEDING FOR THE RECOVERY OF EXPENDITURES AT RIVERBEND?

A. As noted in Kerin Exhibit 10 (Exhibit DJW-3.1.2), the Company is requesting the recovery of $316,680,585 for specified actions at Riverbend. This entire amount should be disallowed for recovery from South Carolina ratepayers absent any federal regulations directing the actions taken by DEC or similar actions.

Q. WHAT EXPENDITURES FOR CLOSURE AND/OR EXCAVATION OPTIONS NOT REQUIRED UNDER THE CCR RULES, BUT REQUIRED UNDER CAMA, HAS THE COMPANY REQUESTED IN THIS PROCEEDING?

A. The Company's request is summarized in Kerin Exhibit 10 (Exhibit DJW-3.1.2). The following table delineates CCR costs being requested by the Company in their filing:

Table 5.1: DEC Actual and Projected ARO Cash Flows 2015-2018

	Total Project	Total Costs Incurred					Total	
	Costs (2015+)	1/1/15 - 9/30/18	2015	2016	2017	1/1 - 9/30/18	CF Forecast	10/1 - 12/31/18
DEC								
Operating								
Allen	$ 266,571,170	$ 53,734,588	$ 13,233,460	$ 19,430,295	$ 8,306,467	$ 12,764,367	$ 212,836,581	$ 2,634,866
Belews Creek	$ 348,719,792	$ 51,150,499	$ 9,861,194	$ 26,479,748	$ 9,534,640	$ 5,274,917	$ 297,569,293	$ 6,833,967
Cliffside	$ 264,216,906	$ 71,472,788	$ 25,869,494	$ 21,351,036	$ 13,088,717	$ 11,163,541	$ 192,744,118	$ 744,816
Marshall	$ 352,048,416	$ 44,272,414	$ 13,212,194	$ 18,159,819	$ 6,540,243	$ 6,360,158	$ 307,776,002	$ 9,634,230
Total Operating Plants	$ 1,231,556,284	$ 220,630,290	$ 62,176,342	$ 85,420,898	$ 37,470,067	$ 35,562,982	$ 1,010,925,994	$ 19,847,880
Retired								
Buck	$ 577,379,599	$ 88,125,408	$ 10,035,189	$ 9,821,833	$ 18,828,443	$ 49,439,943	$ 489,254,190	$ 22,977,711
Dan River	$ 259,894,677	$ 169,526,789	$ 38,612,244	$ 70,263,998	$ 40,266,416	$ 20,384,131	$ 90,367,889	$ 14,390,516
Riverbend	$ 433,114,608	$ 322,350,347	$ 39,667,308	$ 86,404,316	$ 134,089,437	$ 62,189,285	$ 110,764,261	$ 16,381,527
WS Lee (SC)	$ 278,579,141	$ 99,145,771	$ 19,687,325	$ 35,344,738	$ 37,577,688	$ 6,536,020	$ 179,433,371	$ 3,389,962
Total Retired Plants	$ 1,548,968,026	$ 679,148,315	$ 108,002,066	$ 201,834,885	$ 230,761,985	$ 138,549,379	$ 869,819,711	$ 57,139,716
Total DEC Plants	$ 2,780,524,310	$ 899,778,605	$ 170,178,407	$ 287,255,783	$ 268,232,052	$ 174,112,362	$ 1,880,745,705	$ 76,987,595

As shown in Table 5.2 below, four of the plants (Allen, Belews Creek, Cliffside, and Marshall) are pursuing closure options and schedules in compliance with the Federal CCR Rules, and I recommend that all prudently incurred expenditures for these plants be

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allowed. In addition, W.S. Lee pursued closure options that were coordinated with and approved by the South Carolina Department of Health and Environmental Control ("DHEC"), and I recommend that all prudently incurred expenditures for this plant be allowed.

Table 5.2: Summary of Closure Options and Recommended Disallowances

Plant	Claimed By DEC per Response 9-01	Closure Option Compliance with Federal CCR Rules	Recommended Disallowance
Allen	$ 53,059,021	Federal CCR Compliant	$ -
Belews Creek	$ 50,535,423	Federal CCR Compliant	$ -
Buck	$ 80,765,334	Beneficiation -- CAMA only	$ 36,544,788
Cliffside	$ 66,076,839	Federal CCR Compliant	$ -
Dan River	$ 167,426,449	CAMA High Priority - Accelerated Schedule	$ 116,669,019
Marshall	$ 43,212,613	Federal CCR Compliant	$ -
Riverbend	$ 316,680,665	No Federal CCR Requirements	$ 316,680,665
WS Lee (SC)	$ 98,449,950	Federal CCR Compliant & SCDHEC Requirements	$ -
TOTAL	**$ 876,206,294**		**$ 469,894,472**

The three other plants (Buck, Dan River, and Riverbend) shown in Table 5.2 were compelled by the provisions of CAMA to act faster (Dan River and Riverbend) or take actions not required by the Federal CCR Rules (Buck and Riverbend). Dan River and Riverbend were designated as **HIGH PRIORITY** sites by CAMA and compelled by CAMA to complete closure by August 2019. From a Federal CCR Rules perspective, Dan River would not have been required to even begin closure until 2020 while Riverbend was

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not an affected facility in the final Federal rule. All of Riverbend's CCR was dewatered, excavated, and hauled by rail to the Charah Brickhaven Mine about 125 miles away.

Q. REGARDING BUCK, WHAT EXPENDITURES FOR CLOSURE AND/OR EXCAVATION OPTIONS NOT REQUIRED UNDER THE CCR RULES, BUT REQUIRED UNDER CAMA, HAS THE COMPANY REQUESTED IN THIS PROCEEDING?

A. CAMA required beneficiation of CCR at several plant sites in North Carolina. Due to its proximity to the market for beneficiated CCR and the desirable traits of CCR on site, Buck was chosen for this expensive and proprietary process. In addition, as noted above, Buck was originally designated a **HIGH PRIORITY** site under CAMA, and its impoundments have been addressed through beneficiation, a process not shown as a requirement under the Federal CCR Rules. From Kerin Exhibit 10 (Exhibit DJW-3.1.2), the Company has spent $80,765,334 at Buck from 2015 through August 31, 2018. Company witness Kerin states the work includes "Closure plan development; wetlands delineation; dewatering; planning and overheads; CCR and CAMA wells; alternate spillway; beneficiation facility; groundwater; SW/PW reroute. Buck is subject to CCR rule provisions requiring basin closure." In Kerin Exhibit 10 (Exhibit DJW-3.1.2), Company witness Kerin observes many times that "Engineering and project planning at the current time are needed to synchronize work between all of the coal ash sites being closed in the next 20 years, as well as to gain synergies between excavation/capping plans for all the sites." I concur with this assessment. However, these added costs should only be imposed on South Carolina ratepayers when the actual construction work associated with each site is attributable to the CCR rules only and not due to schedule or scope changes imposed by

CAMA. DEC's beneficiation project at Buck clearly falls under the "CAMA-only" category, and the ratepayers of South Carolina should not have to reimburse the Company for expenses related to the CAMA-only beneficiation requirement.

Q. WHAT PORTION OF THESE EXPENDITURES AT BUCK SHOULD BE ALLOWED IN THIS PROCEEDING?

A. In reviewing the Company's actual and projected costs laid out in Kerin's Exhibit 10 (Exhibit DJW-3.1.2), the costs are not described in enough granularity to determine how much of the costs at Buck are associated with appropriate engineering and planning activities, Federal CCR Rules compliance, and compliance with CAMA or other state only requirements. To arrive at a good faith estimate of engineering and planning costs associated with impoundment closures, we assumed that engineering and planning activities at all eight (8) coal-fired power plants were accomplished at the same time between 2015 and 2017. Table 5.3 below includes the data from the DEC's response to ORS Discovery Request 10-09 used to estimate engineering and planning as a percentage of engineering and planning costs.

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Table 5.3: Estimating Engineering and Planning Costs for DEC Plants

Plant	Cost Data From Company Response to SCORS 10-09			2015	2016	2017	2018 thru 9/30	10/1/18 to 12/31/18
Allen	Spend To Date	$ 53,734,588.32		$ 13,233,459.69	$ 19,430,294.80	$ 8,306,466.84	$ 12,764,366.99	$ -
	Remaining Current Year Foreca	$ 2,634,866.18	f	$ -	$ -	$ -	$ -	$ 2,634,866.18
	Total Pre-Construction (E&P)	$ 56,369,454.49						
	Total Project Costs	$ 266,571,170.00						
	Percentage E&P of Total Projec	21.15%						
Belews Creek	Spend To Date	$ 51,150,499.01		$ 9,861,194.00	$ 26,479,748.00	$ 9,534,640.33	$ 5,274,916.68	$ -
	Remaining Current Year Foreca	$ 6,833,966.79	f	$ -	$ -	$ -	$ -	$ 6,833,966.79
	Total Pre-Construction (E&P)	$ 57,984,465.80						
	Total Project Costs	$ 348,719,792.00						
	Percentage E&P of Total Projec	16.63%						
Cliffside	Spend To Date	$ 71,472,788.25		$ 25,869,494.00	$ 21,351,036.49	$ 13,088,716.81	$ 11,163,540.95	$ -
	Remaining Current Year Foreca	$ 744,816.44	f	$ -	$ -	$ -	$ -	$ 744,816.44
	Total Pre-Construction (E&P)	$ 72,217,604.69						
	Total Project Costs	$ 264,216,906.00						
	Percentage E&P of Total Projec	27.33%						
Marshall	Spend To Date	$ 44,272,414.15		$ 13,212,194.00	$ 18,159,819.00	$ 6,540,243.28	$ 6,360,157.87	$ -
	Remaining Current Year Foreca	$ 9,634,230.32	f	$ -	$ -	$ -	$ -	$ 9,634,230.32
	Total Pre-Construction (E&P)	$ 53,906,644.47						
	Total Project Costs	$ 352,048,416.00						
	Percentage E&P of Total Projec	15.31%						
TOTAL FOUR	Spend To Date	$ 220,630,289.73		$ 62,176,341.69	$ 85,420,898.29	$ 37,470,067.26	$ 35,562,982.49	
	Remaining Current Year Foreca	$ 19,847,879.72						$ 19,847,879.72
	Total Pre-Construction (E&P)	$ 240,478,169.45						
	Total Project Costs	$ 1,231,556,284.00						
	Percentage E&P of Total Projec	19.53%						

During my site visits to Buck in January and December 2018, I noted that substantial progress had been made in developing the property and beginning the construction of the CAMA-required beneficiation plant. The fact that the spend during the period rose from an average of $12.9 million from 2015 through 2017 compared to $72.4 million in 2018 led me to conclude that a significant portion of the costs incurred at Buck during 2018 were not engineering and planning costs. Rather, most of these costs appear related to beneficiation site and not compliance with the Federal CCR Rules. For this reason, I recommend disallowing the difference between the total 2018 spend ($72,417,654) and the average of the previous three (3) years ($12,895,654) for a total disallowance of $59,522,499. To adjust this disallowance for the requested reimbursement through September 30, 2018, the $22,977,711 reported in DEC's response to ORS Discovery Request 10-09 as being spent from October 1, 2018 through the end of the year

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should be subtracted for a net disallowance of $36,544,788 for the requested reimbursement.

Q. WHAT EXPENDITURES FOR ACTIONS THAT WOULD NOT HAVE BEEN REQUIRED AT THIS TIME UNDER THE CCR RULES, BUT ARE SUBJECT TO ACCELERATED SCHEDULES UNDER CAMA, HAVE BEEN REQUESTED FOR RECOVERY BY DEC IN THIS PROCEEDING?

A. Kerin Exhibit 10 states "Dan River is subject to CCR rule provisions regarding basin closure. 40 CFR §257.101(b) required a written closure plan by October 17, 2016. On October 11, 2018, it was determined that the Secondary Ash Basin at Dan River did not meet the uppermost aquifer location restriction (40 CFR § 257.60). This results in the basin being required to commence closure pursuant to 40 CFR § 257.101(b)(1)(i) no later than October 31, 2020. The last volume of CCR for beneficial use was removed from the Dan River Primary Ash Basin on April 4, 2018, and, within thirty (30) days, the basin commenced closure pursuant to 40 CFR § 257.102(e)(1)(ii). Pursuant to ¶ 5.e. of the Order Granting Motion for Partial Summary Judgment dated June 1, 2016 (No. 13-CVS-4061), a written Site Analysis and Removal Plan was due by December 31, 2016. Sections 3.(b) and 3.(c) of CAMA require excavation of the Dan River basins, with the ash disposed of in either an off-site or on-site landfill. (Dan River is a high-priority site, with ash basin closure required by August 1, 2019.)"

It is readily apparent from this statement that the CCR rules would not have required closure actions to even *commence* until October 31, 2020, while closure is required to be *completed* by August 1, 2019 under CAMA and the noted North Carolina Partial Summary Judgement.

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Q. WHAT AMOUNT HAS DEC CLAIMED FOR CLOSURE AND EXCAVATION EXPENDITURES AT DAN RIVER?

A. DEC has requested recovery of $167,426,449 in this proceeding.

Q. ARE YOU CONTENDING THAT THIS ENTIRE AMOUNT SHOULD BE DISALLOWED?

A. No. DEC should be allowed to recover in this proceeding any planning and engineering costs that would have been required for compliance with the CCR Rules as they now stand and should be further allowed to seek recovery after 2020 for prudently incurred actual construction and transportation expenditures related to CCR compliance.

Q. WHY IS IT REASONABLE TO ALLOW DEC TO RECOVER ENGINEERING AND PLANNING COSTS?

A. As Company witness Kerin notes several times in Kerin Exhibit 10 (Exhibit DJW-3.1.2), "Engineering and project planning at the current time are needed to synchronize work between all of the coal ash sites being closed in the next 20 years, as well as to gain synergies between excavation/capping plans for all the sites." I concur with this assessment. However, the actual construction work associated with each site should only be allowed if is attributable to the CCR rules only and not due to schedule or scope changes imposed by CAMA.

Q. HOW MUCH OF THE COMPANY'S REQUEST FOR DAN RIVER WOULD YOU ESTIMATE IS PLANING AND ENGINEERING THAT SHOULD BE ALLOWED FOR RECOVERY IN THIS PROCEEDING?

A. Using the same methodology as outlined in the discussion of Buck earlier in my testimony, the weighted average of engineering and planning as a percentage of total

project costs for the four (4) Federal CCR Rules compliant plants (i.e., Allen, Belews Creek, Cliffside, and Marshall) 19.53 percent during the period from 2015 through the end of 2018. Applying this percentage to the $259,894,677 total project costs, I estimate that engineering and planning activities for the Dan River Steam Electric Station is $50,757,430 from 2015 through 2018. Based on the information at hand, I concluded that the rest of the $167,426,449 is caused by the accelerated schedule and other requirements imposed by CAMA on **HIGH PRIORITY** sites. Therefore, I recommend that $116,669,019 of the Company's request for reimbursement at Dan River be disallowed.

Q. WHAT ADDITIONAL REQUIREMENTS WERE IMPOSED BY CAMA AND WHAT OTHER ACTIONS WERE IMPOSED ON THE COMPANY'S ALLEN, BELEWS CREEK, CLIFFSIDE, MARSHALL, AND W.S. LEE BY THE STATE OF NORTH CAROLINA?

A. The "Cap-In-Place" Options chosen at Allen, Belews Creek, Cliffside, and Marshall are consistent with the Federal CCR Rules, and North Carolina state law does not impose additional requirements at these sites. Therefore, the South Carolina pro rata share of the Company's total spend for these four sites should be allowed to the extent they were prudently incurred.

Because the W.S. Lee site was closed and remediated pursuant to a negotiated agreement with the South Carolina DHEC, the costs associated with this project should be approved for recovery from South Carolina ratepayers to the extent they were prudently incurred.

Q. DO YOU HAVE A SUMMARY OF YOUR RECOMMENDED DISALLOWANCES?

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A. Yes. Table 5.3 below summarizes my recommendations for disallowance in the current request for reimbursement. Of the $876,206,294 currently being requested by the Company for reimbursement, I recommend that the Commission disallow $469,894.472 for recovery from ratepayers.

Table 5.4: Duke Energy Carolinas Reimbursement Request and Disallowances

Plant	Cost Data				
	Total Project (from SCORS DEC 10-09)	Ask (from Kerin 10)	Disallowance	Rationale	Allow
Allen	$ 266,571,170	$53,059,021	$ 0-	Federal CCR Compliant	$53,059,021
Belews Creek	$ 348,719,792	$50,535,423	$ 0-	Federal CCR Compliant	$50,535,423
Buck	$ 577,379,599	$80,765,334	$36,544,788	Beneficiation -- CAMA only	$44,220,546
Cliffside	$ 264,216,906	$66,076,839	$ 0-	Federal CCR Compliant	$66,076,839
Dan River	$ 259,894,677	$167,426,449	$116,669,019	CAMA High Priority - Accelerated Schedule	$50,757,430
Marshall	$ 52,048,416	$ 43,212,613	$ 0-	Federal CCR Compliant	$43,212,613
Riverbend	$ 433,114,608	$316,680,665	$316,680,665	No Federal CCR Requirements	$ 0-
W.S. Lee	$ 278,579,144	$98,449,950	$ 0-	Federal CCR Compliant & SCDHEC Requirements	$98,449,950
TOTAL	**$2,780,524,312**	**$876,206,294**	**$469,894,472**		**$406,311,822**

Q. ARE YOU RECOMMENDING THAT DEC BE PRECLUDED FROM RECOVERING COSTS DISALLOWED IN THIS PROCEEDING IN FUTURE PROCEEDINGS?

A. Not necessarily. If DEC can demonstrate that it has prudently incurred expenses dictated by compliance with the CCR Rules as they stand at the time of its next rate case, any expenses required by the CCR Rule as a stand-alone document (i.e. absent CAMA) and determined to be prudently incurred should be considered for recovery in that forum. However, as noted in my testimony above, many of DEC's claimed expenses are not yet ripe for recovery under the CCR Rules as they stand.

Q. WILL YOU UPDATE YOUR TESTIMONY BASED ON INFORMATION THAT BECOMES AVAILABLE?

A. Yes. ORS fully reserves the right to revise its recommendations via supplemental testimony should new information not previously provided by the Company, or other sources, become available.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

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OFFICE OF REGULATORY STAFF
DAN J. WITTLIFF, BCEE
EXHIBIT LIST
DUKE ENERGY CAROLINAS, LLC
DOCKET NO. 2018-319-E

DJW-1	Resume of Dan Wittliff
DJW-2.1.1	January 2018 Site Visit Allen Plant (NC)
DJW-2.1.2	December 2018 Site Visit Allen Plant (NC)
DJW-2.2.1	January 2018 Site Visit Belews Creek Plant (NC)
DJW-2.2.2	December 2018 Site Visit Belews Creek Plant (NC)
DJW-2.3.1	January 2018 Site Visit Buck Plant (NC)
DJW-2.3.2	December 2018 Site Visit Buck Plant (NC)
DJW-2.4.1	January 2018 Site Visit Cliffside Plant (NC)
DJW-2.4.2	December 2018 Site Visit Cliffside Plant (NC)
DJW-2.5.1	December 2018 Site Visit Dan River (NC)
DJW-2.6.1	January 2018 Site Visit Marshall Plant (NC)
DJW-2.6.2	December 2018 Site Visit Marshall Plant (NC)
DJW-2.7.1	January 2018 Site Visit Riverbend Plant (NC)
DJW-2.7.2	December 2018 Site Visit Riverbend Plant (NC)
DJW-2.8.1	December 2018 Site Visit WS Lee Plant (SC)
DJW-3.1.1	November 8, 2018, Jon Kerin Testimony
DJW-3.1.2	November 8, 2018, Jon Kerin Exhibits
DJW-3.2	DEC Response to SCORS Interrogatory 1-22
DJW-3.3	DEC Response to SCORS Interrogatory 9-06
DJW-3.4.0	Summary and Footnotes of ARO Cash Flows
DJW-3.4.1	Allen ARO Cash Flows
DJW-3.4.2	Belew Creek ARO Cash Flows
DJW-3.4.3	Buck ARO Cash Flows
DJW-3.4.4	Cliffside ARO Cash Flows
DJW-3.4.5	Dan River ARO Cash Flows
DJW-3.4.6	Marshall ARO Cash Flows
DJW-3.4.7	Riverbend ARO Cash Flows

[Changes noted below reflect the testimony of the witness during the hearing in this matter.]

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OFFICE OF REGULATORY STAFF
DAN J. WITTLIFF, BCEE
EXHIBIT LIST
DUKE ENERGY CAROLINAS, LLC
DOCKET NO. 2018-319-E

DJW-3.4.8	WS Lee ARO Cash Flows
DJW-3.5.0	Schedule 1800 submitted by DEC
DJW-3.5.1	Schedule 1801 submitted by DEC
DJW-3.5.2	Schedule 1802 submitted by DEC
DJW-3.5.3	Schedule 1803 submitted by DEC
DJW-3.5.4	Schedule 1804 submitted by DEC
DJW-3.5.5	Schedule 1805 submitted by DEC
DJW-3.5.6	Schedule 1806 submitted by DEC
DJW-3.5.7	Schedule 1807 submitted by DEC
DJW-3.5.8	Schedule 1808 Non-ARO Expenses
DJW-3.6	November 8, 2018, Dr. Julius Wright Testimony
DJW-3.7	DEC Response to SCORS Interrogatory 29-1
DJW-4.1	North Carolina Dam Safety Act of 1967
DJW-4.2	National Program for Inspection of Non-Federal Dams
DJW-4.3	USEPA Coal Combustion Residual Rule
DJW-4.4	North Carolina Coal Ash Management Act of 2014
DJW-4.5	Mountain Energy Act 2015
DJW-4.6	Water Infrastructure Improvements for the Nation (WIIN) Act 2016
DJW-4.7.1	Side-by-Side Comparison of Legal Requirements
DJW-4.7.2	Table 4.2 CCR and State Regulations
DJW-4.8	Los Alamos Report
DJW-5.1	Federal Court Case and Plea Agreement
DJW-5.2	May 14, 2015 Joint Factual Statement
DJW-5.2.1	May 14, 2016 Joint Factual Statement
DJW-5.3.1	June 1, 2016 Four Plant Order and Exhibits
DJW-5.3.2	June 9, 2017 Amended Order Granting Motion for Partial Summary Judgement
DJW-5.4	Subsequent Enforcement Actions – Executed Settlement Agreement
DJW-6	DEC Timeline

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OFFICE OF REGULATORY STAFF
DAN J. WITTLIFF, BCEE
EXHIBIT LIST
DUKE ENERGY CAROLINAS, LLC
DOCKET NO. 2018-319-E

DJW-7.1.1	Allen Options Analysis
DJW-7.1.2	Allen Options Analysis Worksheet
DJW-7.2.1	Belews Creek Options Analysis
DJW-7.2.2	Belews Creek Options Worksheet
DJW-7.3.1	Buck Options Reports
DJW-7.3.2	Buck Options Analysis
DJW-7.3.3	Buck Options Worksheet
DJW-7.4.1	Cliffside Options Analysis
DJW-7.4.2	Cliffside Options Worksheet
DJW-7.5	Dan River Conceptual Closure Design Report
DJW-7.6.1	Marshall Options Analysis
DJW-7.6.2	Marshall Options Worksheet
DJW-7.7	Riverbend Closure Design Report
DJW-7.8	W.S. Lee Closure Design Report
DJW-8.1.1	Discovery Analysis – Closure Options
DJW-8.1.2	Discovery Analysis – Recommended Disallowances
DJW-8.2.	Estimating DEC E&P Costs
DJW-8.3	SOC's and Closure Info by Site
DJW-8.4	Original Versus Updated Risk Classifications
DJW-8.5	Analysis of Risk Classifications and Water Spends
DJW-9.1	January 25, 2019 Article by Catherine Morehouse in *Utility Dive*
DJW-9.2	May 18, 2016 NC DEQ Proposed Classifications for all Coal Ash Ponds in North Carolina
DJW-9.3	November 14, 2018 NC DEQ Low Risk Classifications for Allen, Belews Creek, Buck, Cliffside, and Marshall Coal Ash Ponds

(PURSUANT TO PREVIOUS INSTRUCTION,
THE PREFILED SURREBUTTAL TESTIMONY,
INCLUDING CORRECTION/AMENDMENT,
OF DAN J. WITTLIFF FOLLOWS.)

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SURREBUTTAL TESTIMONY AND EXHIBITS OF

DAN J. WITTLIFF, P.E., BCEE

ON BEHALF OF

THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF

DOCKET NO. 2018-319-E

IN RE: APPLICATION OF DUKE ENERGY CAROLINAS, LLC

FOR ADJUSTMENT IN ELECTRIC RATE SCHEDULES AND TARIFFS

AND REQUEST FOR AN ACCOUNTING ORDER

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Dan Wittliff. My business address is 919 Congress, Suite 1110, Austin, Texas 78701. I am employed by GDS Associates, Inc. as Managing Director of Environmental Services.

Q. DID YOU FILE DIRECT TESTIMONY AND EXHIBITS RELATED TO THIS PROCEEDING?

A. Yes. I filed direct testimony and nine (9) exhibits with the Public Service Commission of South Carolina ("Commission") on February 26, 2019.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimony filed by Duke Energy Carolinas, LLC ("DEC" or "Company") witness Kerin on March 12, 2019.

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Q. ON PAGE 3, LINES 11-13 OF COMPANY WITNESS KERIN'S REBUTTAL TESTIMONY HE STATES: "MR. WITTLIFF CONTENDS THAT SOUTH CAROLINA CUSTOMERS SHOULD NOT PAY FOR THAT COMPLIANCE BECAUSE, IN HIS VIEW, CAMA IS TOO EXPENSIVE." DOES THAT ACCURATELY REFLECT YOUR TESTIMONY?

A. No. Kerin mischaracterizes my position as: South Carolina customers should not pay for CCR costs associated with CAMA because it is "too expensive." My actual position, and clearly stated in my testimony, is that South Carolina customers should not pay for the incremental increases in costs imposed by CAMA **above** the federal requirements. South Carolina customers should reasonably expect to pay their fair share of the base amount required to comply with federal CCR Rules but not the incremental increase imposed by North Carolina on plants in that state's jurisdiction. South Carolina ratepayers should also reasonably expect to pay their fair share of any CCR approaches negotiated with or required by the State of South Carolina.

Q. ON PAGE 4, LINES 12-13 OF HIS REBUTTAL TESTIMONY, COMPANY WITNESS KERIN, REFERRING TO MY TESTIMONY IN NORTH CAROLINA, GOES ON TO STATE: "THOSE ARGUMENTS WERE FULLY LITIGATED, AND FOR GOOD REASONS REJECTED IN THE NORTH CAROLINA CASE." DOES THIS ACCURATELY REFLECT THE DECISION MADE BY THE NORTH CAROLINA UTILITY COMMISSION ("NCUC")?

A. No. Finding of Fact #71 in NCUC Docket No. E-7, Sub 1146 (Surrebuttal Exhibit DJW-1) states: "Under the present facts, a management penalty in the approximate sum of

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$70 million is appropriate with respect to DEC's CCR remediation expenses accounted for in the earlier established Asset Retirement Obligation (ARO) with respect to costs incurred through the end of the test year, as adjusted." The fact that a very significant management penalty was imposed by the NCUC can only lead to the conclusion that my arguments regarding the Company's actions were strongly considered by the NCUC.

Q. ON PAGE 6, LINES 6 THROUGH 23 OF DEC WITNESS KERIN'S REBUTTAL TESTIMONY, HE STATES THAT "THE FIRST TWENTY-NINE PAGES OF MR. WITTLIFF'S TESTIMONY LARGELY MIRROR HIS TESTIMONY IN THE NORTH CAROLINA CASE AND THE RHETORIC RECYCLED IN THOSE PAGES HAS NOTHING AT ALL TO DO WITH THE THEORY THAT HE IS ATTEMPTING TO ADVANCE HERE." DO YOU AGREE WITH THIS CHARACTERIZATION?

A. No, I do not. While a good deal of the information on pages 11 through 32 of my Direct Testimony was also presented in the North Carolina hearing on this case, the primarily historical information in Sections III and IV is presented in this docket to provide background and context to the Commission. None of the historical information provided in my direct testimony has changed. In this manner, the Commissioners are informed as to how we got to this place and time. This rate case and the parallel case filed by Duke Energy Progress, LLC are the first time this Commission will deal in a dispositive manner with the CCR costs being accumulated in the ARO and non-ARO accounts. This historical information is useful for evaluation of the expenditures DEC claims for reimbursement. It is also noteworthy that witness Kerin has lifted more than three quarters of his testimony

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in this proceeding from his earlier testimony in the DEC rate case in North Carolina. It is irrelevant that information used in my previous testimony from the North Carolina case is also stated in the current proceeding.

Q. ON PAGE 8, LINES 6 AND 7 OF DEC WITNESS KERIN'S REBUTTAL TESTIMONY, HE STATES THAT "MR. WITTLIFF'S POOR POLICY PROPOSAL LACKS FUNDAMENTAL FAIRNESS." IS THAT ASSERTION CORRECT?

A. Not at all. I used the cost and schedule data provided by DEC through their filed exhibits and responses to eleven (11) rounds of interrogatories as the foundation of my recommendations for allowances and disallowances of claimed costs. Furthermore, I relied on witness Kerin's approach for conducting CCR closure engineering and planning activities simultaneously across the system to determine how much of the costs related to engineering and planning should be allowed at this time. While I recommended that the CCR costs associated with Riverbend to date be disallowed, I recommended DEC be allowed to seek reimbursement of these and other costs associated with Dan River and Buck should the federal CCR rules change to require such closure methods. Specifically, I stated in my Direct Testimony "[i]f DEC can demonstrate that it has prudently incurred expenses dictated by compliance with the CCR Rules as they stand at the time of its next rate case, any expenses required by the CCR Rule as a stand-alone document (i.e., absent CAMA) and determined to be prudently incurred should be considered for recovery in that forum." To allow DEC to seek additional recovery should the federal CCR rules or

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applicable conditions change in the future is fair. DEC should not be allowed recovery now for speculative changes in the federal CCR rules.

Q. ON PAGE 9, LINES 14-17 OF DEC WITNESS KERIN'S REBUTTAL TESTIMONY, HE STATES: "THE SUGGESTION THAT DUKE ENERGY CAROLINAS COULD OR WOULD HAVE TAKEN A 'DO NOTHING' APPROACH TO RIVERBEND'S ASH BASINS, WHILE AT THE SAME TIME CLOSING ALL OF ITS OTHER ASH BASINS IN SOUTH CAROLINA AND NORTH CAROLINA DEFIES REGULATORY REALITY." DO YOU CONCUR WITH THIS STATEMENT?

A. No. Given DEC's past performance, especially as evidenced by the Dan River ash release, it is reasonable to assume that the Company would have continued its "do nothing" approach absent any regulation forcing it to do otherwise. The work undertaken at W.S. Lee which witness Kerin cites later in his rebuttal testimony was imposed upon the Company by a consent agreement (SCDHEC Consent Agreement 14-13-HW) issued on September 29, 2014 (Surrebuttal Exhibit DJW-2), less than eight months after the February 2014 incident at Dan River. As noted previously, this incident occurred as a direct result of DEC's admitted negligence at Dan River. Had the Dan River incident not occurred, it is entirely reasonable to conclude that compliance at Riverbend would have been limited by the CCR Rules, which, as I stated in my direct testimony, currently do not require any action at Riverbend.

Q. ON PAGE 11, LINES 16-18 OF HIS REBUTTAL TESTIMONY COMPANY WITNESS KERIN ASKS: "WOULD MR. WITTLIFF'S PROPOSED TIMELINE

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FOR DAN RIVER CLOSURE UNDER THE CCR RULE HAVE REDUCED CLOSURE COSTS?" ARE YOU CONTENDING THAT ADHERENCE TO THE CCR TIMELINE WOULD HAVE REDUCED DAN RIVER CLOSURE COSTS?

A. No. My contention is that most of the costs incurred to date would not have been incurred prior to September 30, 2018, which ends the period for recovery of actual costs in this proceeding. I do not recommend disallowance of future recovery of reasonably incurred expenditures for Dan River, but do believe costs incurred solely as a result of CAMA should not be recovered in this proceeding.

Q. **ON PAGE 12, LINES 11-21 AND PAGE 13, LINES 1-10 OF DEC WITNESS KERIN'S REBUTTAL TESTIMONY, HE IMPLIES THAT YOUR TESTIMONY SUPPORTS THAT THE CCR RULE WOULD HAVE REQUIRED THE COMPANY TO "COMMENCE CLOSURE [AT DAN RIVER] BY MAY 4, 2018." DO YOU BELIEVE THAT IS THE CASE?**

A. No. To provide appropriate context for this discussion from my testimony, I quoted Kerin Exhibit 10 (direct testimony Exhibit DJW – 3.1.2) which states "Dan River is subject to CCR rule provisions regarding basin closure. 40 CFR §257.101(b) required a written closure plan by October 17, 2016. On October 11, 2018, it was determined that the Secondary Ash Basin at Dan River did not meet the uppermost aquifer location restriction (40 CFR § 257.60). This results in the basin being required to commence closure pursuant to 40 CFR § 257.101(b)(1)(i) no later than October 31, 2020. The last volume of CCR for beneficial use was removed from the Dan River Primary Ash Basin on April 4, 2018, and, within thirty (30) days, the basin commenced closure pursuant to 40 CFR §

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257.102(e)(1)(ii). Pursuant to ¶ 5.e. of the Order Granting Motion for Partial Summary Judgment dated June 1, 2016 (No. 13-CVS-4061), a written Site Analysis and Removal Plan was due by December 31, 2016. Sections 3.(b) and 3.(c) of CAMA require excavation of the Dan River basins, with the ash disposed of in either an off-site or on-site landfill. (Dan River is a high-priority site, with ash basin closure required by August 1, 2019.)"

In his rebuttal, Witness Kerin observes the provision of the Federal CCR Rules [40 CFR § 257.102(e)(1)(ii)] that requires commencement of closure is required within thirty (30) days after the owner: "Removes the final known volume of CCR from the CCR unit for the purpose of beneficial use of CCR." However, Witness Kerin's rebuttal omitted the passage from 40 CFR § 257.101(b)(1)(i)[1] which states:

> The owner or operator of an existing CCR surface impoundment is subject to the requirements of paragraph (b)(1) of this section. (b)(1)(i) Location standard under § 257.60. Except as provided by paragraph (b)(4) of this section, the owner or operator of an existing CCR surface impoundment that has not demonstrated compliance with the location standard specified in § 257.60(a) must cease placing CCR and non-CCR waste streams into such CCR unit no later than October 31, 2020 and close the CCR unit in accordance with the requirements of § 257.102.

From the rationale presented in Kerin Exhibit 10, it is clear that the timeline for removal was set by Order Granting Motion for Partial Summary Judgment (direct testimony Exhibit DJW-5.3.1) dated June 1, 2016 (No. 13-CVS-4061) and Sections 3.(b) and 3.(c) of CAMA (direct testimony Exhibit DJW-4.4). Absent these considerations, the Federal CCR Rules would not have required DEC to begin the removal of CCR for beneficial use before October 31, 2020. Under CAMA, Dan River was designated as a

[1] Source: https://www.law.cornell.edu/cfr/text/40/257.101

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HIGH PRIORITY site and directed closure by August 1, 2019. Consequently, DEC was forced to begin required closure work much earlier in order to meet the stated court order and CAMA deadline for Dan River. Closure work could not commence until DEC had removed the final known volume of CCR from the Dan River CCR unit for the beneficial use of CCR. Therefore, the commencement of work required under the CCR Rules at Dan River was directly attributable to the accelerated timeline in the court order and CAMA.

Q. ON PAGE 14, LINES 15-20 OF DEC WITNESS KERIN'S REBUTTAL TESTIMONY, HE STATES: "FOR THE BUCK SITE, ESTIMATED BENEFICIATION COSTS ARE APPROXIMATELY $131 MILLION MORE EXPENSIVE THAN CLOSURE WITHOUT BENEFICIATION ON A TOTAL SYSTEM BASIS. HOWEVER, FOR THE CAPE FEAR AND H.F. LEE SITES, BENEFICIATION UNDER CAMA IS PROVIDING AN ESTIMATED NET SAVINGS COMPARED TO CLOSURE WITHOUT BENEFICIATION OF APPROXIMATELY $703 MILLION ON A TOTAL SYSTEM BASIS." DO YOU AGREE WITH THIS STATEMENT?

A. Absolutely not. First, Mr. Kerin's statement is totally unsubstantiated, and he provides no supporting exhibits. Second, Mr. Kerin does not state whether the "estimated net savings" are in comparison to CCR requirements or other additional CAMA requirements that might have been imposed on Cape Fear and H.F. Lee in place of beneficiation.

Q. DID YOU CONTEND IN YOUR DIRECT TESTIMONY THAT CAMA'S BENEFICIATION REQUIREMENTS ARE UNREASONABLE?

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A. I did not, and DEC witness Kerin has provided no citation to back his contention that I have done so.

Q. DID SOUTH CAROLINA CUSTOMERS BENEFIT MORE FROM CAMA THAN THEY WOULD HAVE UNDER FEDERAL CCR REQUIREMENTS?

A. ~~No.~~ On page 14 of my testimony, I included the preamble of the May 14, 2014 version of the North Carolina Coal Ash Management Act (Senate Bill 729) (Exhibit DJW-4.4) as a measure of legislative intent. It is abundantly clear from this language that the members of the General Assembly were concerned about (among other things) (1) six decades of ash mismanagement in North Carolina, (2) the failure and release of CCR into the Dan River in February 2014, and (3) protection of North Carolina surface water and ground water resources for their best usage. Consequently, CAMA was appropriately focused on protecting public health and safety as well as the environment in North Carolina. Accordingly, CAMA includes protections above and beyond what is required in the federal CCR Rules and these protections accrue ~~only~~ primarily to the benefit of North Carolina residents and not to the benefit of South Carolina residents.

Q. WILL YOU UPDATE YOUR SURREBUTTAL TESTIMONY BASED ON INFORMATION THAT BECOMES AVAILABLE?

A. Yes. ORS fully reserves the right to revise its recommendations via supplemental testimony should new information not previously provided by the Company, or other sources, become available.

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes.

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MR. NELSON: Mr. Wittliff is available for questions from the other parties or from the Commission.

CHAIRMAN RANDALL: Thank you. Company?

MR. BURNETT: (To Mr. Erskine) Sir, can we get the ELMO thing turned on?

MR. ERSKINE: (Complies.)

MR. BURNETT: Thank you.

CROSS-EXAMINATION

BY MR. BURNETT:

Q Hey, Mr. Wittliff. It's -- oh.

CHAIRMAN RANDALL: Make sure you're on.

THE EXAMINATION BY MR. BURNETT CONTINUES.

Q Hey, Mr. Wittliff. Good to see you again.

A Right -- right back at you.

Q Mr. Wittliff, I think you said as much in your opening there and you agree with me that the ORS has taken the position in this case that costs incurred as a result of jurisdictional laws should not lead to increased costs to ratepayers outside of that jurisdiction, correct?

A That's the policy that I was given to work off of.

Q And you further agree that it -- as it relates to coal ash environmental-compliance costs that the Company is seeking in this case, the ORS has taken

the position that South Carolina customers should not pay for any additional burden that North Carolina law has placed upon them; isn't that right?

A That's the extension of that policy.

Q Do you understand the ORS's position in this regard?

A I think that somebody said it better than I early on in this is that it seems pretty plain on its face as to what they're saying.

Q Okay. So you get it, right?

A Yes.

Q Okay. Do you agree with ORS's position in this regard?

A It's not my position in this -- we were hired to conduct -- I mean, I want to make sure that I'm -- I'm clear on this: that our purpose in this was to basically quantify what the cost increases were, imposed by CAMA above and beyond the CCR rules. And we had to start from that foundational issue. It's not a matter of whether I agree or disagree with that. That was -- that was the starting point for this.

Q I see. So am I correct, Mr. Wittliff, that it doesn't matter if you agree with something or not

-- it could be the craziest idea in the world -- if you're asked to calculate a disallowance on it, you're going to do it whether you agree with it or not?

A You mind ask that -- ask that one again.

Q Well, sure. I'm not trying to be tricky, Mr. Wittliff. I -- if my company tells me to take a position I don't agree with, I'm not going to stand up here and make it. So I'm just asking you: Did you agree with the ORS's position as they told it to you?

A That's a -- going back to your -- that's a policy question that I was not asked to address, and it -- I -- I don't have an opinion whether I agree or disagree with it.

Q Well, I'll ask you this. You -- you confirmed for me you understand the ORS's position. Let me ask you this --

A I do. I do.

Q Okay. Does this position apply to any jurisdictional law that imposes increased costs to ratepayers outside of the jurisdiction, or does this position only apply to some smaller subset of jurisdictional laws?

A That's a question you'll have to ask the policy

person for ORS. That -- that would be Seaman-Huynh.

Q Okay. So you couldn't tell me if the non-jurisdictional law has to be irrational? overreaching? unusual?

MR. NELSON: Asked and answered. This -- he's already -- he's not a policy expert. Mr. Wittliff does not establish ORS policy; he's been hired as an engineering expert to perform calculations.

CHAIRMAN RANDALL: Sustained.

THE EXAMINATION BY MR. BURNETT CONTINUES.

Q Okay. Well, isn't it true, Mr. Wittliff, that your position -- your personal position is that the Company shouldn't recover any incremental costs imposed by CAMA -- that has little to do with ORS's position, does it? Your personal position is based on your belief that the Company caused --

MR. NELSON: Objection. He's asking for a personal opinion from the witness. The witness is hired as an expert witness and is testifying based on the ORS policy as stated to him.

CHAIRMAN RANDALL: Sustained.

THE EXAMINATION BY MR. BURNETT CONTINUES.

Q Well, Mr. Wittliff, you state in your surrebuttal testimony on Page 5, Lines 17 through 19 that, "had the Dan River incident not occurred, it is entirely reasonable to conclude that compliance at Riverbend would've been limited by the CCR rules, which as I stated in my direct testimony, currently do not require any action at Riverbend." Did I read that correctly?

A You -- can you tell me the page again?

Q Page 5, Lines 17 through 19. In your surrebuttal, sir.

A No. I got it right there.

Q Did I read that correctly?

A Yes. Yes. You did.

Q And you would agree with me when you say "it's entirely reasonable to conclude," in that passage I just read, you were engaging in speculation, is -- aren't you?

A No. I don't believe I was engaging in speculation. I mean, you may term it that. I was making a reasoned conclusion based on the facts at hand.

Q Well, Mr. Wittliff, isn't it true that, if you knew for sure that Dan River caused the North Carolina CAMA rule you would've said as much, but you didn't, did you? You said "it's entirely

reasonable to conclude"; isn't that right?
A In my direct testimony -- I'm trying to remember exactly where -- we included the preamble that was included in an earlier version -- I think it was the Senate version -- of CAMA that spoke to legislative intent, and -- and I'm not trying here to -- to go back over all of that. That's -- my deal is we're -- we're here to talk about: What were the impacts? The fact is -- is that Riverbend was not included as an affected site in the federal CCR rules.

The fact that that is being revisited is one of the reasons why I say that, while they shouldn't be allowed to recover costs at Riverbend at this time, should the rules change, they should be allowed to come back and let's revisit those issues. Right now, Riverbend is not an affected facility.

Q I see. Well, you would agree with me that, if the Commission finds that anyone's testimony is engaging in speculation, they should ignore that, right? Will you agree with that?
A Say it again.
Q Yes, sir. If this commission finds, as they read through this various testimony about this issue ,

that a witness has engaged in speculation, you would agree with me that they should ignore that testimony that's engaging in speculation; isn't that right?

A I think it depends on the source of -- of the expertise of that person. If that's a -- a reasoned conclusion that they can make based on the facts at hand, then I think that it's less speculation and it's more reasoned conclusion.

Q I see. Well, on Page 5 of your surrebuttal testimony, Lines 1 through 2, you make it pretty clear that DEC should not be allowed to recover what -- now for what you call "speculative changes to the CCR rule"; isn't that right?

A Yes.

Q So good for the goose, good for the gander, right? We can't do it; you can't either?

A I'm trying to figure out exactly what you're trying to get to here. Let's go one more time just to make sure. Because it's important that the Commissioners hear my best answer to this, and I want to make sure I'm giving it.

Q I'll -- I'll move along, Mr. -- Mr. Wittliff.

In your testimony in this matter, you propose three specific categories of disallowances, again,

based on the theory that North Carolina Coal Ash Management Act imposes requirements that are not imposed by the federal CCR rule. I think we've established that; do you agree?

A Yes, sir.

Q Okay. And we can look here in your opening in Table 5-4 that you included in your -- your opening statement.

A Yes, sir.

Q You'll agree with me that the three disallowances that you have recommended are all based on the contention that North Carolina CAMA law required the Company to take actions in South Carolina -- that cost South Carolina customers more than they would otherwise have paid under the federal CCR; isn't that right?

A Yes.

Q Okay. Now, you also said something that was interesting to me in -- in your opening. You said that "determining with great precision what the CCR cost increases above and beyond what the CCR federal rule required based on the limited information provided by the Company is like performing brain surgery with a pickax," right?

A Yes. I did.

Q Okay. Well, you would agree with me that, when you talked to the North Carolina Commission, it wasn't an issue of whether or not you had enough information, it was enough -- the issue you told the North Carolina Commission as to why you couldn't conduct a proper analysis is because you didn't have enough time and you weren't paid enough money; isn't that right?

A No. I think that's a mischaracterization of what I said. What I said, as I recall -- and you probably have it sitting there in front of me, and I'll probably eat this, but -- but what I remember saying is, again -- whoops. Sorry. What I remember saying was that we didn't have adequate information to make an informed decision regarding costs in -- in North Carolina, but my task here is a good deal different. I'm not being asked to look at all the costs as to whether they're prudent and reasonable. I'm just teasing out for the Commission the differences between CAMA and CCR rules. That was -- that's my sole purpose here.

Q Okay. Well, you're right, Mr. Wittliff. I'm going to show you something here on the ELMO that . . .

A If y'all can read that --

Q In theory, I'm going to show you.

A -- you're better than -- you're better than I.
Q Well, I can't get it to zoom.
A Okay.
Q Hang on.
CHAIRMAN RANDALL: Mr. Erskine's coming up. We can get Scott Elliott. He knows how. Couldn't resist, Scott.
THE EXAMINATION BY MR. BURNETT CONTINUES.
Q And I'll -- I'll read that for you, Mr. Wittliff. When you were in the DEC matter and you were talking about this same issue of what it would have to take to get a difference between CCR and CAMA, you said, "To do it with a level of certainty and specificity I believe that the Commission would prefer and want to see so they could make an informed decision, I think I'd -- I'd take a ballpark couple hundred thousand dollars and about six to twelve months"; isn't that right?
MR. NELSON: Is this testimony from North Carolina? Is that -- I'm not sure what this document is that you're showing us? Is this testimony in this case or in the North Carolina --
MR. BURNETT: It is in the North Carolina rate case where Mr. --

MR. NELSON: I -- I think we've gone far enough. That -- that is the North Carolina case. That doesn't have anything to do with the case that's being tried here. It's irrelevant. I'd ask that they move on.

MR. BURNETT: Mr. Chairman, if I may respond?

CHAIRMAN RANDALL: Go ahead.

MR. BURNETT: This witness has just testified that he didn't have enough information and that inhibited him from providing a confident opinion in his case. I wish to impeach his testimony by showing that in the North Carolina Commission, basically with the same amount of evidence, he -- at his disposal, he made no such allegation, but instead he did not have enough time or enough monetary resources. Goes to the credibility of his testimony.

CHAIRMAN RANDALL: Okay. Okay. I'm going to sustain the objection.

THE EXAMINATION BY MR. BURNETT CONTINUES.

Q Mr. Wittliff, you would agree with me that you have not offered any opinions in this matter that any of the costs that the Company is seeking for disallowance are unreasonable or imprudent under

either the CCR rule or the CAMA law; isn't that right?

A That was not my purpose, and I did not offer that.

Q Okay. So the answer to my question is --

A No. Right.

Q -- I'm correct?

A You're right.

Q Okay. So you must agree with me then, must you not, when I say that, if the Commission rejects the ORS's position that South Carolina customers should not pay for any increased costs brought about by the North Carolina CAMA law, they must logically ignore every dollar of your proposed disallowance because that disallowance is solely supported by ORS's position on cost allocations between North and South Carolina?

A That would be the Commission's call.

Q Now, turning to your recommended disallowance of approximately $316 million at the Riverbend site, you contend that CAMA -- had CAMA not existed, the Company would not have incurred any cost at the Riverbend site for coal ash activity because the ash basins for Riverbend are not covered by the federal CCR rule; isn't that right?

A Yes.

Q And, by making this argument, Mr. Wittliff, you agree with me that your contention is that, absent CAMA, the Company would have left all 5.2 million tons of ash at the Riverbend site as is and would not have taken any activity to close them in place, close them by removal of ash, or use a hybrid closure option; isn't that right?
A I can't account for what the -- what the Company would have or would not have done.
Q Well, if you go to your surrebuttal testimony with me, sir, Page 5. Tell me when you're there, please.
A Yes. Yes.
Q There on Line 10 when you're talking about Riverbend, you say, "Given DE's past performance, especially as evidenced by the Dan River ash release, it's reasonable to assume that the Company would've continued to do it's do-nothing approach absent any regulation forcing it to do otherwise." That's what you said about Riverbend, isn't it, sir?
A Yes. It is.
Q Okay. And if the Company did what you suggested, Mr. Wittliff, left all 5.2 million tons of that ash at Riverbend, while at the same time closing its

basins at Allen, Belews Creek, Cliffside, Buck, Dan River, Marshall, and W.S. Lee, the Company would've had to answer some serious questions from residents that live around Riverbend as to why everyone else's basins are getting closed but theirs are going to stay just like that, wouldn't they?

A There would've been some questions to answer; that's true.

Q You would agree with me that the Company would not have had good answers to those questions because even the United States District Court of Appeals called the CCR's rules exclusion of inactive basis like the one -- inactive basins like the one at Riverbend arbitrary and capricious when it vacated and remanded that exclusion back to the EPA; isn't that right?

A I'm familiar with the DC court decision.

Q Right. I'm just saying: Do you think it would've been an easy conversation for my company to have with our customers to say that, "At Riverbend, this rule just got vacated excluding this site, declared arbitrary and capricious. We're just going to let it sit there, see what happens"? Think that would've been an easy conversation for my company?

A I think that -- I understand the Company's dilemma.

What I'm -- what my charter was -- what I was hired to do was to determine what additional costs were imposed, and that's an additional cost. And -- and one of the things that I allowed and recommended to the Commission in my testimony and my surrebuttal is that they be allowed to come back when those rules are done again, you know, and then whatever costs you've got, let's put them on the table and let's see what's -- what's there. But I've not made any determinations other than, at this time, those rules are still the way they are.

Q Mr. Wittliff, do you think I might've had a couple questions to answer from the North Carolina Department of Environmental Quality, too, if I told them that, "I'm going to live that Riverbend basin just sitting there"?

MR. NELSON: Objection: calls for speculation.

CHAIRMAN RANDALL: Sustained.

THE EXAMINATION BY MR. BURNETT CONTINUES.

Q Well, we don't have to speculate at all to see what happens in the inactive basins here in South Carolina at the W.S. Lee site, do we, Mr. Wittliff? Because the -- you agree with me that the South Carolina DHEC down here, as we've talked about

several times, entered into a consent decree for us to close those -- that inactive basin, notwithstanding it was excluded from CCR; isn't that right?

A Yes.

Q Okay. Now, Mr. Wittliff, turning to your recommended disallowance of about 117 million at the Dan River site, you alleged that, had CAMA not existed, the Company would've not even began moving ash from that site until October 31, 2020, under the CCR rule; isn't that right?

A Yes. That -- and there is a -- actually, give me a second here. The -- the federal CCR rules do have a requirement on the uppermost aquifer restriction, and one of the ponds at Dan River didn't meet that so that, when they stopped sending wastewater streams to the ponds, they then were obligated to be -- initiate closure. And so that happened -- that trigger that Mr. Kerin referred to earlier happened on April 4th of 2018, and then going through it, there's a -- a series of -- it requires -- there's a regulation in the federal CCR rules that says you've got to commence closure within 30 days. And he's right on that. The difference is -- is that he wouldn't have been under the high-

priority closure and required completion of closure -- not beginning of closure -- completion of closure by April 1st of 2019, and he would've had more time to work on that and -- and take a more methodical approach.

Q Well, let me -- let me back up a little bit. You're aware at the Dan River site, there's something called a "primary ash basin."

A Yes.

Q And a "secondary ash basin"?

A Yes.

Q And the utmost aquifer trigger that you talked about under the CCR rule, that applied to both basins, primary and secondary; isn't that right? Absent any other CCR trigger being implicated, that would've been the trigger mechanism for closure under CCR; isn't that right, sir?

A The -- the information that I have says the secondary ash basin was the one that triggered the regulation; I can't speak to the primary ash basin.

Q Okay. So that's helpful. So you would agree with me, Mr. Wittliff, don't you, that as to the primary ash basin where the primary ash is located, that would've had to been closed sooner than your October 31st, 2020, date under CCR because another

trigger in the CCR rule had happened to make that closure sooner; isn't that right?

A Are you -- are you referring to the location restriction, or are you referring to when they stopped flowing ash to it?

Q Yeah. Let me put this in plain English, as --

A Thank you.

Q -- much as I can.

So you would agree with me that, notwithstanding any other CCR closure triggers that happened at that site, the Company was excavating ash from the primary basin at the Dan River site to sell it to the Roanoke Cement Company for beneficial reuse. Because it did that, it would've -- it would have triggered -- CCR rule would have triggered another date under 40 CFR 257.101(b)(1)(ii) and that 10/31/20 date would've been changed to May 4, 2018, right?

A Yes.

Q So to the extent you based any of your calculations on a 10/31/2020 date for closure for the basins at Dan River, that would be wrong for the primary basin; it'd instead be May 4, 2018, wouldn't it?

A Yes.

Q Mr. Wittliff --

MR. BURNETT: Mr. Chairman, I'm -- I'm going to try another one. Probably a hazard here, and opposing counsel can object, but I'll proffer it for the record, perhaps.

THE EXAMINATION BY MR. BURNETT CONTINUES.

Q Mr. Wittliff, you would agree with me that in the North Carolina proceeding where you testified in the DEC case about coal ash you took the same position that North Carolina customers should only pay for costs under the CCR rule, yet you were unable to identify one dollar of difference between the CCR rule and the CAMA in that case; isn't that right?

A That was not my charge or what I was asked to do in the North Carolina case.

Q I see. So if I understand it, Mr. Wittliff, your charge in the North Carolina case was to -- to -- to say, "There are differences between the CCR and CAMA rule; North Carolina customers should only pay for the CCR cost, but I don't know what that is." Is that what your charge was?

A The charge was to assist the attorney general's office in determining the -- I'm sorry. I -- I don't see a purpose to -- it was a different client; it was a different time, and it was a

different purpose. I wasn't hired to -- to divine the cost. I -- I gave it a good shot, but I didn't have the data that would give us the specificity that I would feel comfortable in putting in front of a commission.

We -- we got a lot of better information in this case, thanks to the Company. There were times when it really wasn't as on-point as what we were looking for, but there was more data to look at and -- in the cost that actually started to be accumulated into some amount where you could see a pattern and you could see some information there. So I don't think North Carolina, on the cost issue, is particularly relevant here.

Q Well, Mr. Wittliff, let's talk about your methodology that you used in that case since you just brought it up.

MR. NELSON: Now I'm going to object. Why are we going down this whole road again? There -- for some reason, Duke is attempting to retry the North Carolina case. What Mr. Wittliff did in that case has nothing to do with this case.

CHAIRMAN RANDALL: Sustained.

MR. BURNETT: Mr. Chairman, if I may. Not to

the objection -- because I haven't asked a question yet -- but when I was going to ask my question, I was going to note that Mr. Wittliff has impeached the methodology that he's actually used in this case in a prior proceeding and called it "unreliable" and "facially challengeable." Notwithstanding his testimony were he said his cost disallowance methodology was patently unreasonable and facially challengeable, he's used the exact same methodology before this commission today. So as an expert, he carries his prior testimony and impeachment of his own methodologies with him, and I would offer that it's relevant to impeach the entire calculation methodology he's used in this case.

CHAIRMAN RANDALL: We'll weigh that and rule on it in the order then.

MR. BURNETT: So I am allowed to ask my question, sir?

CHAIRMAN RANDALL: Yes.

MR. BURNETT: Thank you, sir.

THE EXAMINATION BY MR. BURNETT CONTINUES.

Q Mr. Wittliff, if you would turn to Page 37 of your

direct testimony, Lines 22 through 23. Tell me when you're there.

A There.

Q On Lines -- you state in that part of your testimony, "Using the same methodology outlined in my discussion of Buck earlier in my testimony, the weighted average of engineering and planning as a percentage of total for the project costs," and you go on to describe your methodology for calculating disallowances there, don't you?

CHAIRMAN RANDALL: Can you give us that page one more time?

MR. BURNETT: Yes, sir. Page 37 of Mr. Wittliff's direct testimony, Lines 22 through 23, and then onto the next page on Page 38.

CHAIRMAN RANDALL: Thank you.

MR. BURNETT: Yes, sir.

THE EXAMINATION BY MR. BURNETT CONTINUES.

A Ask your question again.

Q Yes, sir. My question is: You state on Page 37 of your direct testimony, starting at Lines 22 that for the Buck site and for the Dan River site, the methodology that you used for determining your proposed disallowances is what you call the

"weighted average of engineering and planning as a percentage of total project costs for" and you go on to describe the sites; isn't that correct?

A That's correct.

Q And now to my question: Isn't it true that you told the North Carolina Commission that that weighted average cost as a percentage of engineering total was unreliable and would've been challengeable on its face and you just could not get comfortable with it?

A That just doesn't sound like me. Now, you're probably going to have a piece of paper there that's going to say that I said exactly that, but I'm -- I'm telling you I don't remember saying that. What I will say -- and -- there you go.

What I will say is that we used Kerin's stated engineering and planning process, that it was their intent and desire to do engineering planning -- engineering and planning simultaneously across the entire fleet and that they were -- they were looking at that so they would get economies, they would get a standard approach, they would have some standard ideas about how to approach these things.

And so, when you have these high-priority sites, the high-priority sites are loaded -- I'm so

sorry. I talk with my hands, and that's bad. They're loaded on the front end and the -- but if you look at the four plants -- Allen, Belews Creek, Cliffside, and Marshall -- those plants were CCR compliant. And so what I was doing there was trying to establish what kind of a baseline of engineering and planning, if you were on the same schedule, would you have at Dan River and Buck as you would at -- at these other four plants?

It's not precise, but it is -- it is my attempt to try to get to some sort of reasoned conclusion about what these additional costs would've been in terms of above -- above the engineering and planning baseline, how much more did you spend because you had to do it faster? Not that that would be disallowed; it's just that that -- that is a matter for another day.

Q Mr. Wittliff, I'm close to wrapping up. Last line of questioning here. In your surrebuttal testimony on Page 3 starting at Lines 3 through 5, you discuss a mismanagement penalty that was exacted upon Duke Energy Carolinas in the North Carolina Commission; isn't that right?

A Yes.

Q And you state that "the fact that a very

significant mismanagement penalty was imposed by the NCUC can only lead to the conclusion that my arguments regarding the Company's actions were strongly considered by the NCUC"; isn't that right?

A That's what it says.

Q You would agree with, though, if I go to the Duke Energy Carolinas order from the North Carolina Commission on Page 266, speaking about your testimony, the North Carolina Commission said, "Indeed, AGO Witness Wittliff was not able to specify exactly how the Company should've acted differently in managing its coal ash to be consistent with the industry or at which sites it should've taken those actions and how much those actions would've cost the Company. Witness Wittliff also presented no credible evidence showing DEC's engineering and design of its impoundments was not consistent with industry practice and regulatory requirements of the time other than his own subjective allegations." Would you agree that, if you read that, that's what that order would say, sir, if you looked at it, subject to check?

A Well, I'm trusting you to read it.

Q Okay. And you would also agree with me that the

penalty that the North Carolina Commission levied against the Company was just under 13 percent of the amount of costs that the Company requested, which is nowhere close to the about 54 percent you've requested in this case; isn't that right?

A Yes. They were -- they had 70 million in -- in penalty.

Q So if the Commission was inclined to do what the North Carolina Commission did in that case and exact a mismanagement penalty, it wouldn't be for the almost 54 percent you've asked for; it would be a much lower figure of 13 percent, wouldn't it?

A Let me -- let me put this on pause a little bit because I think that what we're doing is we're getting a little far afield because you're -- you're acting like I'm saying, "You're never going to get the money." What I'm saying is -- is that the CCR rules allowed a longer time; they allowed a different place to start with. And they could come back and recover those should the CCR rules be changed to allow them to come back in and -- and ask for relief. But I'm not saying out and out today that you don't get anything. That's just -- I mean, I -- I -- sir, first of all, that's not my call, and it's not my recommendation.

What I'm saying is, on Riverbend, not ready for -- for being considered in these proceedings because the rules haven't changed. With regard to Buck and -- and -- and Dan River, those costs whenever -- when and if the rules change, they can come back in and -- and recover those costs. There's not -- there's not like forever. I don't understand -- I mean, you're asking me a question that makes it sound like today is the only day that would ever be visited.

MR. BURNETT: I appreciate your time today, Mr. Wittliff. Nothing further, sir.

CHAIRMAN RANDALL: Thank you. Any other cross for Mr. Wittliff? Commissioners?

MR. ELLIOTT: Mr. Chairman?

CHAIRMAN RANDALL: Yes, sir. Sorry.

CROSS-EXAMINATION

BY MR. ELLIOTT:

Q Mr. Wittliff, I just have some real basic questions.

A Good. I could use some.

Q Not -- yeah. Not this high level I've heard so far this afternoon.

I've got some concern that, even with all of the testimony so far on the record, that the

ratepayers are simply paying more than they should for these matters, so if you would give me some comfort that the ratepayers should be paying anything at all, I'd appreciate it.

Can we agree that Duke was under a duty to -- to prudently operate and maintain these coal ash ponds?

A Yes.

Q And can we -- can we agree that, throughout the life of these coal ash ponds, that Duke's ratepayers have been paying in rates some amount to compensate Duke for the cost and expense of maintaining the coal ash ponds?

MR. BURNETT: Objection. Mr. Commissioner -- Mr. Chairman, Mr. Wittliff has on numerous times stated that his engagement here was just to calculate differences at three -- at specific sites. I've had my questions not allowed on that same theory, so this is beyond the scope.

MR. ELLIOTT: Mr. Chairman, this is open cross. I'm not asking about the nature of his -- of his engagement. I'm asking him some just basic questions.

CHAIRMAN RANDALL: Okay. Overruled.

MR. ELLIOTT: Thank you, sir.

CHAIRMAN RANDALL: Continue.

THE EXAMINATION BY MR. ELLIOTT CONTINUES.

Q So, again, can we agree that -- that Duke ratepayers have been paying, through rates, an amount to cover the cost of the operation and maintenance of these coal ash ponds?

A That -- I think that's a reasonable expectation.

Q And can we agree that, were these coal ash ponds prudently maintained and prudently operated, that Duke might've avoided some, if not all, of these coal ash remediation costs?

MR. BURNETT: Objection: calls for speculation and assumes facts not in evidence.

CHAIRMAN RANDALL: Sustained.

THE EXAMINATION BY MR. ELLIOTT CONTINUES.

Q Well, we can agree, can we not, that -- that a coal ash pond certainly operated as intended should not fail, absent some act of God?

A Yes. I think that's reasonable.

Q All right. And I think I understand from your testimony in this case that -- that Duke had plenty of notice over the years of the dangers associated with the failure to operate the coal ash ponds in a prudent manner. Can we agree with that?

A Please ask that again.
Q Well, for instance -- and I think you testified on Page 10 of your testimony that under the Clean Air Act of -- Clean Water Act of 1972, these coal ash ponds were required to be operated in a manner that didn't spoil the -- the -- the state or nation's waters, correct?
A Yes.
Q And then, in accordance with 40 CFR 122.41, Duke had a duty to comply with its NPDES permit, didn't it?
A Yes.
Q And Duke had a duty to mitigate any and all damages to the environment associated with its NPDES permit, didn't it?
A Yes.
Q And Duke had the obligation under its NPDES permit for the proper operation and maintenance of the coal ash ponds? Am I correctly --
A Yes.
Q -- characterizing your testimony?
And so, as far back as 1979, North Carolina established rules to protect, maintain, preserve, and enhance the quality of the groundwaters of the state of North Carolina, did it not?

A Yes.
Q And we already understand from the terms of its NPDES permit that Duke's failure to properly operate and maintain those ponds could spoil the -- the -- or contaminate the waters of North Carolina, did we not?
A Yes.
Q And I think you testified that in 1979 the Los Alamos report put the nation's utilities, including Duke, on notice of the dangers of the improper maintenance and operation of coal ash ponds, correct?
A Yes.
Q And, again, in 1988 in an -- an EPA report to Congress similarly sounded the alarm about the dangers associated with the improper operation and -- and maintenance of these coal ash ponds, correct?
A Yes.
Q And as I understand it, the federal Coal Combustion Residual rule was -- at its origins dates back as far as October 21 of 1976; is that correct?
A Yes.
Q And then, for a real-life example of what could happen if a coal ash pond is not properly operated

and maintained, on December 22, 2008, a dike used to contain coal ash at the dewatering area of the Tennessee Valley Authority Kingston Fossil Plant in Roane County, Tennessee failed, correct?

A Yes.

MR. BURNETT: Mr. Chairman, object: irrelevant. He's giving us a history lesson of coal ash that does not go to any issue Mr. Wittliff has talked about. No allegation of imprudence, no allegation of unreasonableness; he simply noted differences between two existing rules -- way out --

CHAIRMAN RANDALL: I'm going to overrule and let him proceed.

MR. ELLIOTT: Thank you, sir.

THE EXAMINATION BY MR. ELLIOTT CONTINUES.

Q And, in fact, at the Kingston plant, approximately 5.4 million cubic yards of coal ash was released into Swan Pond, correct?

A Yes.

Q And so it's fair to -- it's fair to say, is it not, that -- that Duke knew or should have known of the dangers of the improper maintenance and operation of its coal ash ponds?

A Yes.

Q And when was the Dan River spill?
A February of 2014.
Q And so my question, again, is: Mr. Wittliff, had Duke heeded the warning signs that you and I have discussed here this afternoon, could Duke have prevented some or all of these contaminants spilling into the Dan River or elsewhere?
MR. BURNETT: Objection: calls for speculation.
CHAIRMAN RANDALL: Sustained.
THE EXAMINATION BY MR. ELLIOTT CONTINUES.
Q Now, you testify as to the Lee -- the Lee Station in Anderson County, South Carolina. Do you recall that?
A Yes, sir.
Q And -- and certainly the Lee Station is -- is an outlier in that it's the only South Carolina facility involved in this docket, correct?
A Yes.
Q Now, I think, as I understand it, you have studied a number of aspects about the Lee Station facility, but -- but -- one of which being the existence of a consent order entered into between Duke and -- and DHEC concerning the Lee Station, correct?
A Yes.

Q And as a part of your investigation of this matter, you had an opportunity to -- to review all the DHEC documents or at least the relevant ones, including the consent order, correct?
A Yes.
Q And to be clear, the consent order in this case -- in this matter was executed last by the DHEC authorities on September 29, 2014. Do you recall that?
A That sounds right.
Q Yes, sir. And I'd like to show you a copy of that DHEC order and ask if you recognize it.
A Yes.
Q Thank you so much.

MR. ELLIOTT: Mr. Chairman, I apologize. I only have one copy of this, but I move this DHEC order into the evidence of this case at this time.

CHAIRMAN RANDALL: It will be entered as Exhibit 35.

(WHEREUPON, Hearing Exhibit 35 was marked and received in evidence.)

MR. ELLIOTT: Thank you, Mr. Chairman.

THE EXAMINATION BY MR. ELLIOTT CONTINUES.

Q Now, Mr. Wittliff, this order, just for the record

-- Exhibit 35 -- is captioned "In re: Duke Energy Carolinas, LLC, W.S. Lee Steam Station, Anderson County." Do you see that, sir?

A Up there at the very top?

Q Yes, sir.

A Yeah.

Q And it's labeled a "consent agreement," is it not?

A Yes. It is.

Q And it carries a date -- carries a consent agreement number of 14-13-HW. Do you see that?

A I do, that.

Q Now, this is a -- this is, by its terms, an agreement, not an order; is that correct?

A Yes.

Q And you're aware, are you not, of the fact that DHEC, in the appropriate case, can actually issue an order requiring a regulated utility to take some step or take some remedial action, are you not?

A I am.

Q And you understand there's a difference between an order, which compels an act, and an agreement, which is a negotiated document? You understand that, don't you, sir?

A I do.

Q Now, the findings of fact in this document are

relatively brief, and Finding of Fact 1 provides that Duke owns and operates W.S. Lee Station to supply electricity, correct?

A Yes.

Q Now, Number 2 provides that, prior to 1974, CCR was placed in the Inactive Ash Basin, which is an unregulated basin located south of the power plant. Do you see that?

A Yes. I do.

Q And so this -- this ash basin was not regulated by DHEC, according to the -- the finding in this order, correct?

A No.

Q And also we've learned that it -- this ash basin, I think because it's inactive, is not subject to the federal rule regulating CCR; is that correct?

A That would depend on whether it's a -- if it's an -- an existing inactive basin at an inactive power plant.

Q And it would appear that it was both, would it -- does it not, from this finding?

A At first blush, yes.

Q And, in fact, I think Mr. Kerin testified to that, did he not?

A Let me check.

Q Let me refresh your recollection, if I may. I don't have it all highlighted, but this is from Mr. Kerin's summary when he testified just where you're seated, a few moments ago: "First I disagree with ORS Witness Wittliff's erroneous conclusion that, absent CAMA, the Company could have left its ash basins at Riverbend untouched indefinitely because those basins are not covered by the federal CCR rule." Do you see that language?

A I do.

Q And then he further testified, "The position that DE Carolinas could or would have taken a do-nothing approach at Riverbend CCR units when similar basins at the Company's South Carolina W.S. Lee Station that are also not covered by the federal CCR rule were being excavated is wholly unrealistic." Do you see what I've highlighted there?

A I do.

Q So Mr. Kerin, at least, tells the Commission that the -- that the W.S. Lee Station here in Anderson was not covered by the federal CCR; you would not disagree with Mr. Kerin who testified for the Company on this issue, would you?

A No.

Q Now, I would like to go just a little further,

Paragraph 3 says, "CCR was believed to have been used in the past as a backfill on the Ash Fill Area, which is located near the Inactive Ash Basin." You see that?

A I do.

Q And then, "On May 1, 2014, Duke Energy initiated geotechnical characterization of the Inactive Ash Basin." Do you see that?

A I do.

Q And so that language says that the first -- the first conduct or action taken with W.S. Lee was taken not by DHEC but by Duke, correct?

A It -- it appears so, yes.

Q And then on May 30, 2014, Duke Energy submitted a plan for the geotechnical characterization on the Ash Fill Area. Do you see that language?

A I do see that.

Q And in both cases, Paragraphs 3 and 4, it is Duke taking a step to -- to start this consent agreement process. Do you see that?

A I do.

Q Now, do you understand that here in South Carolina that with respect to a regulated activity -- an activity regulated by DHEC, that if there's a violation of a permit, DHEC will institute a

corrective action? Do you understand that's how DHEC works here?

A Yes. I'm familiar with that process.

Q But what we know here about -- about the Lee Station is that at least two engineering firms engaged by the Company advised them that no remedial action was necessary for the Lee Station; is that correct?

MR. BURNETT: Objection: assumes facts not in evidence, and Counsel is testifying.

CHAIRMAN RANDALL: Sustained.

THE EXAMINATION BY MR. ELLIOTT CONTINUES.

Q Well, would it not be the case, Mr. Wittliff, that if -- if DHEC saw no need to institute this consent agreement, that it would've had to have been instituted -- initiated by Duke; isn't that logical?

A My experience in Texas with enforcement actions is you can voluntarily disclose and come in and -- and work with the agency to take care of a problem you had self-identified, and those would be done under consent agreements so that everybody understands what's going on and -- and -- and how you mutually agree to -- to proceed. So otherwise, you're on the business end of an enforcement order.

Q Right. And so in this particular case, the South Carolina case, we have the Company coming forward to institute a consent agreement with the regulator to excavate these ponds; is that your testimony?
A Yes.
Q Now, you heard a couple of witnesses here previously testify -- describe this DHEC consent order as South Carolina policy. Do you recall that?
A Yes. I do recall that.
Q Well, basically, this consent order is an agreement between Duke on the one hand and -- and DHEC on the other hand wherein DHEC has consented to Duke's excavating this -- this coal basin -- coal ash basin, correct?
A Yes.
Q And you're not aware of any statute in South Carolina that required DHEC to require Duke to remediate this coal ash, are you?
A No. There are some regulations that are in place, and DHEC is in charge of making sure those regulations are complied with.
Q Well, if you look at this order, at the top it reads, "The department has the authority to implement and enforce laws and regulated

regulations pursuant to the South Carolina Hazardous Waste Management Act," and it cites the code section. Do you see that top two lines?

A I do.

Q But Mr. Kerin testified in a -- in a -- in response to a question by one of the Commissioners that this coal ash isn't hazardous waste, is it?

A It's not hazardous at this time.

Q Yes, sir. And so, again, DHEC may have some statutory authority and it may have boot-strapped itself into this agreement by this language, but the coal ash is not hazardous?

A No, sir.

Q So we know that -- so we know that the DHEC -- the -- the Anderson site was not regulated by DHEC, correct?

A The Anderson site?

Q The W.S. Lee Steam Station in Anderson County. I beg your pardon.

A Oh, I'm sorry. W.S. Lee. Thank you. Yes.

Q Yes, sir.

A Yes.

Q We understand it wasn't regulated by DHEC. We understand that the -- that the W.S. Lee Steam Station in Anderson County was not regulated by the

federal CCR rules, correct?
A Yes.
Q And we know that they're -- that the coal ash is not subject to regulation by the Hazardous Materials Act of South Carolina, correct?
A When -- when I talked with the DHEC officials to kind of get an explanation of how they got into the consent agreement, their explanation was -- is that they basically enforced -- not "enforced"; that's the wrong word -- that they pursued it according to the solid waste regulations of the State of South Carolina, for which they have delegation, is my understanding. And they also looked at the Clean Water Act NPDES stuff as well. So should the -- I don't know the "hazardous" piece, but I know that they were looking at the solid waste regulations.
Q And if you had the same conversation with the same person I did, you were also told that, even though they may not have ruled Duke in to clean up this -- or ordered Duke to come forward and clean up this coal ash basin, that they weren't going to look a gift horse in the mouth.
MR. BURNETT: Objection: hearsay, calls for -- assumes facts not in evidence. Counsel is testifying.

CHAIRMAN RANDALL: Sustained.

MR. ELLIOTT: If I may be heard, he testified to what the officials told him, and I was simply asking -- pursuing that line of questioning.

CHAIRMAN RANDALL: Okay. You can proceed.

THE EXAMINATION BY MR. ELLIOTT CONTINUES.

Q So I think the question was: If you had the -- if your conversation with the DHEC employee, if it was like mine was, that the DHEC employee said that with Duke being voluntarily in front of them to excavate and remediate this -- this coal ash basin, they weren't going to look -- look a gift horse in the mouth?

A No. They weren't.

MR. ELLIOTT: Thank you. I have no further questions.

CHAIRMAN RANDALL: Thank you. Any other cross? Commissioners? Commissioner Howard?

COMMISSIONER HOWARD: I'm sorry. I don't have any questions. I have no questions.

CHAIRMAN RANDALL: Thank you. Commissioner Whitfield?

COMMISSIONER WHITFIELD: Thank you, Mr. Chairman.

EXAMINATION

BY COMMISSIONER WHITFIELD:

Q I've got just a couple for you, Mr. Wittliff. The Chairman's warned me we're on time a little bit, so I'll -- I'll -- let's try to make this brief. Let's use that pickax you were talking about and -- and just pick into it for a quick second on a couple of questions.

I was going to ask you about the eight plants. We don't really need to -- to get into the location of -- of Lee; obviously, it's in South Carolina. But the other seven plants, you did say you visited them. Could you briefly discuss the locations, and maybe we can look at the basins that they -- some of them, I know, ultimately go into the DEP territory. So if you could just briefly mention the -- the locations of the other -- the other ones, not Lee.

A I got you. We visited Cliffside, Riverbend, Buck, Allen, Marshall, Belews Creek, Dan River. Did I capture them all -- all seven? Or did I miss one?

Q I think you got them. North Carolina ones. Yes, sir. Go ahead. Go ahead.

A Okay. Obviously, Cliffside's just inside the border. Riverbend's maybe 10/12 miles inside the

border in North Carolina. Couple of those watersheds do come -- come into South Carolina. I -- I didn't -- you know, when you get past that, it's -- it's -- it's a little more difficult to assess there's an impact. That's where I thought you were going with that question.

Q Right. And I -- and I realize you're from out of state, even when it comes to North Carolina, so you -- you've at least acknowledged they -- they impact some of the basins, not only in the Duke Energy Progress territory but also in South Carolina.

A Yes, sir.

Q Real briefly, without rehashing everything you've done today: What method is used to calculate CAMA-related costs to South Carolina ratepayers?

A Basically, what I did was a systemwide impact. And then what I understand is there's an allocation, and I've heard 24 percent/25 percent talked about here; that wasn't mine to determine. I just basically say: This is a systemwide impact in increases caused by CAMA over and above what the CCR rules are. So if there's an allocation of 24 or 25 percent, you'd multiply that times whatever is -- y'all finally reach, and then that would be the impact to South Carolina customers is -- that's

the way I understand it would work. That may not be pristinely correct, but that's the way I understand it.

Q Okay. And how does North Carolina CAMA differ from equivalent laws applicable in both North Carolina and South Carolina?

A Well, in my direct testimony, I list -- I list several. Actually, I think there's close to eight there. Give me -- if you'll just give me a second. Let me see if I can find that quickly. Here it is. Because there is -- there's no -- I mean, they've adopted the CCR rules --

Q Right.

A -- South Carolina. So from my understanding and my discussions and -- and research, what I've been able to determine is that there are differences in CAMA -- between CAMA and the CCR rules in the closure mandates. CAMA doesn't allow cap-in-place for anything but low -- low-priority sites. And then, if you have a high-priority site, now you're on an accelerated timeline to get it closed and excavation into either an onsite landfill or to some other offsite landfill is -- is pretty much your -- your choices. Now, with the exception of -- let's see if that's -- that's the mandate.

Then there's closure methods. Again, you're only allowed cap-in-place at low-risk sites, and that's -- that's one of the reasons how Allen, Belews Creek, Cliffside, and Marshall were allowed to close with cap-in-place instead of something a little more costly. So that's -- that's a principle difference.

Compliance timing is another, that the CAMA rules require accelerated timing for high-priority sites. And then there was the -- in -- well, okay. Yeah. And that was basically -- they were having to complete those by August 1st of 2019.

Then the ability -- I'm sorry -- the applicability to inactive sites, because CCR rules apply only to -- to sites that were active as of April 17th, 2015. Riverbend wasn't impacted by the CCR rules; directed for closure under CAMA.

Q I see that on your chart, yes, sir.

A Okay. And the beneficiation requirements are something that's -- that's just not mentioned at all in the -- in the -- in the federal rules that are a requirement for 300,000 tons per year at each of three sites. And the -- the two -- two are Cape Fear and H.F. Lee in DEP and -- and Buck in DEC.

And there's the conversion to driest disposal.

CAMA requires that if you're going to be an active plant going forward, whereas the CCR rule -- while itself doesn't say anything about it, there is a federal requirement under the Steam Electric Effluent Limitations Guidelines that basically proposes to require that conversion.

Then there's the high-priority sites; we've already talked about that. But those are the principle differences.

Q Mr. Wittliff, I don't know if you heard about any of the night testimony, but some of the -- a couple of the witnesses at some of the night hearings complained about the excessive amount of trucks and equipment running the material from -- I'm -- I'm coming back to W.S. Lee in South Carolina now -- coming down 85 and tearing up the roads and that sort of thing. And as Commissioners, we're not allowed to visit the site; we're a judicial body, and you -- you are allowed -- you did visit the site, and you're an engineer.

In your opinion, as an expert opinion as an engineer, what would've been the best remediation procedures for that facility, since you did visit the site and -- and -- and that is your area of expertise? And I -- I know, when you're -- you're

on a hurry-up scenario, that that's what they did. But in your opinion, could -- could you offer any opinion on that?

A Well, at -- at -- at W.S. Lee, which is -- -- oh, not W.S. Lee, H.F. Lee.

Q Yeah. Lee right on the Anderson-Greenville county line on the Saluda River. That -- that site, yes, sir. South Carolina.

A All right. Oh, I'm sorry. That one was not -- they hauled some stuff off but --

Q Talking about where they trucked it off to Georgia.

A Oh, that -- yeah. That part. Yeah. They did truck it off to Georgia. And are there better ways to do any of these things? There's -- what is that saying? You can have it cheaper, faster, or right; you get to pick any two. And so if -- if you're mandating folks to -- to get it -- if they're mandated to get it off the site and -- and go somewhere with it, then that's expensive. It's more expensive, and you do have those attendant issues with these -- the traffic, with the safety being on the road. I mean, those -- those are material issues. I -- I haven't given that a lot of thought as to what a better solution would be at W.S. Lee because it was a negotiated consent

agreement with the state.

Q With DHEC, yes, sir.

A Yes, sir.

Q All right. Thank you, sir

COMMISSIONER WHITFIELD: That's all I have, Mr. Chairman.

CHAIRMAN RANDALL: Any other Commissioner questions? Okay. Recross?

COMMISSIONER BELSER: Redirect.

MR. BURNETT: No, sir.

CHAIRMAN RANDALL: Redirect, I mean?

MR. NELSON: Redirect. I -- no -- no redirect.

CHAIRMAN RANDALL: Yeah. Re -- re-something. Okay.

MR. NELSON: No redirect.

CHAIRMAN RANDALL: Mr. Wittliff, appreciate you being here, and thank you for your testimony. And you are dismissed.

(Witness excused)

MR. WITTLIFF: Thank you, sir.

CHAIRMAN RANDALL: And we are adjourned.

(WHEREUPON, at 4:44 p.m. the proceedings in the above-entitled matter were adjourned.)

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3. **Coal Ash Costs**

Q. **MR. O'DONNELL, PLEASE EXPLAIN THE BACKGROUND THAT HAS LED DEC TO REQUEST RECOVERY OF $200 MILLION OF COAL ASH COSTS IN THIS CASE.**

A. On February 2, 2014, DEC spilled a large amount of coal ash in the Dan River. This spill made the national press. The Dan River spill will be cleaned up with Duke stockholder funds. Information exposed in the Duke federal plea deal, which is described below, revealed that on two separate occasions, Duke engineers at the Dan River plant requested an immaterial amount of budget funding to pay for video equipment to scope the pipe that later failed. Duke engineers were denied the request. [18]

On September 2014, in response to the Dan River spill, the North Carolina Legislature passed the Coal Ash Management Act (CAMA) that required the closure of existing coal ash ponds as well as conversion from wet ash to dry ash handling. CAMA was the first such coal ash management law in the United States. This initial legislation required basins at four Duke plants to be closed by 2019.

On December 19, 2014, the EPA issued the Coal Combustion Residual (CCR) Order that provided minimum national criteria for CCR landfills, CCR surface impoundments, and lateral expansion of coal-fired units. The CCR federal rule was designated as "self-implementing," meaning that Duke was not under any requirement to act UNLESS it is sued by a state or other entity and loses that lawsuit.

On May 14, 2015, DEC, Duke Energy Progress, and Duke Energy Business Services pled guilty to nine violations of the Clean Water Act and was fined $102

[18] United States District Court for Eastern District of North Carolina, Case Nos. 5:15-CR-62-H, 5:15-CR-67-G, 5:15-CR-68-H, ordering paragraphs 69-80

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million by the federal courts[19]. Below are some of the issues to which Duke admitted guilt:

- From at least January 1, 2012, Duke Energy Carolinas and Duke Energy Business services failed to properly maintain and inspect the two storm water pipes underneath the primary coal ash basis at the Dan River Steam Station in Eden, North Carolina. On February 2, 2014, one of those pipes failed, resulting in the discharge of approximately 27 million gallons of coal ash wastewater and between 30,000 and 39,000 tons of coal ash into the Dan River[20]
- Duke Energy Progress and Duke Energy Business Services also failed to maintain the riser structures in two of the coal ash basins at the Cape Fear Steam Electric Plant, resulting in the unauthorized discharges of leaking coal ash wastewater into the Cape Fear River.[21]
- Additionally, Duke Energy Carolinas and Duke Energy Progress's coal combustion facilities throughout North Carolina allowed unauthorized discharges of pollutants from coal ash basins via "seeps" into adjacent waters of the United States.[22]
- The Defendants' conduct violated the Federal Water Control Act (commonly referred to as the "Clean Water Act," or "CWA"). 33.U.S.C. 1251. [23]

[19] United States DE Ct. of Justice press release, May 14, 2015, 1

[20] United States District Court for Eastern District of North Carolina, Case Nos. 5:15-CR-62-H, 5:15-CR-67-G, 5:15-CR-68-H, 2

[21] Id at 3

[22] Id at 3

[23] Id at 4

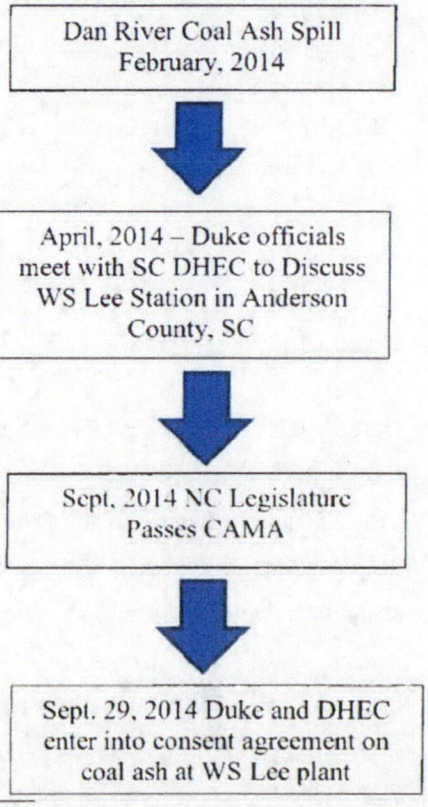
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Below is what an official with the United States Environmental Protection Agency said about Duke officials and coal ash:

> "Duke management failed in their responsibility to the people of North Carolina. Their criminal negligence is what caused this disaster," said Cynthia Giles, assistant administrator for enforcement for the U.S. Environmental Protection Agency. [24]

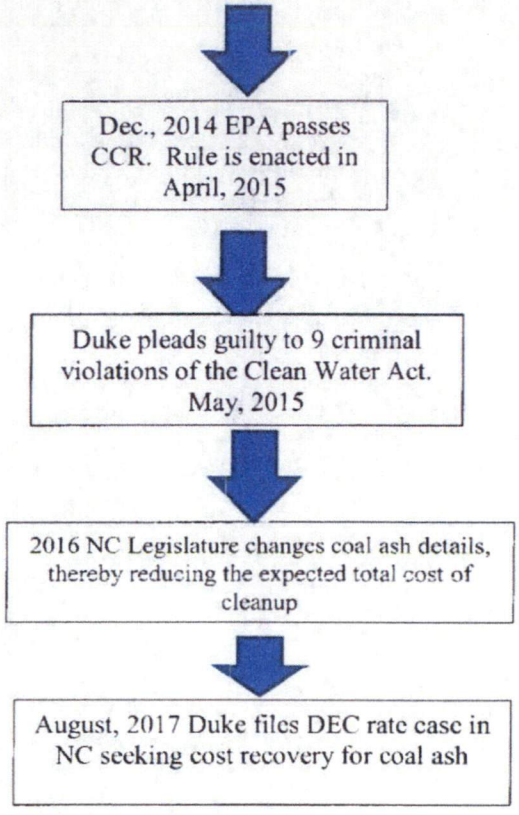
Chart 3 below shows the milestone dates for the Duke coal ash situation from the spill at Dan River to the current rate case recovery request.

Chart 3: Duke Coal Ash Timeline



[24] http://www.wral.com/duke-energy-pleads-guilty-to-environmental-charges-linked-to-coal-ash-spill-leaks/14645414/)

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Q. DOES DUKE BELIEVE IT IS ENTITLED TO 100% RECOVERY OF ALL COAL ASH EXPENSES?

A. Yes, with the exception of the Dan River spill clean-up costs and fines. Duke maintains that its coal ash expenses are being incurred as a normal course of its business operations and, as such, ratepayers should pay these costs entirely.

Q. CAN YOU PROVIDE ANY EVIDENCE THAT THE NORTH CAROLINA CAMA LEGISLATION WAS PROMPTED BY THE DAN RIVER SPILL?

A. Yes. Below is a portion of an article that cites two legislators in North Carolina that demonstrate CAMA was a direct result of the Dan River spill.

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> According to one of Duke Energy's top leaders, North Carolina's 2014 coal ash legislation didn't necessarily result from a company ash spill in the Dan River.
>
> Federal coal ash rules were already being drafted at the time, and it's possible, Duke state President David Fountain testified Monday during a rate increase hearing, that the North Carolina General Assembly would have passed its law anyway.
>
> Twice, Sierra Club attorney Matthew Quinn asked Fountain whether the law was motivated, or partially motivated, by a spill that turned parts of the river gray.
>
> "I really can't admit that," Fountain replied.
>
> State Rep. Pricey Harrison, D-Guilford, who saw her push for coal ash regulations gain traction only after the spill, scoffed at this Monday evening. When the bill passed in 2014, Senate negotiator Tom Apodaca specifically said that, "When I saw the Dan River thing, I said, 'We've got to do something.'" State Rep. Chuck McGrady, R-Henderson, who negotiated the bill for the House, told the Associated Press that, "unfortunately, sometimes we wait until we have a really big problem before we address it."
>
> "It makes sense for (Fountain) to say that, but he is flat wrong," Harrison said Monday. [25]

Q. DO YOU AGREE WITH DUKE'S POSITION THAT CONSUMERS SHOULD PAY ALL THE COSTS OF CLEANUP?

A. No. Duke management made specific decisions that resulted in the coal ash spill in North Carolina that, in turn, led to the creation of the Coal Ash Management Act (CAMA). My analysis in North Carolina was that Duke stockholders should pay 75%, but I have a discovery response outstanding to Duke that may change my recommendation on this matter.

[25] http://www.wral.com/seeking-rate-increase-duke-energy-dodges-link-between-coal-ash-spill-and-coal-ash-bill/17145054/

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Q. PLEASE EXPLAIN THE ACTIONS DUKE TOOK IN REGARD TO THE COAL ASH SITUATION AT THE WS LEE GENERATING STATION IN ANDERSON COUNTY, SC.

A. As noted in the timeline above, the Dan River spill occurred in February 2014. The cause of the spill was the collapse of a pipe under the coal ash pond that allowed coal ash to spill into the Dan River. On April 1, 2014, Duke officials met with the South Carolina Division of Health and Environmental Control (SC DHEC) to discuss actions it should take at the Lee plant's inactive coal ash basin under which was a 60-inch corrugated pipe that was similar to the pipe that failed at the Dan River plant. At the time of the Duke/DHEC meetings, the Lee plant's inactive coal ash basin was not subject to the EPAs CCR rule as the CCR applies only to active ash basins. Similarly, the North Carolina CAMA was pertinent to that state, meaning that the CAMA regulations could not cross the border into South Carolina.

It is important to understand that Duke was not, prior to the consent agreement with DHEC, obligated to remediate the WS Lee inactive coal ash pond. However, given that the construction of the Lee coal ash pond was similar to the Dan River coal ash pond that failed, Duke panicked and rushed to remediate the Lee coal ash pond.

Q. DID THE COMPANY PERFORM ANY ENGINEERING STUDIES IN ASSESSING THE SITUATION AT THE INACTIVE COAL ASH BASIN AT THE LEE PLANT?

A. Yes, the Company completed two engineering studies. One study was completed two weeks prior to the Duke/DHEC consent agreement whereas the other study was completed 9 months after the consent agreement was finalized.

Q. PLEASE EXPLAIN THE FINDINGS OF THE FIRST ENGINEERING STUDY.

A. Soils and Materials Engineers (S&ME) submitted a report to DEC on Sept. 12, 2014 in which it recommended the Company monitor the Lee plant embankments. S&ME did not recommend immediate excavation of the Lee plant inactive basin. [26]

Q. PLEASE EXPLAIN THE FINDINGS OF THE SECOND ENGINEERING STUDY.

A. On June 30, 2015 (9 months after the DHEC consent agreement), URS Corporation issued a report to Duke which state in its summary:

> Imminent Dam Safety Issues: No conditions were observed or identified by analyses completed under Phase 2 that represent a dam safety condition requiring immediate attention.[27]

Notwithstanding the fact that Duke's two engineering firms said that no immediate excavation was warranted, on Sept. 29, 2014, a full 7 months AFTER the Dan River spill, Duke and SC DHEC entered into a consent agreement in which the Company agreed to immediate excavation of the inactive coal ash basin and removal of the coal ash by Dec. 31, 2017.

Q. ARE YOU CONTENDING THAT THE INACTIVE COAL ASH BASIN AT THE LEE PLANT SHOULD NOT HAVE BEEN EXCAVATED?

A. Yes. Duke's engineers saw no need to excavate the coal ash basin. Accordingly, Duke's stockholders should be required to pay for the Lee coal ash remediation.

Q. DO YOU HAVE A SPECIFIC AMOUNT ASSOCIATED WITH YOUR RECOMMENDATION TO DISALLOW CLEAN UP COSTS ASSOCIATED WITH THE WS LEE INACTIVE BASIN?

[26] NCUC Docket NO. E-7, Sub 1146, Tr. Vol. 15, p. 118.

[27] NCUC Docket No. E-7, Sub 1146, Tr. Vol. 15, p. 143.

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A. No. The cost of the remediation of the Lee inactive basin is confidential and, at the time of the filing of this testimony, has not yet been revealed to me in a discovery response by DEC. I reserve the right to submit supplemental testimony to provide the Commission with this disallowance amount.

Q. DID DEC CHANGE REMEDIATION EFFORTS AT ANY OTHER COAL PLANT SUBSEQUENT TO THE DAN RIVER SPILL?

A. Yes, On Jan. 22, 2014, Duke received a draft report from a contractor, AMEC Environmental & Infrastructure, Inc. which detailed the proposed surface impoundment closure at the Dan River plant. [28] The closure plan included a "brownfield" strategy that involved the following:

1. the construction of a new landfill disposal facility at the site of the existing ash area;
2. the capping of the existing fill area and using new landfill for future waste disposal or for the relocation of existing waste.

However, on April 28, 2014, two months after the Dan River spill, AMEC submitted another plan. So, the Company changed its strategy for the Dan River plant from keeping the coal ash at its existing location to excavating the coal ash and moving it to a site that had previously not been used for coal ash storage.

Given the fact that DEC abruptly changed its remediation plans at the Dan River site in the wake of its spill at that site to a more costly remedy, I recommend to the Commission that Duke stockholders, not ratepayers, bear the incremental cost associated with the change in closure plans at Dan River. As is the case with my recommended disallowance at the WS Lee site, the cost of my disallowance is confidential, and I am awaiting those details now from DEC in a discovery response.

[28] NCUC Docket NO. E-7, Sub 1146, Kerin Public Staff Cross Ex. 6 (Ex. Vol. 16, Part 1, pp. 111-137)

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Q. DO YOU HAVE ANY CONCERN WITH DUKE'S ACCOUNTING FOR COAL ASH REMEDIATION COSTS?

A. Yes. Statement of Financial Accounting Standards (SFAS) 143 set a guideline for when a company should establish an asset retirement obligation (ARO). In essence, SFAS 143 requires that companies establish the ARO liability in the period in which the liability was incurred. In the DEC – NC case, the Company maintained that it did not become subject to SFAS 143 until the creation of the North Carolina CAMA legislation and the federal CCR. The Company further maintains that prior to it being subject to SFAS 143 that it did not include any closure costs for its coal ash ponds in depreciation rates. The issue now before this Commission is whether it was prudent for the Company not to have sought recovery of the coal ash costs in prior rate cases.

Q. WERE COAL ASH REMEDIATION COSTS A TOPIC OF CONCERN IN THE ELECTRIC INDUSTRY PRIOR TO 2014, WHICH IS THE YEAR THAT THE CAMA LEGISLATION BECAME LAW?

A. Yes, in October 1981, the Electric Power Research Institute (EPRI) published a manual entitled "Coal Ash Disposal Manual Second Edition." [29] In 1982, EPRI published another such manual dealing with existing coal ash storage and disposal facilities.[30] In 2004, EPRI published another manual that, specifically, warned utilities of the serious environmental issues associated with coal ash disposal. [31] Even with these various publications dating back to 1981, Duke did not establish AROs associated with coal ash until the promulgation of CAMA and the CCR in 2014.

[29] NCUC Docket No.E-7, Sub 1146, Kerin Sierra Club Cross Ex. 4 (Ex. Vol. 16, Part 1, pp. 281-356;

[30] NCUC Docket No.E-7, Sub 1146, Kerin Sierra Club Cross Ex. 4 (Ex. Vol. 16, Part 1, pp. 224-262

[31] NCUC docket No. E-7, Sub 1146, Tr. Vol. 16, Part 1, p. 704.

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Duke could have, and should have, sought recovery of the coal ash costs in much earlier rate cases. To the extent that it did not, the Company has now created a conflict for this Commission which can be summed up in the following question:

> Should current and future DEC customers pay for expenses that were incurred to serve past customers?

Q. DO YOU HAVE A SPECIFIC DISALLOWANCE RECOMMENDATION TO THIS COMMISSION IN REGARD TO THE TIMING OF DUKE'S ACCOUNTING OF COAL ASH COSTS?

A. Yes. I have read the well-reasoned dissent of NCUC Commissioner Dan Clodfelter in Docket No. E-7, Sub 1146 and will adopt, as my own, his analysis and recommendation that DEC North Carolina be disallowed $133.6 million in coal ash closure costs for failing to request these expenses in earlier years when knowledge of potential closure costs were well known throughout the industry. [32] Based on my analysis, the corresponding disallowance would be $46.7million for South Carolina,

Q. CAN YOU PUT DUKE'S COAL ASH COSTS INTO PERSPECTIVE RELATIVE TO OTHER UTILITIES AROUND THE COUNTRY?

A. Yes. Using data obtained from SNL Financial, I extracted AROs on the books of utilities from across the country. I then ranked the utilities by AROs from largest to smallest.

Table 7: Total AROs

Company Name	ARO 2017
Duke Energy Progress, LLC	$ 4,673,454
Duke Energy Carolinas, LLC	$ 3,609,220

[32] Dissent opinion of Commissioner Dan Clodfelter in NCUC Docket NO. E-7, Sub 1146, p. 31

Georgia Power Company	$	2,637,679
DTE Electric Company	$	2,124,863
Florida Power & Light Company	$	2,030,679
Alabama Power Company	$	1,583,682
Virginia Electric and Power Company	$	1,365,061
Indiana Michigan Power Company	$	1,321,774
Entergy Arkansas, LLC	$	981,213
Duke Energy Indiana, LLC	$	781,284
Duke Energy Florida, LLC	$	741,078
Arizona Public Service Company	$	670,719
Kansas Gas and Electric Company	$	343,408
Kansas City Power & Light Company	$	266,280
Kentucky Utilities Company	$	234,929
PacifiCorp	$	214,901
Mississippi Power Company	$	173,851
Portland General Electric Company	$	166,979
Public Service Company of New Mexico	$	145,707
Gulf Power Company	$	142,292
Appalachian Power Company	$	124,979
Southwestern Electric Power Company	$	92,758
Nevada Power Company	$	79,819
ALLETE (Minnesota Power)	$	77,391
Oklahoma Gas and Electric Company	$	75,106
Westar Energy (KPL)	$	61,709
Public Service Company of Oklahoma	$	54,015
Kentucky Power Company	$	51,238
Tampa Electric Company	$	47,370
Tucson Electric Power Company	$	45,356
Monongahela Power Company	$	41,782
KCP&L Greater Missouri Operations Company	$	34,772
Southwestern Public Service Company	$	28,524
Idaho Power Company	$	26,415
Empire District Electric Company	$	21,287
Entergy Mississippi, LLC	$	9,219
Otter Tail Power Company	$	8,719
Dayton Power and Light Company	$	8,035
Cleco Power LLC	$	7,976
Wheeling Power Company	$	7,021
Entergy Texas, Inc.	$	6,835
Ohio Power Company	$	1,661
Black Hills Power, Inc.	$	-

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The above data represents total AROs for these utilities. I quickly realized that the AROs needed to be segregated for coal ash costs only. As a result, I researched the 2017 individual financial statements of the 25 utilities with the highest AROs extracted from SNL Financial to segregate the coal ash AROs from other items not related to coal ash. The results of this analysis can be seen in Table 8 below.

Table 8: Coal Ash ONLY AROs

Rank	Company Name	Coal Ash AROs ($000)
1	Duke Energy Progress, LLC	$ 2,075,000 [33]
2	Duke Energy Carolinas, LLC	$ 1,629,000 [34]
3	Georgia Power Company	$ 1,424,000
4	Duke Energy Indiana, LLC	$ 763,000
5	Virginia Electric and Power Company	$ 624,000
6	Alabama Power Company	$ 324,000
7	DTE Electric Company	$ 225,000
8	Mississippi Power Company	$ 173,851
9	Gulf Power Company	$ 142,292
10	Kentucky Utilities Company	$ 142,292
11	Arizona Public Service Company	$ 139,000
12	Kansas City Power & Light Company	$ 91,400
13	Kansas Gas and Electric Company	$ 74,300
14	Public Service Company of New Mexico	$ 33,396
15	CLECO	$ 28,524
16	Portland General Electric Company	$ 23,000
17	Indiana Michigan Power Company	$ 21,774
18	Duke Energy Florida, LLC	$ 19,000
19	Florida Power & Light Company	$ -
20	Entergy Arkansas, LLC	$ -

There were 6 utilities for which I could not determine a coal ash ARO. Those companies were Nevada Power, Public Service of Oklahoma, Allete, Empire

[33] Duke Energy 10-k, page 183

[34] id

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District, Kentucky Power, and Dayton Power & Light. The highest ARO, however, in this group, is only $266 million

As can be seen in the table above, the Duke AROs specific to coal ash are MUCH greater than the coal ash AROs from other utilities. On the surface, this table strongly implies that the North Carolina CAMA legislation is much more stringent than the CCR requirements.

Q. DID YOU DO ANY FURTHER ANALYSIS ON THE COAL ASH AROs AS STATED BY DUKE RELATIVE TO OTHER UTILITIES?

A. Yes. I recognize that Duke may have a greater amount of coal generation relative to other utilities in the country. To normalize for the difference in coal ash generation across the country, I also examined the established AROs relative to the amount of coal ash that is present for each utility in the above-stated table. To be specific, I calculated a ratio of coal ash AROs relative to the KWHs of coal generation for each utility. I determined the amount of KWHs of historical coal generation by multiplying the amount of coal generation of each utility by the average age of the utility's coal generation fleet by an assumed capacity factor of 65%. Lastly, I sorted the ratio of coal ash AROs by KWHs of coal generation to calculate a ratio for each utility. The results of this analysis can be seen in Table 9 below.

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Table 9: Coal Ash ARO per KWH of Generation

Rank	Company	Calculated ARO per kWh of Generation
1	Duke Energy Progress, LLC	$ 0.002168
2	Mississippi Power Company	$ 0.001392
3	Duke Energy Carolinas, LLC	$ 0.000892
4	Georgia Power Company	$ 0.000860
5	Duke Energy Indiana, LLC	$ 0.000697
6	Virginia Electric and Power Company	$ 0.000551
7	Gulf Power Company	$ 0.000298
8	Arizona Public Service Company	$ 0.000290
9	Alabama Power Company	$ 0.000274
10	Kentucky Utilities Company	$ 0.000274
11	Kansas Gas and Electric Company	$ 0.000254
12	Public Service Company of New Mexico	$ 0.000147
13	Kansas City Power & Light Company	$ 0.000145
14	DTE Electric Company	$ 0.000123
15	Portland General Electric Company	$ 0.000123
16	Indiana Michigan Power Company	$ 0.000071
17	Duke Energy Florida, LLC	$ 0.000063
18	CLECO	$ 0.000057
19	Florida Power & Light Company	$ -
20	Entergy Arkansas, LLC	$ -

Q. HOW DO DEC AND DEP COMPARE TO NEIGHBORING UTILITIES THAT OPERATE IN SIMILAR GEOGRAPHIC CLIMATES?

A. In Table 10 below I have provided a comparison of how DEC and DEP compare to neighboring utilities.

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Table 10: Coal Ash ARO per KWH of Generation

Company	Calculated ARO per kWh of Generation
Duke Energy Progress, LLC	$ 0.002168
Mississippi Power Company	$ 0.001392
Duke Energy Carolinas, LLC	$ 0.000892
Georgia Power Company	$ 0.000860
Virginia Electric and Power Company	$ 0.000551
Gulf Power Company	$ 0.000298
Alabama Power Company	$ 0.000274
Kentucky Utilities Company	$ 0.000274
Duke Energy Florida, LLC	$ 0.000063
CLECO	$ 0.000057

Q. CAN YOU PROVIDE A COST COMPARISON BETWEEN WHAT DUKE MANUFACTURING CUSTOMERS ARE BEING ASKED TO PAY FOR COAL ASH RELATIVE TO WHAT MANUFACTURERS IN NEIGHBORING STATES ARE BEING ASKED TO PAY FOR COAL ASH REMEDIATION?

A. Yes. Using a 20 MW manufacturing load with an 85% load factor, the cost to the DEC manufacturer would be $132,837 as opposed to the average cost in other southeastern states of $70,160. The cost disparity for DEP customers is even greater as this same 20 MW load with an 85% load factor would have annual costs of $322,859.

The above-stated cost difference over an estimated 10-year cleanup span could very well mean the difference of ongoing viability of many manufacturing jobs in the Carolinas. To the extent that the Commission determines Duke has

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responsibility for cleaning up its coal ash ponds, and I believe they should, Duke stockholders should shoulder the burden.

Q. WHAT IS THE TOTAL AMOUNT OF YOUR RECOMMENDED COAL ASH DISALLOWANCE IN THIS CASE?

A. My recommended disallowance for the Company's coal ash request is 75%, but my recommendation may change pending the response from DEC in certain SCEUC discovery items. My 75% disallowance recommendation is the same as my recommendation before the North Carolina Utilities Commission in DEC's 2018 general rate case.

Stockholders need to be held accountable for the actions of Duke executives that led to the Dan River spill that led, in turn, to the passage of CAMA. Given the fact that the DEC coal ash costs are so much higher than utilities operating in a similar manner, the stockholders should shoulder the burden of 75% of the coal ash costs.

4. Hourly Pricing Rates

Q. DOES DUKE OFFER A REAL-TIME HOURLY PRICE RATE?

A. Yes, it does.

Q. DO DEC INDUSTRIAL CONSUMERS TAKE ADVANTAGE OF THE HOURLY PRICING RATE OFFERED BY DEC?

A. Yes, but in the past two years, I have heard consistent complaints from manufacturers regarding the excessive prices of Duke hourly prices in relation to prices found in other parts of the country and, in particular, with a neighboring state, Georgia.

Q. PLEASE EXPLAIN THE CONCERN ABOUT DUKE'S HOURLY PRICES RELATIVE TO PRICES IN OTHER PARTS OF THE COUNTRY.

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Q. PLEASE EXPLAIN YOUR DISAGREEMENT WITH MR. KERIN'S COMMENTS IN REGARD TO YOUR COAL ASH COST COMPARISON.

A. Mr. Kerin believes the Commission should not compare the coal ash costs of Duke relative to the same costs of other utilities. Apparently, Mr. Kerin wants this Commission to blindly accept Duke's position that its costs are reasonable in relation to other utilities. Mr. Kerin's position is antithetical to the concept of utility regulation.

I have appeared as a witness on the matter of rate of return in states around the country for over 33 years. Most, if not all, rate of return witnesses provide a discussion of the *Federal Power Commission v. Hope Natural Gas Company*, 320 U.S. 591 (1944) case. Indeed, in this case, Company Witness Hevert cited the above-stated Hope case in his prefiled testimony. Mr. Hevert, like myself, recognizes the need for comparisons in determining the accuracy of cost estimates. In his prefiled testimony, Mr. Hevert states:

> As discussed above, and in keeping with the Hope and Bluefield standards, that return should be commensurate with the returns expected elsewhere in the market for investments of equivalent risk. [1]

In this case, Mr. Hevert used a comparable group of companies to help develop his return on equity recommendation. Mr. Kerin, on the other hand, does not believe any such comparisons should be made in regard to coal ash costs. I disagree. DEC's costs are grossly out-of-line in relation to coal ash costs of other utilities across the country. This evidence is relevant to the question of Duke's excessive coal ash cost recovery as I demonstrated in my prefiled direct testimony

Q. HOW DO YOU RESPOND TO THE STATEMENTS FROM MR. KERIN AND DR. WRIGHT THAT THE COSTS FROM NORTH CAROLINA'S

[1] Hevert prefiled direct testimony, p. 11

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CAMA LEGISLATION ARE NOT HIGHER THEN THE FEDERALLY MANDATED CCR RULE?

A. The statements of Mr. Kerin and Dr. Wright conflict with statements from other Duke officials that have admitted CAMA costs are higher than CCR costs. On May 24, 2016, Utility Dive published a story entitled "Two years after EPA's coal ash rule, progress depends on states". Below is a portion of that article.

> Duke Energy, the state's major investor-owned utility, has a total of 150 million tons of ash at its 14 coal plants in North Carolina. Mark McIntire, director of environmental policy at Duke, told Utility Dive the company faces more stringent standards from the CAMA rather than the federal regulation.
>
> "The NC law came before the CCR [rule]," he said. "We find that NC CAMA that is specific to NC is generally driving decision making on a management perspective on coal ash ... From a comparison perspective the CAMA is generally a good bit more stringent." [2] (underline added)

Obviously, Duke's director of environmental policy, Mark McEntire, disagrees with Mr. Kerin and Dr. Wright in this case. The Commission needs and deserves a straight answer from Duke.

Q. HOW DO YOU RESPOND TO THE POSITION OF MR. PIRRO REGARDING REAL-TIME PRICING RATES?

A. The fact that Duke's hourly pricing rates are higher than market rates is a reflection on Duke's regulated rates being above market costs. While I agree with Mr. Pirro that Duke's RTP rates are marginal rates based on the Duke system production costs, I disagree with Mr. Pirro that Duke should not offer its large customers the lower of market costs or Duke's hourly costs. As I demonstrated in my testimony, DEC's rates are trending in the wrong direction. Given Duke management's decision on future rate hikes to fund its grid plan and drive

[2] https://www.utilitydive.com/news/two-years-after-epas-coal-ash-rule-progress-depends-on-states/419672/, May 24, 2016

anything above 9 percent right now, for a utility like Duke, is -- is too high to me. But, that said, the 2018 average is 9.59 percent for -- per Regulatory Research Associates, so that was the ROE allowed on average across the country in 2018: 9.59.

Q So, going from the 9.763 year average to the 2018 average you just stated, does that show a upward or a downward trend in ROEs across the country?

A Downward.

MR. NELSON: Okay. Thank you. I have no further questions. Thank you, Mr. Chairman.

CHAIRMAN RANDALL: Thank you. Commissioners? Commissioner Ervin.

COMMISSIONER ERVIN: Thank you, Mr. Chairman.

EXAMINATION

BY COMMISSIONER ERVIN:

Q Mr. O'Donnell, you suggested that -- well, you stated you don't like referrals -- deferrals. I think you say it's -- it's similar to kicking the can down the road with interest; is that -- is that a --

A Yes.

Q -- fair statement?

A Yes.

Q And it ultimately was going to run the price -- run up the rates because of that factor, because you got -- you got to -- instead of pay as you go, you got to pay -- defer and pay interest?
A That's true, but it's also, to me, you're -- you're separating risk and return at that point, because if we're going to grant the utility even a 9.59 percent rate of return in this case, which is a very lofty rate of return, there's going to be some risk. And if you're going to allow a deferral, that's reduction of risk. And, so, by allowing a deferral, they have to go hand in hand. 9.59 and a deferral means that you ought to reduce the ROE, to me, or not allow the deferral.
Q So there's a choice there that -- that has to be made, but is -- you say, as the referrals [sic] go up, the ROE needs to come down?
A Yes, sir.
Q One thing that I saw in your summary that I -- I want to follow up on, you -- you noted that nationally, electric costs have been flat in the Southeast. Electric costs have risen, but not to the extent of Duke Energy Carolina's costs. What do you attribute that to, why -- why their cost is more than counterparts in the Southeast?

A. ORS's correction to income taxes is due to an error in the calculation of synchronized interest. ORS erroneously added unamortized investment tax credits ("ITC") to pro forma rate base instead of subtracting unamortized ITC from rate base when calculating synchronized interest expense. The correction resulted in annualized interest expense of $112,455,000, less per book interest expense of $102,970,000, for an increase to interest expense of $9,485,000. The tax rate of 24.95% was applied to the increase in interest expense for a total decrease in income taxes of ($2,367,000). The allowable interest expense was computed using the SC retail rate base after ORS adjustments, a long-term debt ratio of 47%, and a weighted cost of debt of 4.44% as shown in Supplemental Audit Exhibit GS-7.

Q. BRIEFLY EXPLAIN THE CHANGE TO ORS ADJUSTMENT #36 TO REMOVE CERTAIN EXPENSES.

A. ORS updated its Adjustment #36 made to other operations and maintenance ("O&M") expenses for the removal of ($575,000) of litigation expenses attributed to legal actions related to coal ash. As detailed in ORS witness Wittliff's direct testimony, the Company violated state and federal laws resulting in damages to the environment. Customers should not bear the burden of legal costs related to the Company's failure to operate its coal ash basin in accordance with state and federal rules and regulations. Inclusion of the legal costs as an allowable expense forces ratepayers to pay for Duke Energy Carolinas, LLC's ("DEC" or "Company") failure to comply with the law. Furthermore, the legal expenses are not related to providing adequate electrical service and the customers derived no benefit from the expenditures. These legal costs should be

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the shareholders responsibility which in turn incentivizes the regulated utilities to operate in compliance with federal, state and local laws.

Q. PLEASE IDENTIFY THE EXHIBITS ATTACHED TO YOUR SUPPLEMENTAL DIRECT TESTIMONY.

A. I have attached the following exhibits to my supplemental testimony relating to the total Company per books and South Carolina ("SC") retail per books:

- Supplemental Audit Exhibit GS-1: Operating Experience, Rate Base and Rate of Return Reflecting ORS's Proposed Increase
- Supplemental Audit Exhibit GS-2: Explanation of Accounting and Pro Forma Adjustments - Retail
- Supplemental Audit Exhibit GS-3: Electric Plant in Service at Original Cost
- Supplemental Audit Exhibit GS-4: Accumulated Depreciation and Amortization – Electric Plant in Service
- Supplemental Audit Exhibit GS-5: Materials and Supplies
- Supplemental Audit Exhibit GS-6: Working Capital Investment
- Supplemental Audit Exhibit GS-7: Weighted Cost of Capital
- Supplemental Audit Exhibit GS-8: Operating Experience, Rate Base and Rate of Return Reflecting Company's Proposed Increase

These exhibits were either prepared by me, or under my direction and supervision, in compliance with recognized accounting and regulatory procedures for electric utility rate cases. These exhibits show various aspects of DEC's operations and financial position.

Q. PLEASE DESCRIBE THE FORMAT OF SUPPLEMENTAL AUDIT EXHIBIT GS-1 AND ELABORATE ON THE CALCULATIONS.

[Please note: corrections noted on pg 9 reflect the testimony of the witness during the hearing in this matter.

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SURREBUTTAL TESTIMONY AND EXHIBITS OF

GABY SMITH

ON BEHALF OF

THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF

DOCKET NO. 2018-319-E

IN RE: APPLICATION OF DUKE ENERGY CAROLINAS, LLC

FOR ADJUSTMENTS IN ELECTRIC RATE SCHEDULES AND TARIFFS AND

REQUEST FOR AN ACCOUNTING ORDER

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.

A. My name is Gaby Smith. My business address is 1401 Main Street, Suite 900, Columbia, South Carolina, 29201. I am employed by the State of South Carolina as an Audit Manager, in the Audit Department of the South Carolina Office of Regulatory Staff ("ORS").

Q. ARE YOU THE SAME GABY SMITH WHO PRESENTED DIRECT AND SUPPLEMENTAL TESTIMONIES IN THIS DOCKET?

A. Yes. I pre-filed direct testimony and eight (8) exhibits with the Public Service Commission of South Carolina ("Commission") on February 26, 2019. I also filed supplemental direct testimony and eight (8) exhibits on March 6, 2019.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. The purpose of my surrebuttal testimony is to respond to certain issues raised in the rebuttal testimonies of Duke Energy Carolinas, LLC. ("DEC" or "Company") witnesses Kim

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Smith, Renee Metzler and Lesley Quick. My surrebuttal will address the Company's rebuttal testimonies in regards to:

- ORS Adjustment #21 to Annualize Operation and Maintenance ("O&M") Non-Labor Cost,
- ORS Adjustment #22 to Normalize O&M Labor Expenses,
- ORS Adjustment #25 to Amortize Rate Case Costs,
- ORS Adjustment #28 to Adjust for Credit Card Fees,
- ORS Adjustment #29 to Adjust O&M for Executive Compensation,
- ORS Adjustment #30 to Adjust for Customer Connect Additional Expense and Deferral,
- ORS Adjustment #36 to Remove Certain Expenses,
- ORS Adjustment #37 Customer Growth Adjustment, and
- ORS Adjustment #38 to Adjust Revenue, Taxes and Customer Growth for the Proposed Increase.

My surrebuttal testimony also updates ORS adjustment amounts for ORS Adjustment #30 to Adjust for Customer Connect Additional Expense and Deferral and Adjustment #32 to Synchronize Interest Expense with End of Period Rate Base.

Q. PLEASE DESCRIBE ORS'S RESPONSE TO THE COMPANY'S REBUTTAL TESTIMONIES IN REGARD TO CERTAIN ADJUSTMENTS.

A. ORS's responses to the adjustments are as follows:

Adjustment #21 - Annualize O&M non-labor expenses

Company witness Smith states in her rebuttal testimony that annualizing the impacts of inflation to an end of test period level is based on actual known and measurable inflation metrics. Per S.C. Code Ann. Regs.103-823(A)(3), the Commission requires rate applications to be based on a historic 12-month test period. Traditionally, the Commission allows

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adjustments to the Test Year to reflect known and measurable changes in the Company's operating experience. Adjustments for "inflation" are not known and measurable. Consistent with Commission Order Nos. 84-108 and 85-841 in which the Commission expressly rejected adjustments for inflation, ORS recommends the Commission reject recovery of these costs, which are based on projections and estimates, as it shifts the risks from the Company to the customers.

Adjustment #22 – Normalize O&M Labor Expenses

Based on the rebuttal testimony of Company witness Smith, the Company agrees with ORS's adjustment to update the salary allocator for DEC for wages and salaries and related employee benefit costs to the same date as the O&M labor expense, July 1, 2018.

The Company does not agree with ORS's recommendation to remove 50% of the Company's long and short term incentive ("LTI" and "STI") program costs for the reasons discussed by Company witness Metzler. Company witness Metzler's rebuttal testimony primarily addresses the Company's position in regards to overall compensation philosophy, the compensation programs provided by DEC, why a competitive compensation package is important, and how eliminating any portion of incentive compensation would decrease employees' total compensation to less than competitive levels.

Company witness Metzler's rebuttal testimony discusses earnings per share ("EPS") and also mentions Total Shareholder Return ("TSR"). A general definition of TSR is the total return of a stock to an investor, or the capital gain plus dividends. Both EPS and TSR are metrics that involve the performance of a Company's stock. Company witness Metzler's rebuttal testimony includes Table 1: Summary 2017 STI Plan. This table indicates the

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Executive Leadership Team's ("ELT") STI payouts are based on 50% EPS and all remaining Non-ELT employees' STI payouts are based on 30% EPS.

Company witness Metzler's rebuttal testimony fails to include the components of the Company's LTI plan where LTI awards are based 50% on EPS and 25% on TSR, for a total 75% of the LTI payouts directly tied to the Company's stock performance. ORS determined that an average adjustment of 50% to total LTI and STI payouts was reasonable and appropriate in this docket. An adjustment of 50% to total LTI and STI plan payouts equitably shares the costs between customers and shareholders. If employees are largely driven by stock performance rather than the service to customers, a balanced approach to equitably share those costs is important. ORS's recommendation does not require DEC to reduce the total compensation package provided to their employees, only that the costs of the LTI and STI plans be shared equally between customers and shareholders.

An increase in the Company's EPS and TSR, due to an increase in the Company's rates through a rate case, with no actual improved Company efficiency or operating performance, substantially influences the LTI and STI payouts made to employees. This removes the incentive for employees to achieve earnings goals through performance, customer satisfaction, efficiencies, and cost reduction measures. Shareholders are the primary benefactors of increased EPS and TSR, of which these incentives are directly based. It also shifts the risks from the Company to the customer if the Company is allowed recovery of 100% of its LTI and STI payouts.

In addition, the Commission has the authority to regulate the Company's management practices and decisions in regard to prudency but does not regulate the Company's management of EPS or TSR. Allowing regulated utilities the recovery of

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employee incentives based on stock performance, EPS or TSR, would limit the Commission's ability to determine the prudency of those incentives. The Company's request to allow cost recovery of employee incentives based on stock performance, EPS or TSR, would also be a vast departure from this Commission's decisions on this issue. In Order No. 2012-951, the Commission found that incentive compensation is an accepted and necessary component of a utility company's compensation package and that there are sound reasons for offering incentive compensation as part of a competitively reasonable compensation package. In that order, the Commission also found that recovery of 50% of this incentive compensation expense is just and reasonable.

ORS's adjustment to remove 50% of the LTI and STI program incentive costs is reasonable as it is an equitable sharing of the costs between the customers and the Company.

Adjustment #25 - Amortize Rate Case Costs

In rebuttal testimony, Company witness Smith opposes ORS's recommendations to exclude a return on the deferred rate case expenses during the deferral period and exclude rate case expenses from rate base. ORS reaffirms its original positon to exclude a return on rate case expenses and exclude rate case expenses from rate base as the expenses are related to O&M and are not capital in nature. The Company does not currently have a Commission approved accounting order authorizing a deferral.

In addition, Company witness Smith opposes ORS's recommendation to disallow certain rate case expenses due to the Company's lack of sufficient documentation to support the costs. ORS attempted on several occasions to obtain sufficient documentation from the Company. On December 12, 2018, ORS sent Audit Request #16 to the Company asking the Company to provide a summary listing of rate case expenses, copies of all invoices and proof

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of payment. *See* Confidential Surrebuttal Audit Exhibit GS-9, page 1. On December 27, 2018, the Company responded to Audit Request #16 by providing a summary excel file, legal invoices excel file, an internal labor excel file, and various invoices for some of the legal expenses. Confidential Surrebuttal Audit Exhibit GS-9, page 2 shows an example of the excel information provided for amounts billed to DEC without a supporting invoice. On January 3, 2019, ORS issued ORS Audit Request #36 to request copies of legal invoices for the legal expenses that were not supported by the Company, *See* Confidential Surrebuttal Audit Exhibit GS-9, page 3. On January 9, 2019, the Company responded. *See* Confidential Surrebuttal Audit Exhibit GS-9, page 4. On January 14, 2019, ORS issued ORS Audit Request #48 to request the Company provide additional detailed information to include billing rates, billed time, and a description of services. This audit request has been attached as Confidential Surrebuttal Audit Exhibit GS-9, page 5. On January 17, 2019, the Company submitted an excel workbook including a column with a general description for the legal expenses, and timesheets which lacked any reference to the specific legal action, service performed, or person billed which are shown on Confidential Surrebuttal Audit Exhibit GS-9, pages 6 and 7.

On February 22, 2019, Company witness Smith contacted ORS to discuss the level of detail that was needed to provide sufficient support. The Company provided a small sample that contained some additional information, which was characterized as the best the Company could provide. ORS clarified that proper documentation for cost recovery would include itemized work performed, hourly rates, and a detailed accounting of the time spent for the work performed. This information should be provided to the Company from the vendor to support the expenses the Company is requesting to include as rate case expenses.

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ORS cannot verify the summary information created by the Company is accurate. Complete information is important to ensure that customers pay for only expenses related to the rate case. ORS recommends the Commission adopt ORS's adjustment to rate case expenses and reject any rate case expenses not properly supported by the Company.

Adjustment #28 - Adjust for Credit Card Fees

Company witness Quick, in her rebuttal testimony, opposes ORS's recommendation to exclude the Company's growth projections in the calculation of credit card fee expenses. ORS's position for rejecting inflation-based estimates applies to the ORS recommendation the Commission reject the 20% growth projections included by the Company in the calculation of credit card fees. Per S.C. Code Ann. Regs.103-823(A)(3), the Commission requires rate applications to be based on a historic 12-month test period. Traditionally, the Commission allows adjustments to the Test Year to reflect known and measurable changes in the Company's operating experience. Adjustments for growth projections are not known and measurable. Consistent with Commission Order Nos. 84-108 and 85-841 in which the Commission expressly rejected adjustments for inflation, ORS recommends the Commission reject recovery of these costs, which are based on projections and estimates, as it shifts the risks from the Company to the customers.

Company witness Quick states that the Company experienced an average historic year over year growth rate of 9% from 2014 to 2017. In addition, to support her findings, she states that the Company reviewed other utilities around the country implementing fee free credit card usage and found that the projected increase in credit card transactions cited by these utilities ranged from 5% to 30%. This further supports ORS's position as to the uncertainty of the Company's proposed growth projection.

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On page eight of Company witness Quick's rebuttal testimony, she proposes the Commission approve a deferral to include the incremental credit card fees that ORS does not recommend be included in this adjustment. ORS recommends the Commission reject Company witness Quick's request to establish a deferral for the credit card fee expenses should the Commission not include the growth projections as the credit card fees are not extraordinary in circumstance or magnitude. See ORS witness Payne's surrebuttal testimony for discussion of deferrals.

Adjustment #29 - Adjust O&M for Executive Compensation

ORS recommends the Commission adopt the ORS adjustment to O&M for executive compensation. The Company's adjustment eliminates 50% of the compensation (base pay, LTI and STI) of the four DEC executives with the highest level of compensation. ORS does not remove 50% of the LTI and STI payments for these four executives in its adjustment since 50% of those payments were already removed in Adjustment #22 by ORS. ORS reaffirms its calculation of this adjustment.

Adjustment #30 - Adjust for Customer Connect Additional Expenses and Deferral

Upon review of Company witnesses Smith's and Hunsicker's rebuttal testimony, ORS proposes an additional adjustment to O&M expenses for the Customer Connect Project to reflect the actual incurred level of expenses in 2018 of $3,189,000. This results in an adjustment to O&M of $2,549,000 as $640,000 of costs associated with Customer Connect were included in the test year expenses. Inclusion of this adjustment results in an additional adjustment to income taxes of ($636,000) for a total adjustment to income taxes of ($901,000) associated with Customer Connect.

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ORS recommends the Commission reject Company witness Hunsicker's forecasted average O&M expense of $4.7 million. This amount includes forecasted costs of $1.8 million for inflation and contingency. Per S.C. Code Ann. Regs.103-823(A)(3), the Commission requires rate applications to be based on a historic 12-month test period. Traditionally, the Commission allows adjustments to the Test Year to reflect known and measurable changes in the Company's operating experience. Adjustments for inflation and contingencies are not known and measurable. Consistent with Commission Order Nos. 84-108 and 85-841 in which the Commission expressly rejected adjustments for inflation, ORS recommends the Commission reject recovery of these costs, which are based on projections and estimates, as it shifts the risks from the Company to the customers. Due to ORS's additional adjustment, ORS recommends cancellation of the accounting order (Order No. 2018-552) for deferred expenses related to Customer Connect on the date of the order issued by the Commission in this docket.

Adjustment #36 – Remove Certain Expenses

ORS recommended an adjustment to other O&M expense by ($2,974,000) and income taxes by $742,000 to disallow sponsorships, lobbying expenses, service awards, advertising and other miscellaneous items. These items are non-allowable and not necessary to provide electric service to customers. Subsequent to filing the application, the Company proposed an adjustment to other O&M expense of ($227,000) and income taxes of $57,000 to remove lobbying costs and image building advertising.

Based on the rebuttal testimonies of Company witnesses Smith and Metzler, the Company disagrees with ORS removing items associated with employee incentives, any costs to recognize and reward Company employees, lineman's rodeo costs, organization

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dues, costs that are not 100% related to South Carolina ("SC"), timing differences and litigation expenses as part of its non-allowable adjustment.

ORS performed its non-allowable review of the Company's accounting records over a three (3) month period, concluded its initial review, and sent its list of non-allowable transactions to the Company on January 28, 2019. ORS requested the Company provide additional supporting documentation and detailed reasoning for why expenses should be allowed and included for recovery from customers. On February 11, 2019, ORS contacted the Company to inquire if the Company's response was forthcoming related to the transactions deemed non-allowable by ORS. On that same day, ORS received a response from the Company which indicated the Company reviewed the ORS spreadsheet containing the list of non-allowables. The Company's response identified some transactions the Company intended to remove in the updated supplemental filing which included a new pro forma adjustment called "Remove Certain Expenses." The Company's response also identified instances where ORS duplicated removal of the same transaction and instances where ORS recommended removing North Carolina ("NC") specific costs, like Department of Motor Vehicle ("DMV") costs, which were allocated between NC and SC. The Company indicated ORS's adjustment to non-allowables did not identify the comparable SC specific costs that were also allocated between NC and SC.

The Company indicated in its response all remaining transactions identified by ORS in the spreadsheet were reasonable expenses attributed to: prudent utility operations; community engagement; and maintenance of an engaged workforce. ORS requested the Company identify all transactions that were removed more than once, and on February 18, 2019, ORS received the Company's response. ORS modified its non-allowable adjustment

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to remove duplicate items. The Company provided no additional supporting documentation for specific non-allowable transactions.

Company witness Metzler, in her rebuttal testimony, specifically addresses ORS's non-allowable adjustment in regard to spot bonuses (exceptional contribution awards), lump sum merit payments, service awards, safety awards and lineman's rodeo. ORS recommended an adjustment to remove amounts associated with spot bonuses, service awards and safety awards consistent with Commission Order Nos. 91-595 and 94-1229. In these Commission Orders, the Commission removed sales incentive awards, safety and length of service awards, and other miscellaneous gifts and awards. ORS removed costs associated with the lineman's rodeo as costs associated with competitions between linemen from various utilities are not necessary to provide quality electric utility service to customers. ORS's treatment of rodeo related expenses in this docket is consistent with ORS's treatment of rodeo related expenses in other SC gas and electric utility rate cases and Rate Stabilization Act filings. The Company is incorrect in its statement that ORS's non-allowable adjustment removed amounts associated with lump sum merit payments made by the Company.

Company witness Smith, in her rebuttal testimony, specifically addresses organization dues, costs that are not 100% related to SC, timing differences due to accrual accounting, and litigation expenses. Company witness Smith specifically identifies the Company's request to recover from its customers membership dues for local Chambers of Commerce, Visit Greenville SC and the Spartanburg Development Association. ORS removed 50% of the dues associated with Chambers of Commerce as part of its non-allowable adjustment consistent with Commission Order Nos. 94-1229, 01-887, and 02-285 where the Commission found that one-half of dues paid to state and local Chambers of

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Commerce should be included in cost of service. In regards to the transactions associated with Visit Greenville SC and the Spartanburg Development Association, ORS removed 100% of amounts associated with transactions associated with Visit Greenville SC and the Spartanburg Development Association, based on the Company's designation of them as being related to "Memberships in Social and Athletic Clubs (including but not limited to Chamber of Commerce, Rotary, Lions, etc.)." Removal of costs for transactions associated with memberships in social and athletic clubs is consistent with Commission Order Nos. 91-595 and 94-1229.

The Company asserts that ORS included in its adjustment for non-allowables transactions related to costs that are not 100% related to SC and timing differences for accrual accounting. ORS provided the Company ample opportunity to identify and provide additional supporting documentation for any transactions for which they did not agree with ORS's treatment as non-allowable. The Company failed to specifically identify transactions included in ORS's non-allowable adjustment related to these items during the non-allowable review process. ORS first became aware of the Company's treatment of DMV registration fees for transmission vehicles while reading Company witness Smith's rebuttal testimony. The same is also true for transactions included in ORS's non-allowable adjustment related to expenses incurred and accrued in a previous period but not paid until the test year. Had the Company properly supported these transactions with the explanations in Company witness Smith's testimony when ORS originally asked for support, ORS would have had the opportunity to closely review and verify these transactions further, determined the appropriate treatment, and modified its non-allowable adjustment appropriately. As such,

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ORS has not verified Company's witness Smith's claims and ORS recommends the Commission reject the Company's position.

ORS's removal of litigation expenses as part of its non-allowable adjustment is discussed in detail by ORS witness Hamm's surrebuttal testimony.

Adjustments #33 - Adjust for 1/8 O&M for Accounting and Pro Forma Adjustments, Adjustment #37 - Customer Growth, and Adjustment #38 - Adjust Revenue, Taxes and Customer Growth for the Proposed Increase

ORS and the Company agree on the methodology used in calculating these adjustments. ORS and Company amounts differ due to the underlying adjustments of ORS and the Company and the recommended return on equity.

Q. DID ORS UPDATE ANY OTHER ADJUSTMENTS AS PART OF SURREBUTTAL TESTIMONY?

A. Yes. ORS updated ORS Adjustment #32 to Synchronize Interest Expense with End of Period Rate Base due to an increase in the weighted average cost of debt rate to 4.53% from 4.44% as accepted by ORS witness Parcell in his surrebuttal testimony.

Q. PLEASE IDENTIFY ADDITIONAL EXHIBITS ATTACHED TO YOUR SURREBUTTAL TESTIMONY.

A. I have attached the following exhibits to my surrebuttal testimony to reflect the update to ORS Adjustment #30 for the Customer Connect Project, the increase in the weighted average cost of debt rate to 4.53% from 4.44%, and the resulting changes to fall out adjustments:

- Surrebuttal Audit Exhibit GS-1: Operating Experience, Rate Base and Rate of Return Reflecting ORS's Proposed Increase

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- Surrebuttal Audit Exhibit GS-2: Explanation of Accounting and Pro Forma Adjustments - Retail
- Surrebuttal Audit Exhibit GS-3: Electric Plant in Service at Original Cost
- Surrebuttal Audit Exhibit GS-4: Accumulated Depreciation and Amortization – Electric Plant in Service
- Surrebuttal Audit Exhibit GS-5: Materials and Supplies
- Surrebuttal Audit Exhibit GS-6: Working Capital Investment
- Surrebuttal Audit Exhibit GS-7: Weighted Cost of Capital
- Surrebuttal Audit Exhibit GS-8: Operating Experience, Rate Base and Rate of Return Reflecting the Company's Proposed Increase
- Confidential Surrebuttal Audit Exhibit GS-9: Company responses to ORS Audit Request #16, #36, and #48

Q. WILL YOU UPDATE YOUR SURREBUTTAL TESTIMONY BASED ON INFORMATION THAT BECOMES AVAILABLE?

A. Yes. ORS fully reserves the right to revise its recommendations via supplemental surrebuttal testimony should new information not previously provided by the Company, or other sources, become available

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes, it does.

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DIRECT TESTIMONY OF

ZACHARY J. PAYNE

ON BEHALF OF

THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF

DOCKET NO. 2018-319-E

IN RE: APPLICATION OF DUKE ENERGY CAROLINAS, LLC FOR ADJUSTMENTS IN ELECTRIC RATE SCHEDULES AND TARIFFS AND REQUEST FOR AN ACCOUNTING ORDER

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.

A. My name is Zachary J. Payne. My business address is 1401 Main Street, Suite 900, Columbia, South Carolina, 29201. I am employed by the South Carolina Office of Regulatory Staff ("ORS") in the Audit Department as a Senior Auditor.

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND YOUR BUSINESS EXPERIENCE.

A. I received a Bachelor of Science Degree in Business Administration with a double major in Accounting and Economics from the University of South Carolina in May 2013. I began employment with ORS in March 2015 and since have worked on cases dealing with the regulation of nuclear waste, natural gas, water and wastewater companies.

Q. WHAT IS THE MISSION OF THE OFFICE OF REGULATORY STAFF?

A. ORS represents the public interest as defined by the South Carolina General Assembly as:

> The concerns of the using and consuming public with respect to public utility services, regardless of the class of customer, and preservation of

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continued investment in and maintenance of utility facilities so as to provide reliable and high-quality utility services.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to set forth ORS's findings and recommendations for certain adjustments resulting from ORS's examination of the application of Duke Energy Carolinas, LLC ("Company" or "DEC"), in Docket No. 2018-319-E. Specifically I will be addressing ORS's findings and recommendations for Company Adjustments 7, 13, 18, 19, 30, and 35, all of which are related to accounting deferrals. These findings and recommendations are explained in detail in my testimony.

Q. PLEASE OUTLINE THE FUNCTION OF AN ACCOUNTING ORDER TO DEFER COSTS.

A. An accounting order to defer costs is a regulatory instrument in which the regulatory commission issues an order at the utility's request to establish a regulatory asset (or liability) account into which certain costs can be deferred. The Governmental Accounting Standards Board's (GASB) statement No. 62 provides, among other things, general standards of accounting for the effects of regulation and states that:

> A regulated business-type activity should capitalize all or part of an incurred cost that otherwise would be charged to expense if both of the following criteria are met:
>
> a. It is probable that future revenue in an amount at least equal to the capitalized cost will result from inclusion of that cost in allowable costs for rate-making purposes.
>
> b. Based on available evidence, the future revenue will be provided to permit recovery of the previously incurred cost rather than to provide for expected levels of similar future costs.

In other words, GASB identifies the key criteria the utility must meet to capitalize costs through an approved regulatory asset:

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1) the incurred costs are likely to be recoverable for ratemaking purposes; and,

2) the costs have already been incurred, and the costs are not similar to costs the utility may incur in the future.

GASB statement No. 62 also indicates the utility should accrue "carrying charges" on the regulatory asset:

> During the period between the date on which the new asset is recognized and the date on which recovery begins, the carrying amount should be increased by accruing a carrying charge.

GASB outlines the accounting standards for deferring costs; however, it is ultimately the regulatory commission that determines what costs in the regulatory asset are allowable for ratemaking purposes, and the manner in which the utility is allowed to recover the allowable costs in the regulatory asset.

Once an accounting order is issued by the regulatory commission, the utility will create a regulatory asset account on the balance sheet and record costs to the regulatory asset as the costs are incurred. The utility will request to recover regulatory assets in a future general rate case proceeding. It is during the general rate case proceeding the regulatory commission will determine the appropriate amount of allowable costs to be recovered from customers, and the manner in which the utility is allowed to recover allowable costs. Accounting orders to defer costs are used by a utility to smooth earnings and rate recovery related to significant costs that arise from circumstances that are unexpected and/or non-recurring.

Q. WILL ORS REQUEST THE COMMISSION CONSIDER GUIDELINES FOR FUTURE DEFERRAL REQUESTS?

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A. Yes. In Docket No. 2018-206-E, DEC, Duke Energy Progress, LLC (collectively "the Companies") and ORS discussed the Companies' request for approval of an accounting order to defer certain capital and operating expenses pursuant to S.C. Code Ann. § 58-27-1540 and S.C. Code Regs. 103-825 (Supp. 2015) related to the Power/Forward Initiative. On September 4, 2018, ORS filed a letter in the docket to inform the Commission that ORS would make a future filing in 2019 to request a proceeding to adopt guidelines on future deferral requests. ORS intends to make such a filing no later than December 2019.[1]

Q. PLEASE SUMMARIZE ORS'S RECOMMENDATIONS FOR THE TREATMENT OF ACCOUNTING DEFERRALS PROPOSED BY THE COMPANY.

A. ORS reviewed each of the Company's proposals for recovery of accounting deferrals and has developed a recommendation to be applied to the request by the Company to recover its deferred costs. In each of the Company's proposed deferrals the Company calculated a weighted average cost of capital ("WACC") return on deferred costs. Additionally the Company proposed to include the unamortized balance of each deferral in rate base. ORS recommends each deferral balance be separated into two categories of costs, operating-related costs and capital related costs. ORS recommends the recovery of both the operating-related costs and the capital-related costs be subject to the same regulatory accounting treatment required for each category absent an accounting deferral. According to the National Association of Regulatory Utility Commissioners ("NARUC") Rate Case and Audit Manual, regulatory assets and other deferrals should be examined to determine if the deferred costs are appropriate to be included in rate base. The Company may recover prudently incurred operating expenses, without a WACC return or rate base treatment. The Company may

[1] https://dms.psc.sc.gov/Attachments/Matter/36a3a7be-111b-4103-8131-bd54da3ec5de

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recover prudently incurred capital costs by recording capital costs to rate base and recovering those costs through depreciation expense over the life of the associated asset, while earning a WACC return on the undepreciated balance. With the exception of deferred environmental costs in Adjustment #18, the ORS recommendations allow the Company to fully recover its deferred expenses. ORS's recommendations focus on how those costs should be recovered. ORS's recommendations are in the public interest because the recommendations allow for a return of costs and, where it is appropriate a return on costs.

Q. PLEASE EXPLAIN ORS'S RECOMMENDED ADJUSTMENTS.

A. Explanations of the accounting and pro forma adjustments are presented on a South Carolina retail basis for both ORS and the Company. As shown on Audit Exhibit GS-2, the ORS adjustment numbers are the same as those filed by the Company in its Application. My recommended adjustments for accounting deferrals are as follows:

Adjustment #7 – Amortize Deferred Cost Balance Related to Carolinas West Control Center

The Company proposes to adjust depreciation and amortization expense by $1,781,000, income taxes by ($444,000), working capital investment by $3,563,000, and accumulated deferred taxes by ($889,000) to amortize the deferred cost balance related to Carolinas West Control Center (CWCC). ORS proposes to adjust depreciation and amortization expense by $168,000, income taxes by ($42,000), working capital investment by $3,501,000, and accumulated deferred taxes by ($874,000) to amortize the deferred cost balance related to CWCC.

Commission Order No. 2018-552 granted the Company's request "to defer in a regulatory asset account the return and depreciation on the capital costs associated with the Company's Carolinas West Primary Distribution Control Center incurred since January 1,

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2018." The Commission order also stated "Such relief will not prejudice the right of any party to address the prudency of such costs in a subsequent rate case proceeding." The Company provided ORS with support for a deferral balance of $5,344,000 consisting of $3,622,000 in deferred cost of capital, $1,420,000 in deferred depreciation expense, and $301,000 in after-tax return on deferred costs. The Company proposes amortizing this deferral balance over a three year period, and including the balance less one year of amortization in rate base.

ORS proposes a deferral balance of $5,042,000 which will provide the Company a recovery of the same deferred cost of capital and deferred depreciation expense as the Company's proposal, but does not include a return on those deferred costs. ORS recommends the deferred cost of capital portion of the deferral balance be included in rate base. ORS does not recommend that the deferred depreciation expense portion of the deferral balance be included in rate base. ORS's recommendation to include the deferred cost of capital portion of the deferral in rate base, and exclude the deferred depreciation expense from rate base is consistent with regulatory accounting practices for capital-related and operating-related costs. ORS's recommendation still allows the Company to recover its actual deferred costs through amortization of the proposed deferral balance which is a sufficient level of cost recovery. If the Company is allowed to include depreciation expense in rate base, the Company will earn a return on its depreciation expense.

ORS proposes amortizing the deferral balance over a period of 30 years. This amortization period was provided by the ORS Utility Rates Department, and is addressed in more detail in the testimony of ORS witness Willie Morgan.

Adjustment #13 – Amortize Deferred Cost Balance Related to Lee Combined Cycle

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The Company proposes to adjust depreciation and amortization expense by $7,154,000, income taxes by ($1,785,000), working capital investment by $14,309,000, and accumulated deferred taxes by ($3,570,000) to amortize the deferred cost balance related to Lee Combined Cycle (LCC). ORS proposes to adjust depreciation and amortization expense by $563,000, income taxes by ($140,000), working capital investment by $14,473,000, and accumulated deferred taxes by ($3,611,000) to amortize the deferred cost balance related to LCC.

Commission Order No. 2018-552 granted the Company's request "to defer the return and depreciation expense, property taxes, incremental non-fuel operating and maintenance expenses and carrying costs at the weighted average cost of capital in connection with the addition of the W.S. Lee combined cycle plant incurred since January 1, 2018." The Commission order also stated that "(s)uch relief will not prejudice the right of any party to address the prudency of such costs in a subsequent rate case proceeding." The Company provided ORS with support for a deferral balance of $21,463,000 consisting of $14,184,000 in deferred cost of capital, $4,581,000 in deferred depreciation expense, $843,000 in deferred operation and maintenance ("O&M") expense, $940,000 in deferred property tax expense, and $915,000 in pre-tax return on deferred costs. The Company proposes amortizing this deferral balance over a three year period, and including the balance less one year of amortization in rate base.

ORS proposes a deferral balance of $21,946,000 which will provide the Company a recovery of the same deferred cost of capital, deferred depreciation, deferred O&M, and deferred property tax expenses as the Company's proposal, but does not include a return on those deferred costs. ORS recommends the deferred cost of capital portion of the deferral

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balance be included in rate base. ORS does not recommend that the deferred depreciation, O&M, and property tax expense portion of the deferral balance be included in rate base. ORS's recommendation to include the deferred cost of capital portion of the deferral in rate base, and exclude the deferred depreciation, O&M, and property tax expenses from rate base is consistent with regulatory accounting practices for capital-related and operating-related costs. ORS's recommendation still allows the Company to recover its actual deferred costs through amortization of the proposed deferral balance which is a sufficient level of cost recovery. If the Company is allowed to include depreciation, O&M and property tax expense in rate base, the Company will earn a return on these expenses.

ORS proposes amortizing the deferral balance over a period of 39 years. This amortization period was provided by the ORS Utility Rates Department, and is addressed in more detail in the testimony of ORS witness Willie Morgan.

Adjustment #18 – Amortize Deferred Environmental Costs

The Company proposes to adjust depreciation and amortization expense by $48,381,000, income taxes by ($12,071,000), working capital investment by $193,522,000, and accumulated deferred taxes by ($48,284,000) to amortize the deferred environmental costs. ORS proposes to adjust depreciation and amortization expense by $19,226,000, income taxes by ($4,797,000), working capital investment by $75,232,000, and accumulated deferred taxes by ($18,770,000) to amortize the deferred environmental costs.

Commission Order No. 2016-490 granted the Company's request "for an accounting order authorizing the deferment of certain costs incurred in connection with complying with federal and state environmental remediation requirements related to permanently closing coal ash basins and other ash storage units at the Companies' coal fired generating facilities."

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The Commission order also stated "This ruling in no way limits the ability to challenge the reasonableness of these expenditures in a subsequent general rate case or other proceeding." The Company provided ORS with support for a deferral balance of $241,903,000 consisting of $217,207,000 in deferred asset retirement obligation ("ARO") plant spend, ($22,061,000) in nuclear decommissioning trust fund ("NDTF") overcollection offset, $35,696,000 in after-tax WACC return on the ARO plant balance, $8,101,000 for a WACC return on the non-ARO plant balance, $2,678,000 for deferred depreciation of the non-ARO plant balance, and $281,000 for an after-tax return on the deferred non-ARO costs. The Company proposes amortizing this deferral balance over a five year period, and including the balance less one year of amortization in rate base.

ORS proposes a deferral balance of $96,131,000 which includes $95,334,000 in deferred ARO plant spend, ($22,061,000) in NDTF overcollection offset, $14,389,000 in after-tax WACC return on the ARO plant balance, $6,377,000 for a WACC return on the non-ARO plant balance, and $2,091,000 for deferred depreciation of the non-ARO plant balance. ORS proposes including in rate base all components of the deferral balance (less one year of amortization) except for the deferred depreciation of the non-ARO plant balance. ORS's recommendation to include the deferred capital costs portion of the deferral in rate base, and exclude the deferred depreciation expense from rate base is consistent with regulatory accounting practices for capital-related and operating-related costs.

ORS calculated its proposed deferral balance starting with the allowable ARO system expenditure through August 31, 2018 provided in the testimony of ORS witness Dan Wittliff. ORS Audit Department calculated an allowable percentage per month based on Mr. Wittliff's recommended total amount and applied that percentage to the ARO monthly expenditures

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that were originally provided by the Company. Creating an allowable monthly expense allocation was necessary to calculate the WACC return in a manner consistent with the Company's original calculation. ORS then added the non-ARO WACC return and deferred depreciation expense to the allowable ARO plant spend, less NDTF overcollection, plus WACC return on the allowable plant balance. ORS does not recommend the Commission adopt the Company's calculation of a WACC return on the non-ARO deferred cost of capital and deferred depreciation expense. ORS did not include such a return in the proposed deferral balance. If the Company is allowed to include depreciation expense in rate base, the Company will earn a return on these expenses.

Adjustment #19 – Amortize Deferred Cost Balance Related to South Carolina Advanced Metering Infrastructure ("SC AMI")

The Company proposes to adjust depreciation and amortization expense by $12,626,000, income taxes by ($3,150,000), working capital investment by $25,252,000, and accumulated deferred taxes by ($6,300,000) to amortize the deferred cost balance related to SC AMI. ORS proposes to adjust depreciation and amortization expense by $2,175,000, income taxes by ($543,000), working capital investment by $19,210,000, and accumulated deferred taxes by ($4,793,000) to amortize the deferred cost balance related to SC AMI.

Commission Order No. 2016-489 granted the Company's request "to defer into a regulatory asset until the Company's next general rate case: 1) the financial effects of the depreciation expense of the AMI meter deployment described above, the carrying costs on the investment at its weighted average cost of capital, and the carrying costs on the deferred costs at its weighted average cost of capital not to exceed $45 million;" The Commission order also stated that "(a)n accounting order granting the relief that the Company seeks will

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not preclude the Commission or parties from addressing the reasonableness of the costs deferred for AMI meters in the Company's next general rate proceeding." The Company provided ORS with support for a deferral balance of $37,878,000 consisting of $22,484,000 in deferred cost of capital, $11,936,000 in deferred depreciation expense, and $3,458,000 in after-tax return on deferred costs. The Company proposes amortizing this deferral balance over a three year period, and including the balance less one year of amortization in rate base.

ORS proposes a deferral balance of $32,629,000 which will provide the Company a recovery of the same deferred cost of capital and deferred depreciation expense as the Company's proposal, but does not include a return on those deferred costs. ORS recommends the deferred cost of capital portion of the deferral balance be included in rate base. ORS does not recommend that the deferred depreciation expense portion of the deferral balance be included in rate base. ORS's recommendation to include the deferred cost of capital portion of the deferral in rate base, and exclude the deferred depreciation expense from rate base is consistent with regulatory accounting practices for capital-related and operating-related costs. ORS's recommendation still allows the Company to recover its actual deferred costs through amortization of the proposed deferral balance which is a sufficient level of cost recovery. If the Company is allowed to include depreciation expense in rate base, the Company will earn a return on its depreciation expense.

ORS proposes amortizing the deferral balance over a period of 15 years. This amortization period was provided by the ORS Utility Rates Department, and is addressed in more detail in the testimony of ORS witness Willie Morgan.

Adjustment #30 – Adjust for Customer Connect Additional Expense and Deferral

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The Company proposes to adjust other O&M by $4,025,000, depreciation and amortization expense by $1,796,000, income taxes by ($1,452,000), working capital investment by $3,592,000, and accumulated deferred taxes by ($896,000) to adjust for Customer Connect additional expenses and to amortize deferred costs. ORS proposes to adjust depreciation and amortization expense by $1,063,000, and income taxes by ($265,000) to adjust for the amortization of deferred costs related to Customer Connect.

Commission Order No. 2018-552 granted the Company's request "to defer in a regulatory asset account the incremental operating and maintenance expenses associated with the deployment of the Company's new billing and Customer Information System, known as Customer Connect, and carrying costs on the deferred costs at its weighted average cost of capital incurred since January 1, 2018." The Commission order also stated "The deferred costs to be recorded on the Company's accounting records will be based on actual costs" and that "Such relief will not prejudice the right of any party to address the prudency of such costs in a subsequent rate case proceeding." The Company provided ORS with support for a deferral balance of $5,388,000 consisting of $2,507,000 in actual deferred O&M expenditures as of September 30, 2018, $2,621,000 in estimated deferred O&M expenditures between October 1, 2018 and May 31, 2019, and a calculated weighted average cost of capital return of $260,000. The Company proposes amortizing this deferral balance over a three year period, and including the balance less one year of amortization in rate base.

Additionally, the Company proposes adjusting other O&M expense by $4,025,000. This adjustment represents the difference between the Company's actual test year O&M expense attributable to the Customer Connect project of $640,000, and the Company's projected average annual O&M expense of $4,665,000 during the 2019 and 2020 years.

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ORS proposes a deferral balance of $3,189,000 which consists of the Company's actual deferred O&M expenditures as of December 31, 2018. As ordered by the Commission, ORS does not recommend including the Company's estimated O&M expenditures in the deferral balance as they are not actual costs. ORS does not recommend a return on any deferred expenses, and ORS does not recommend that any of the deferral balance be included in rate base since the balance consists entirely of deferred O&M expense. ORS's recommendation to exclude the actual deferred O&M expense from rate base is consistent with regulatory accounting practices for operating-related costs. ORS's recommendation still allows the Company to recover its actual deferred costs through amortization of the proposed deferral balance which is a sufficient level of cost recovery. If the Company is allowed to include deferred O&M expenses in rate base, the Company will earn a return on its O&M expenses.

The Company proposes to increase other O&M expense by $4,025,000 which the Company identified as an estimate. The Company should not be allowed to recover estimated or projected O&M expenditures as they are not known and measurable. The Company recorded $640,000 in actual O&M expense during the test year attributed to the Customer Connect project and ORS recommends approval of these known and measurable expenses.

Adjustment #35 – Amortize Deferred Cost Balance Related to South Carolina Grid

The Company proposes to adjust depreciation and amortization expense by $3,356,000, income taxes by ($837,000), working capital investment by $3,356,000, and accumulated deferred taxes by ($837,000) to amortize the deferred cost balance related to SC grid. ORS proposes to adjust depreciation and amortization expense by $1,181,000, income taxes by ($295,000), working capital investment by $2,475,000, and accumulated

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deferred taxes by ($618,000) to amortize the deferred cost balance related to South Carolina grid.

Commission Order No. 2018-751 granted the Company's request "to defer the incremental Operating and Maintenance ("OAM"), depreciation and property taxes associated with certain capital assets installed as part of its Power/Forward work, as well as the carrying cost on the investment and on the deferred costs at each utility's weighted average cost of capital." The Commission order also stated "the issuance of the requested accounting order would not prejudice the right of any party to address the prudency of these costs in the Companies' next general rate case proceeding." The Company provided ORS with support for a deferral balance of $6,713,000 consisting of $3,277,000 in deferred cost of capital, $3,171,000 in deferred depreciation, O&M, and property tax expenses, and $266,000 in after-tax return on deferred costs. The Company proposes amortizing this deferral balance over a two year period, and including the balance less one year of amortization in rate base.

ORS proposes a deferral balance of $5,904,000 which will provide the Company a recovery of the same deferred cost of capital, deferred depreciation, deferred O&M, and deferred property tax expenses as the Company's proposal, but does not include a return on those deferred costs. ORS recommends the deferred cost of capital portion of the deferral balance be included in rate base. ORS does not recommend that the deferred depreciation, O&M, and property tax expense portion of the deferral balance be included in rate base. ORS's recommendation to include the deferred cost of capital portion of the deferral in rate base, and exclude the deferred depreciation, O&M, and property tax expenses from rate base is consistent with regulatory accounting practices for capital-related and operating-related

costs. ORS's recommendation still allows the Company to recover its actual deferred costs through amortization of the proposed deferral balance which is a sufficient level of cost recovery. If the Company is allowed to include depreciation, O&M, and property tax expense in rate base, the Company will earn a return on these expenses.

ORS proposes amortizing the deferral balance over a period of 5 years. This amortization period was provided by the ORS Utility Rates Department, and is addressed in more detail in the testimony of ORS witness Anthony Sandonato.

Q. WILL YOU UPDATE YOUR TESTIMONY BASED ON INFORMATION THAT BECOMES AVAILABLE?

A. Yes. ORS fully reserves the right to revise its recommendations via supplemental testimony should new information become available not previously provided by the Company.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

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SURREBUTTAL TESTIMONY OF

ZACHARY J. PAYNE

ON BEHALF OF

THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF

DOCKET NO. 2018-319-E

IN RE: APPLICATION OF DUKE ENERGY CAROLINAS, LLC FOR ADJUSTMENTS IN ELECTRIC RATE SCHEDULES AND TARIFFS AND REQUEST FOR AN ACCOUNTING ORDER

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.

A. My name is Zachary J. Payne. My business address is 1401 Main Street, Suite 900, Columbia, South Carolina, 29201. I am employed by the South Carolina Office of Regulatory Staff ("ORS") in the Audit Department as a Senior Auditor.

Q. ARE YOU THE SAME ZACHARY PAYNE WHO PRESENTED DIRECT TESTIMONY IN THIS DOCKET?

A. Yes. I pre-filed direct testimony related to ORS's findings and recommendations for certain adjustments in this proceeding on February 26, 2019.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY IN THIS PROCEEDING?

A. The purpose of my surrebuttal testimony is to address certain issues raised in the rebuttal testimonies of Duke Energy Carolinas, LLC ("Company" or "DEC") witnesses Kim H. Smith, Robert B. Hevert, and Dr. Julius A. Wright. In my surrebuttal testimony, I will address the Company's position regarding the assertion the Company is "entitled" to a return

on deferred expenses until the money spent is fully recovered. I will also clarify the Company's mischaracterizations of my direct testimony. The issues I am addressing in surrebuttal are specific to Company and ORS Adjustments 7, 13, 18, 19, 30, and 35, all of which are related to accounting deferrals.

Q. WILL ORS'S RECOMMENDED TREATMENT OF THE COMPANY'S ACCOUNTING DEFERRALS ADDRESS THE CONCERNS OF THE USING AND CONSUMING PUBLIC, ALL CLASSES OF CUSTOMERS, AND ALLOW THE COMPANY TO CONTINUE TO PROVIDE RELIABLE AND HIGH-QUALITY SERVICE?

A. Yes.

Q. PLEASE EXPLAIN WHY.

A. ORS's proposals represent a reasonable and equitable approach to the Company's recovery of deferred costs. ORS's recommendations allow the Company to include costs that were largely incurred outside of the Test Year, by including approximately $24,000,000 in amortization expense and including approximately $115,000,000 in unamortized deferral balances in rate base. As illustrated in the table below, the ORS's recommended accounting treatment contributes approximately $33,000,000 to the ORS proposed revenue increase of $82,357,000 or more than 40%. In comparison, the Company's proposals related to recovery of deferred balances included approximately $75,000,000 in amortization expense and included approximately $243,000,000 in unamortized deferral balances in rate base. The Company's recommended treatment contributes roughly $94,000,000 (more than 40%) to the Company proposed revenue increase of $230,807,000.

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Table 1.1 – Proposed Treatment of Accounting Deferrals			
	ORS Proposal	Company Proposal	Difference
Amortization Expense	$24,000,000	$75,000,000	($50,000,000)
Unamortized Deferral Balances in Rate Base	$115,000,000	$243,000,000	($128,000,000)
Resulting Revenue Requirement	$33,000,000	$94,000,000	($61,000,000)
Total Revenue Requirement	$82,357,000	$230,807,000	($148,450,000)

The majority of Company's witnesses Smith, Hevert and Wright rebuttal testimony addresses the issue of return on deferred costs and rate base treatment for the accounting deferrals. For comparison purposes, ORS calculated the difference from the Company's proposal based solely on the aspect of a return on deferred costs and rate base inclusion. If ORS's recommendations incorporated the same amortization periods as the Company, and did not include a change to the allowable coal ash costs, ORS's reduction to the Company's revenue requirement based on the ORS recommended accounting treatment of deferred balances would have been approximately $4,000,000. The ORS recommended accounting treatment for deferrals is a relatively minor reduction to the Company's operating experience.

Q. WHAT SOUTH CAROLINA STATUTES OR REGULATORY STANDARDS GOVERN THE RECOVERY OF A COST OF CAPITAL RETURN ON A DEFERRAL BALANCE?

A. ORS did not locate any South Carolina statutes or regulatory standards that govern recovery of a cost of capital return on a deferral balance. Therefore, the Public Service

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Commission of South Carolina ("Commission") has the duty to determine the most equitable treatment of the deferral balances for the customers and the Company.

Q. WHAT JUSTIFICATION DOES THE COMPANY OFFER FOR INCLUSION OF A COST OF CAPITAL RETURN ON THE RECOVERY OF THE DEFERRAL BALANCES?

A. The Company witnesses do not offer, in rebuttal testimony, a South Carolina statute or accounting standard to support the Company's inclusion of cost recovery of the weighted average cost of capital ("WACC") in the recovery of the deferral balances in Adjustments 7, 13, 18, 19, 30, and 35. Outside of the coal ash cost disallowance proposed by ORS witness Dan Wittliff, the main point of disagreement between the Company and ORS is the issue of whether the customers should pay the Company the WACC on the Company's deferred costs.

The Company claims deferred costs were 100% financed by debt and equity because the deferred costs were not included in the Company's cost of service. Therefore, the Company asserts it should be allowed to recover financing costs by calculating a WACC return on deferred costs and include unamortized balances in rate base to earn a return going forward.

Q. DOES ORS AGREE WITH THE COMPANY'S JUSTIFICATION FOR INCLUSION OF A RETURN ON THE DEFERRED BALANCE?

A. No. ORS recommends the Commission apply the proper accounting treatment to the expenses contained in the deferral balances as it would absent the deferral account. This requires the deferral balances to be separated into two categories: operating-related costs and capital-related costs. The rates and revenue requirement are designed by the

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Commission to provide the Company a reasonable opportunity to recover prudently incurred operations and maintenance ("O&M") expenses, and a fair and reasonable return on its capital investments to provide customers with reliable and high-quality service.

The rebuttal testimonies of Company witnesses Smith, Wright, and Hevert failed to acknowledge the Company collected $1.7 billion dollars in operating revenues from South Carolina customers per the Application. These revenues were paid to the Company by South Carolina customers during the 2017 test year through service rates that were designed to allow recovery of the Company's operating costs as well as provide a reasonable return on shareholders' capital investments.

Q. PLEASE EXPLAIN ORS'S RECOMMENDATIONS FOR COST RECOVERY TREATMENT FOR THE COMPANY'S DEFERRED BALANCES.

A. The determination of what, how and over what time period a utility receives cost recovery for accounting deferrals through service rates is ultimately within the discretion of the Commission. As I stated in my direct testimony, with the exception of the coal ash cost disallowances proposed by ORS witness Dan Wittliff, ORS recommends no additional adjustments to the actual costs incurred and deferred by the Company. ORS's recommendation achieves an equitable sharing of deferred costs between the Company's customers and the Company's shareholders.

Q. WHAT REGULATORY AND/OR ACCOUNTING STANDARDS DO OTHER STATE COMMISSION'S APPLY TO THE RECOVERY OF DEFERRED BALANCES?

A. ORS's research indicates regulatory asset recovery through service rates has been decided by state commissions largely on a case by case basis. In addition, ORS did not find

specific statutes in South Carolina that address the treatment of regulatory accounting deferrals. Historic orders issued by the Commission included various methods of deferral balance recovery. Based on ORS's research, ORS concludes, cost recovery for deferred balances is determined by state Commissions on a case by case basis.

Q. WHAT METHODS DO OTHER STATE COMMISSIONS UTILIZE TO DETERMINE COST RECOVERY TREATMENT FOR ACCOUNTING DEFERRALS?

A. The Minnesota Public Utility Commission applies a standard for the establishment of accounting deferrals and all components of the standard must be met to establish an accounting deferral. The standard is:

1. The expense must be related to utility operations for which ratepayers have incurred costs or received benefits;
2. It must be significant in amount;
3. It must be associated with unusual or extraordinary items; and
4. It is subject to review for reasonableness and prudence.

The New York Public Service Commission uses a similar, three-part test when considering approval of accounting deferrals which includes a test to determine if the extraordinary expenses are "material to earnings" (greater than 5% of income for shareholders). In Connecticut, utilities are not allowed to incur carrying costs in deferral balances until recovery begins. In New Hampshire, the decision to allow carrying costs on a deferred balance is decided case by case, but the New Hampshire Public Utilities Commission does not allow the deferral balances to be included in rate base. In Utah, much

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like South Carolina, the Public Service Commission has no formal regulatory guidelines or standards and prefers to determine the treatment of deferrals on a case by case basis.

Q. COMPANY WITNESS SMITH DEFINED DEFERRED COSTS AS COSTS THE COMPANY INCURRED AND NOT CURRENTLY RECOVERED THROUGH RATES. DO YOU AGREE WITH THIS DEFINITION?

A. No. In many instances, the Company used deferral accounting treatment to preserve the Company's ability to recover expenses incurred outside of the Test Year in the next general rate proceeding. Company witness Smith overlooks some very important criteria related to accounting deferrals.

A utility should be granted accounting deferrals for costs that meet a level of "extraordinary" in terms of circumstance and magnitude.[1] Meaning, the costs should be non-recurring, unforeseen, and out of management's control, such as uninsured storm damage, losses from early retirement of major plant assets (not provided for in depreciation) or environmental and regulatory remedies imposed by local, state or federal governments. The Federal Energy Regulatory Commission ("FERC") Electric Chart of Accounts (page 286) states that in order to be considered as extraordinary, an item should be more than approximately 5% of a utility's income, computed before extraordinary items.

ORS does not believe the Company's projects for which it has deferred costs such as Customer Connect, Grid Mod, and installation of AMI meters meet any of these criteria to be considered extraordinary. ORS allowed recovery of the costs actually incurred by the

[1] Deloitte, *Regulated utilities manual A Service for regulated utilities* at 34 (Feb. 2004) http://ipu.msu.edu/wp-content/uploads/2017/09/Deloitte-Regulated-Utilities-Manual-2012-2.pdf

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Company. However, ORS recommends the Commission not allow the Company shareholders to earn a cost of capital return on the non-extraordinary deferred operating costs.

Q. PLEASE EXPLAIN YOUR CONCERNS WITH COMPANY WITNESS SMITH'S DEFINITION OF DEFERRED COSTS.

A. Company witness Smith's definition is very broad, and if strictly applied, may allow the Company to seek more accounting deferrals for O&M costs in the future that are not classified as extraordinary. In South Carolina, a regulated utility's rates are established based on a historical test year adjusted for known and measurable changes. Since no one can predict the future, rates will often not represent all the specific operating costs that will be incurred by the Company during the time the rates are in effect. Without proper guardrails or guidelines related to accounting orders, the Commission may inadvertently allow utilities to reduce regulatory lag and shift risk to customers by establishing accounting orders for non-extraordinary expenses that occur outside of a historic test year.

The impact of this practice will be greatly inflated costs in future years which will be passed on to customers through rates. The impact will be greater if the utility is allowed to earn a cost of capital return on deferred O&M costs, during the time in which the O&M costs are deferred and while the O&M costs are amortized. This compounding of a return within the recovery of the deferred balance creates a situation where the utility earns a return on regulatory assets for the sole purpose to benefit their shareholders at the direct expense of the Company's customers.

Q. DO YOU AGREE WITH COMPANY WITNESS SMITH'S CHARACTERIZATION THAT ORS'S RECOMMENDATIONS ARE PUNITIVE?

A. No. Company's witness Smith's characterization that ORS's recommendations are "punitive" is meant to convey the Company will suffer irreparable harm – which is not true. ORS's recommendation to allow the Company to receive recovery of its incurred expenses outside of the Test Year is fair and equitable. ORS recommends the Commission limit the Company's recovery to the operating expenses because the Company provides no justification for financing daily operations. The Company should not be allowed to shift its risk to the customers through the allowance of a cost of capital return on O&M expenses. ORS recommends the Commission approve normalized annual operating expenses for the Company including approximately $24,000,000 of amortization expense to recover deferred costs which were not incurred during the Test Year. Absent specific Commission guidelines or guardrails to govern deferral balance recovery, ORS recommends an equitable sharing of the deferred balance of O&M between the customers and shareholders.

Q. DID ORS CONSIDER OTHER ALTERNATIVES FOR TREATMENT OF COST RECOVERY RELATED TO ACCOUNTING DEFERRALS?

A. Yes. ORS evaluated an alternative recommendation which would limit the Company's cost recovery of the deferred balances to the actual deferred costs. This alternative would not allow the Company any rate base treatment of capital-related costs. ORS did not advance this recommendation as it may negatively impact the Company's investment in and maintenance of utility facilities to provide reliable and high-quality utility services.

Q. IS THE COMMISSION REQURIED TO ACCOUNT FOR THE TIME VALUE OF MONEY IN ITS DETERMINATION OF COST RECOVERY FOR DEFERRED BALANCES?

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A. Company witness Wright asserts that ORS's recommendation is flawed because it does not account for the fact "these dollars were not borrowed from investors for free." ORS's recommended adjustments to deferred balances generously provide a return of and a return on capital-related costs. However, as stated in in my surrebuttal testimony, ORS does not agree that deferred O&M costs should earn a return. The Company should not be allowed to shift its risk to the customers through the allowance of a cost of capital return on O&M expenses.

Q. DO YOU AGREE WITH COMPANY WITNESS SMITH'S SUGGESTION THAT ORS'S RECOMMENDED TREATMENT FOR THESE ACCOUNTING DEFERRALS SHOULD BE APPLIED TO OTHER REGULATORY ASSETS AND LIABILITIES?

A. No. ORS concludes cost recovery for deferred balances is determined by state Commissions on a case by case basis. Company witness Smith argues that ORS's proposed treatment of these six accounting deferrals, should also be applied to a regulatory liability, such as accumulated deferred income tax ("ADIT"). Unlike other regulatory assets, ADIT has a prescribed accounting treatment which is documented in regulatory and accounting publications and guidelines. For instance, *Accounting for Public Utilities* states "[t]he general view in this respect is that these liabilities represent a source of interest-free funds supplied by the U.S Treasury that the utility is free to use in support of rate base investment. Therefore, the rate base must be reduced by accumulated deferred income tax ("ADIT") liabilities balance to avoid paying a return on funds that are cost free."[2] Additionally, the NARUC *Rate Case and Audit Manual* states "[u]nder Statement of Financial Accounting

[2] Robert L. Hahne & Gregory E. Aliff, *Accounting for Public Utilities*, § 4.04[9] (2018).

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Standards (SFAS) 109, Accounting for Income Taxes, companies must recognize changes in tax rates when they occur and use deferred tax accounting. The resulting comprehensive interperiod tax allocation, or income tax normalization, cause a rate base adjustment that is amortized over the tax life of the timing difference."[3] The accounting deferrals the Company is seeking to recover in this docket, do not have clearly defined procedures established to determine the regulatory accounting treatment.

Q. WILL YOU UPDATE YOUR SURREBUTTAL TESTIMONY BASED ON INFORMATION THAT BECOMES AVAILABLE?

A. Yes. ORS fully reserves the right to revise its recommendations via supplemental testimony should new information become available not previously provided by the Company.

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes, it does.

[3] NARUC Staff Subcommittee on Accounting and Finance, *Rate Case and Audit Manual, pg. 24 (2003)*

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Q Now, Mr. Hamm, can you please summarize your surrebuttal testimony for the Commission?

A (HAMM) Yes. Mr. Chairman and members of the Commission, good afternoon. The purpose of my testimony is to address and contest certain legal expenses the Company --

CHAIRMAN RANDALL: Mr. Hamm, they say they can't hear you over livestream, so make sure you get close to that microphone. Want you to go worldwide.

WITNESS HAMM: I'm surprised that somebody couldn't hear me, Your Honor. But I certainly want to do that. Is this better, sir?

CHAIRMAN RANDALL: I think so.

WITNESS HAMM: Okay.

CHAIRMAN RANDALL: I'm getting a nod from the back.

WITNESS HAMM: All right.

THE EXAMINATION BY MR. NELSON CONTINUES.

A (HAMM) Mr. Chairman, members of the Commission, hello again. The purpose of my testimony is to address certain contested legal expenses that the Company seeks to recover from their customers. I am responding to the Company witness Dr. Wright mainly. If you read Dr. Wright's testimony in this

area, he just generally makes the assertion that all legal expenses of the Company should be and are automatically fair and reasonable and, therefore, should be approved by this commission. However, Dr. Wright forgets that the Company bears the burden of proving that any expense is not only fair and reasonable but is it fair and reasonable and should it be charged to customers? There are expenses -- and this commission has done it in the past -- that are more properly borne by shareholders, and there are expenses that are properly charged to customers.

In addressing that issue, I assert in my testimony that the witnesses offered by the Company and the Company itself have not met the basic burden of persuasion in providing substantial evidence, as required by both the Administrative Procedures Act and rulings of the Supreme Court. Since they don't meet those standards, those expenses should not be approved.

In my first rate case that I participated in 41 years ago, the Company made certain assertions and it proceeded as if, "Well, the Company had spent it, and, therefore, the Company was in the best position to know whether it ought to be

approved," and that's how the hearing started. I think, given the evolving nature of regulatory law in South Carolina and, indeed, the evolving nature of some of the orders this commission has issued, we're now in the midst of an evolution of the policies that ought to be applied. You know, "Hope and Bluefield" talk about balancing. Those cases are mainly quoted for the purposes of rate of return to shareholders, but remember, those decisions bear equal application to Company expenses sought to be recovered during the regulatory process.

It is our position and, in fact, ORS's position based on decisions emanating from this commission in recent days that the Commission must first examine: Why does this expense exist in the first place? What happened? Who generated the need for the expense? Did the Company engage in an action that resulted in allegations that they violated some particular law, operating standard, or regulation? And, if they did, the Commission must then determine, well, if the Company management controlled by shareholders made that kind of poor management decision, the Commission must examine that and determine, "All right. If

you took action that resulted in adverse costs to the Company, certainly not under the control of customers and ratepayers, why should ratepayers, rather than shareholders, bear those costs?" That is fair; that is reasonable; that is consistent with the United States Supreme Court precedent and certainly consistent with precedent issued by the South Carolina Supreme Court, which is why I make the observation that -- the Commission -- ORS recommends the Commission examine the actions taken by the Company before the alleged allegation of misconduct took place to better understand why whatever entity brought whatever action that created this underlying cost.

Management decisions and conduct are directly relevant in determining if -- if customers should be forced to pay any legal expenses. And, in fact, this commission has clearly, recently, fully embraced that concept in the CWS case in which the Commission, on reconsideration, declined to force CWS customers to pay for a losing environmental challenge begun by the Company.

South Carolina's Supreme Court has ruled that the Commission should not reward the Company for violations of operating standards, whether state or

and cited it. I'll -- I'll proceed, Mr. Chairman.

CHAIRMAN RANDALL: Thank you.

THE EXAMINATION BY MR. NELSON CONTINUES.

A (HAMM) From a policy standpoint, it's our position -- and I think it's a position endorsed by this commission. I don't want my comments on behalf of ORS to be unduly critical of -- of the Commission or the Company. But I have a great deal -- and ORS has a great deal of respect for the Company, and I have a great deal of respect for the individuals that represent them. And my comments are made in the -- for the purpose of encouraging the Commission to further examine the underlying causes for exception -- for the reason that they exist rather than, "Well, it's a legal expense" and maybe "We've done it before." I think the -- the suggestion, "Well, we haven't considered that before," is belied by the fact that I think we're all under -- operating under greater public and regulatory scrutiny and we have a joint obligation for us to give you the best evidence and positions we can and for you to make your best decision -- and you can only make the best decision if all of the parties give you as many diverse perspectives

as possible, and that's what we attempt to do.

And, specifically, now going to the exhibit that I want to reference, Witness Smith, in her testimony and adjustments, eliminates a legal expense of $575,000. Let me first say: Is that a great deal of money? In the scheme of this case or any case, not particularly. But should the dollar amount of any challenged expense make a difference? And my answer and recommendation to the Commission on behalf of ORS is: Absolutely not.

The cumulative impact of various adjustments either adopted or not adopted over time can amount to multimillion dollars, and that's why we say: Look at the issue, underlying evidence. Don't say, "Well, it's such a small amount, we're not going to mess with it." We're beyond that stage. What you know from the evidence submitted by the Company on these legal expenses of $575,000 that are allocated costs to South Carolina. There's -- the total expense is much larger. As you know, South Carolina allocation is -- of the total Company is about 24 or 25 percent. But when we asked in discovery, "We want to see the expenses and invoices so we can go and look underlying -- the underlying data" --

MR. ELLERBE: Mr. Chairman, we're --

A (HAMM) -- of why something took place --

MR. ELLERBE: Once again, this is -- this is supposed to be a summary of the surrebuttal testimony, and it's gone well beyond that.

CHAIRMAN RANDALL: Agreed.

WITNESS HAMM: Mr. Chairman, I will --

CHAIRMAN RANDALL: Let's -- let's move along, Mr. Hamm.

WITNESS HAMM: That's fine, Mr. Chairman.

THE EXAMINATION BY MR. NELSON CONTINUES.

A (HAMM) Finally, our -- our position and will be reflected -- reflected in my testimony is that sound regulatory policy only means something if it is consistently applied. And we're respectfully recommending that you examine our adjustments and the reason for them, many of which are predicated on this commission's prior determinations. And we look forward to being -- answering questions about it, both from Counsel and the Commission. That concludes my summary.

(PURSUANT TO PREVIOUS INSTRUCTION, THE PREFILED SURREBUTTAL TESTIMONY OF STEVEN W. HAMM FOLLOWS.)

SURREBUTTAL TESTIMONY

AND EXHIBITS

OF

STEVEN W. HAMM

ON BEHALF OF

THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF

DOCKET NO. 2018-319-E

IN RE: APPLICATION OF DUKE ENERGY CAROLINAS, LLC FOR ADJUSTMENTS IN ELECTRIC RATE SCHEDULES AND TARIFFS AND REQUEST FOR AN ACCOUNTING ORDER

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Steven W. Hamm. My business address is 1401 Main Street, Suite 900, Columbia, South Carolina 29201. I am employed by the State of South Carolina as Special Counsel and Senior Advisor, in the Legal Department of the South Carolina Office of Regulatory Staff ("ORS").

Q. HAVE YOU PREVIOUSLY APPEARED BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA?

A. Yes. I appeared as Legal Counsel in my first contested case hearing before the Public Service Commission of South Carolina ("Commission" or "PSC") over 40 years ago, in the summer of 1978. At that point, I served as State Deputy Consumer Advocate and head of the newly created Division of Consumer Advocacy at the South Carolina Department of Consumer Affairs. I was named Administrator and State Consumer Advocate for the Department in 1981 by the Commission on Consumer Affairs. I served

at the Department of Consumer Affairs for almost 18 years and left the Department to enter the private practice of law in 1994. I represented many regulated entities before the Commission during my 24 years in private practice. I have appeared before the Commission in various types of regulatory proceedings. I left private practice and joined ORS in September 2018.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. The purpose of my surrebuttal testimony is to address the regulatory policy issues related to certain legal expenses sought by Duke Energy Carolinas, LLC ("DEC" or "Company") which are addressed in the rebuttal testimony of DEC witness Kim Smith and Dr. Julius Wright. I will discuss why ORS recommended the Commission disallow cost recovery from customers for those identified legal expenses.

Q. HAS REGULATORY PUBLIC POLICY CHANGED AND EVOLVED DURING YOUR CAREER OF APPEARING BEFORE THE COMMISSION?

A. Yes. I have been directly involved in working to shape and revise the regulatory public policy standards that serve to guide the Commission in evaluating rate making positions advanced by regulated companies. Rulings by the South Carolina Supreme Court in response to appeals of Commission orders have been a significant factor in how the Commission decides contested issues.

Q. WHAT CHANGES HAVE YOU OBSERVED DURING THE PAST 40 YEARS OF APPEARING BEFORE THE COMMISSION?

A. The Commission has modified policy positions in response to efforts by regulated companies to claim that a utility should be able to recover all costs of operations from ratepayers, regardless of who actually benefitted from those expenses.

Q. CAN YOU PROVIDE THE COMMISSION WITH AN EXAMPLE?

A. Yes. In a recent Carolina Water Service, Inc. ("CWS") rate case, the Commission addressed whether the contested proposed legal expenses should be paid by customers. Based upon the record testimony and evidence, the Commission ruled that certain CWS litigation expenses should be assigned to stockholders and not customers.[1]

Q. HOW WOULD YOU DESCRIBE THE CURRENT LEGAL EXPENSE REGULATORY POLICY ADOPTED BY THE COMMISSION?

A. I believe the current Commission approach to examine proposed legal expense recovery is focused on a determination of whether the underlying legal expenses in question should be paid by customers. The Commission regulatory policy includes an examination of the legal expenses to determine if the Company's legal costs and expenses were the result of management decisions and whether the Company achieved an outcome that provided an economic benefit to customers from the litigation. Said another way, the Commission will generally not include legal costs and expenses in rates paid by customers in legal disputes in which the Company was found at fault and was unable to demonstrate its achievement of an outcome that provided economic benefit to its customers.

Q. WHY SHOULD MANAGEMENT DECISIONS AND ACTIONS AFFECT WHETHER OR NOT PROPOSED LEGAL EXPENSES SHOULD BE RECOVERED BY CUSTOMERS?

A. The rates and charges for public utility service in South Carolina are required by law to meet the regulatory standard of being both fair and reasonable to customers and provide a reasonable rate of return to Company investors. Company management is

[1] Docket No. 2017-292-WS – Order 2018-802

required to take steps to comply with all applicable legal and regulatory requirements. Final Commission orders must reflect a proper balancing of Company and customers' interests which now require a full examination of why those expenses were incurred in the first place. The South Carolina Supreme Court has confirmed and ruled that the Commission has the regulatory authority to reject portions of expenses previously incurred by a regulatory utility.[2]

Q. HOW DOES DEC ATTEMPT TO SUPPORT PAYMENT OF COAL ASH LITIGATION COSTS?

A. DEC filed Direct and Rebuttal Testimony for Dr. Julius Wright that briefly addressed coal ash legal costs related to insurance recovery litigation and the legal defense costs of North Carolina enforcement action.

Q. DOES DR. WRIGHT PROVIDE ANY SPECIFIC LEGAL DATA OR INFORMATION TO JUSTIFY COAL ASH RELATED LEGAL EXPENDITURES BY DEC?

A. No.

Q. PLEASE EXPLAIN:

A. Dr. Wright makes no attempt to justify that DEC wants its customers to pay all legal costs. The broad assertion is made that "legal fees should be recoverable because they represent a legitimate, reasonable and prudent business expenditure".

Q. WHAT OTHER BASIS DOES DR. WRIGHT OFFER TO THE COMMISSION?

[2] *Utilities Services of SC v. SC Office of Regulatory Staff*, 392 S.C. 96, 708 S.E.2d 755 (2011).

A. He also makes a general statement that "The company must be afforded the opportunity to defend itself from lawsuits especially from non-governmental related parties..."

Q. DOES ORS'S PROPOSED DISALLOWANCE PREVENT DEC FROM DEFENDING ITSELF FROM LAWSUITS?

A. No.

Q. PLEASE EXPLAIN.

A. DEC has provided no substantive information for any coal ash litigation expenses to justify customers being responsible for legal fees and costs. Every proposed legal expense is always subject to a disallowance by the Commission based on a variety of considerations.

Q. HAS THE COMMISSION DISALLOWED LEGAL EXPENSES?

A. Yes.

Q. PLEASE EXPLAIN.

A. The Commission recently disallowed certain legal expenses requested by CWS in a Reconsideration Order issued on January 25, 2019. The Commission declined to force customers to pay for the Company's legal expenses related to its failure to successfully overturn a federal court decision finding the Company in violation of the Clean Water Act.[3]

Q. HAVE YOU EXAMINED LITIGATION RELATED COSTS AND EXPENSES SOUGHT BY DEC IN THIS DOCKET?

A. Yes.

[3] Docket No. 2017-292-WS – Order 2018-802

Q. SHOULD THE COMMISSION APPROVE ALL DEC LEGAL EXPENSES SOUGHT IN THIS PROCEEDING?

A. No.

Q. PLEASE EXPLAIN YOUR RESPONSE TO THE COMMISSION.

A. As an initial policy approach, the Commission must first determine if the Company's proposed legal expense should even be considered as a ratemaking operating expense to be included in rates authorized by the Commission. "When litigation involves claims asserting failure of the utility to adhere to state or federal law, we must look carefully at the matter to determine whether expenses associated with defending the action should be included in rates paid by customers." Docket No. 2017-292-WS, Order No. 2018-802 p.16

Q. ARE YOU SUGGESTING THAT A REGULATORY UTILITY MUST MEET A PERFECTION STANDARD IN ORDER TO OBTAIN COST RECOVERY FROM THE COMMISSION?

A. No. The Commission has many years of experience examining complex cases from regulating a wide range of regulated entities. What has changed over my 40 years of experience before the Commission is the Commission now demands greater accountability before it approves Company requests for rate adjustments.

Q. PLEASE EXPLAIN THE LITIGATION EXPENSES AT ISSUE IN THIS RATE PROCEEDING.

A. DEC seeks ratepayer recovery of coal ash litigation expenses. Most notable is the extremely summary explanation provided by DEC to ORS discovery inquiries. DEC provided the very same limited written justification for several legal invoices for coal ash

litigation expenses. The description of services for the legal invoice, as provided by DEC in its response to ORS states "legal fees and expenses related to potential insurance recovery for "coal ash." Exhibits SWH-1 – SWH-4.

Q. ARE THERE ANY OTHER DEC SUMMARIES FOR OTHER COAL ASH LEGAL EXPENSES?

A. Yes. DEC provided the following brief justification regarding 5 other listed coal ash legal expenses. The description for services performed stated "Defense of coal ash state enforcement litigation for DEC, LLC Sites based on alternative fee arrangement."

Q. PLEASE EXPLAIN WHY ORS RECOMMENDS THE COMMISSION EXCLUDE FROM COST RECOVERY OF COAL ASH LEGAL INVOICES.

A. DEC has not provided the Commission or ORS with any clear and detailed information supporting its claim for recovery of hundreds of thousand dollars of coal ash litigation expenses. The brief DEC explanations merely advise the Commission that DEC is defending unnamed Company actions related to coal ash cases filed against DEC. The Commission only knows that DEC believes there may be "*potential* insurance recovery for coal ash" (emphasis added). However, no insurance recovery has been received by DEC or shared with customers as of the date of this testimony. DEC has not demonstrated that any of the coal ash litigation expenses merit inclusion in the rates that may be established by the Commission in this DEC proceeding.

Q. WHAT IF A LEGAL FORUM HAVING JURISDICTION OVER DEC RULES THAT THE MASSIVE DEC COAL ASH DISCHARGE IN NORTH CAROLINA WAS THE RESULT OF DEC MANAGEMENT FAILURE?

A. DEC has the legal obligation to file any existing orders or decisions relating to coal ash matters with the Commission. Sound regulatory policy should require the review of specific positions by DEC and in related litigation proceedings before the Commission has a basis to make final regulatory decisions on what coal ash related litigation costs or expenses, if any, should be included in DEC rates in South Carolina.

Q. DOES ORS RECOMMEND THE COMMISSION APPROVE RATES WHICH INCLUDE THE ADVERSE COST IMPACTS RESULTING FROM POOR DEC MANAGEMENT DECISIONS?

A. As a general matter, ORS believes the only sound regulatory policy answer is no. ORS recommends the Commission review and consider all relevant management and legal factors. In this evolving regulatory environment and concerns from the General Assembly clearly point to the conclusion that Company management will not be rewarded for failure to comply with federal and state laws.

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes, it does.

A (PAYNE) Yes, ma'am?
Q On Page 1 starting at Line 15 of your direct testimony, you refer to Governmental Accounting Standards Board Statement Number 62; is that correct?
A (PAYNE) Yes, ma'am.
Q And is Duke subject to General Accounting Standards Board Statement Number 62?
A (PAYNE) In that they are a regulated utility, yes.
Q Why would a company that is not a government entity be subject to the GASB and not the FASB?
A (PAYNE) Because they are a regulated utility. GASB Statement 62 does have a section that is dedicated specifically to regulated utilities.
Q And is that what -- for the amounts that must be paid by government agencies? Or if a government agency is a utility?
A (PAYNE) It said, "Regulated utilities who operate and receive their revenues through customers."
Q Okay. And were you here when Mr. Doss was testifying?
A (PAYNE) No. And I don't believe I watched it livestream either.
Q Okay. And are you aware when he recited the accounting principles that the Company follows,

GASB was not among them?

MR. NELSON: I think he just answered that he didn't hear that testimony, so I don't know how he can testify at that.

MS. SMITH: Okay.

CHAIRMAN RANDALL: Sustained.

A (PAYNE) Reasonable to assume that FASB would be more appropriate, yes.

Q Okay. And is GASB a private, nongovernmental organization that creates accounting reporting standards or generally accepted accounting principles for state and local governments in the United States?

A (PAYNE) Yes.

Q Okay. Do you know the total amount of tax regulatory liability -- let me rephrase.

Do you know the total amount of regulatory liability related to deferred income tax in this case?

A (PAYNE) Yes. I don't know it off the top of my head, but I -- I've seen it. I believe 1.7 billion is what Kim Smith said in her surrebuttal.

Q That's correct, yes. Is that included in rate base as a credit?

A (PAYNE) Yes. It is.

Q Does that mean that customers are getting a return on the balance?
A (PAYNE) That means it's reducing the return that the shareholders are getting, which is essentially the same thing, so yes.
Q Okay. And so, do you believe that both regulatory liabilities and regulatory assets should get a return?
A (PAYNE) I believe that both should be examined on a case-by-case basis unless there is precedent or standards that define how both should be treated. And I believe in the case of ADIT, it is very well prescribed that ADIT should be included as a liability in rate base.
Q Okay. And we don't dispute that. You mentioned that in your testimony, right? You give a cite to the accounting -- accounting for public utilities?
A (PAYNE) Yes.
Q Okay. And so -- so there's a prescription out there for how ADIT is -- accumulated deferred income taxes -- there's a prescription for how that's treated?
A (PAYNE) Yes.
Q Okay.
A (PAYNE) In both accounting and regulatory.

Q Sure. And are you aware that the Company has been deferring a portion of its revenue related to the difference between the prior 35 percent Federal income tax rate and the current 21 percent income rate -- tax income rate since January 1st, 2018?
A (PAYNE) Yes. I am aware.
Q Okay. And that is not covered by the -- by the statement we described? That's excess deferred income tax. This is a little bit of a different animal?
A (PAYNE) It is, yes. There are additional documentation to that effect, but we didn't -- I personally haven't reviewed it.
Q Okay. And I believe Witness Smith referred to it as "deferred revenue" in her testimony; is that a fair --
A (PAYNE) Yeah. I gotcha. Yes.
Q Okay. And the Company's proposing to return that to customers?
A (PAYNE) Yes.
Q And -- and so, that balance would not have existed but the -- for the Commission's order ordering that deferral?
A (PAYNE) Yes.
Q And so, the EDIT was a Commission-ordered

regulatory liability within its discretion just like the other deferrals in this case was in the Commission's discretion?

A (PAYNE) Yes.

Q And so, in your opinion, should the Commission apply equal treatment to deferrals that fall under its jurisdiction?

A (PAYNE) I believe the deferral should be examined on a case-by-case basis unless there are standards in place. I also think it's fair to point out in this case that the EDIT -- the excess revenue or whatever we're going to call it -- in this case was also money that the customers had no choice in paying throughout the time, whereas the deferrals large part relate to projects that the Company has willfully chosen to pursue. I think there is a large difference there in the fact that the customers had no choice when they paid those rates based on what the tax rate was established at the time.

Q And, if I go through all those deferral requests and deferral orders, it will -- it will give us the purpose and nature of those deferrals, correct?

A (PAYNE) Yes.

Q I -- I don't want to dispute with you over each of

those. We can -- there's evidence on that?
A (PAYNE) Uh-huh.
Q Okay. Was the ORS policy on separating capital and O&M for deferrals articulated in any statute or rule?
A (PAYNE) No. Due to the lack of statutes and rules, we came up with that policy to align how those deferred expenses would've been treated had they not been deferred expenses, had they been treated within a proper test year for a rate case.
Q Okay. And so, it's a relatively new policy?
A (PAYNE) You could say that, yes.
Q Okay. All right. And it wasn't articulated at the time the Company requested the deferrals, correct?
A (PAYNE) No. It was not. We typically like to address deferrals through rate cases, not at the time that they are requested.
Q Okay. And is it still the ORS' desire to have a generic docket on deferrals later this year?
A (PAYNE) Yes. Especially after this process, we believe it's very important that we establish guidelines here in the state of South Carolina as to what companies should be allowed to defer and hopefully establish some guidelines as to how those companies may recover their deferrals.

Q Okay. And that would involve all utilities --
A (PAYNE) Yes.
Q -- ideally in a generic docket?
A (PAYNE) Yes.
Q And would the application of that docket be prospective?
A (PAYNE) Yes. It would.
Q Okay. And so, why does this new policy need to apply to existing deferrals? Why shouldn't they be looked at individually on a case-by-case basis as you suggest?
A (PAYNE) They are, and this is our proposal for these specific such deferrals in this case.
Q Okay. And the Commission is obviously free to make a different decision?
A (PAYNE) Yes. They are.
Q Okay. And that doesn't preclude anyone from making any arguments that they want to make in a generic docket applied prospectively?
A (PAYNE) No. They do not.
Q Okay. And deferrals could influence rate case timing; is that correct?
A (PAYNE) That is one aspect of deferrals, yes.
Q Okay. And, if a company understands that the ORS would have -- rather have more frequent rate

changes versus utilizing deferrals, utilities might file more frequent rate cases?

A (PAYNE) It's possible, but I also would like to point out the four of the six deferrals that the Company has requested were requested less than six months before the Company filed a petition for a rate case.

Q Okay. And, in fact -- well, let me skip one.

And I see you mentioned other states' deferrals?

A (PAYNE) We did some research to try to get an idea of what's done in other cases in order to formulate our position, yes.

Q Did you do an exhaustive review of all states?

A (PAYNE) I wouldn't call it an "exhaustive review." We polled our NARUC subcommittee on finance and were able to get responses back from other Public Staffs and Commissions.

Q Okay. And, I mean, there wasn't time to do --

A (PAYNE) Yeah. I mean, in -- in the grand scheme of things, no.

Q Okay. And, in a generic docket, there might be time to do a more expansive review?

A (PAYNE) Yes. I would hope, yes.

Q Okay.

A (PAYNE) Especially one that we initiate.
Q So, of the cases you found, are you representing that the way deferrals are treated in the cases you cited are the way all deferrals are treated in that state?
A (PAYNE) To the extent that the information was provided to us, that's our understanding.
Q Okay. But, if we looked at other orders within those states, there might be different results?
A (PAYNE) It's possible, especially depending on when said guidelines were established, of course.
Q Okay. And I noticed North Carolina wasn't on the list.
A (PAYNE) No. They were not, but we have spoken with Public Staff up there and -- and had an input on how they handle deferrals. I believe there are a few things that we may look to adopt in a future proceeding.
Q And some of those the Company may like and some of those the Company may not like?
A (PAYNE) I would imagine so.
Q Okay. And -- and is it -- it just seemed a curious omission -- are -- are you aware that most of the deferrals that the Company has in North Carolina have a return during the deferred period and during

the amortization period?
A (PAYNE) Yes. But I'm also aware that they begin amortizing their deferrals the day that they're granted, which is a very large departure from what we had requested.
Q Okay. That's only for storms, though, correct? That's not any other --
A (PAYNE) I -- I know at least for storms, yes.
Q Okay. But you don't have any knowledge for the other deferrals?
A (PAYNE) Outside of that, not -- not specifically, no.
Q Would you -- would it surprise you to know that's unique to storms?
A (PAYNE) No. I guess. But it -- yes.
Q Okay. And so, there's been a lot of testimony in this case about deferrals being a ratemaking convention.
A (PAYNE) Well, I mean, there's an accounting aspect to it, but the recovery of the deferrals is a ratemaking convention, yes.
Q Okay. And so, there may be states that might not need deferrals if they have a forward test year?
A (PAYNE) Yeah. So, if you're getting into -- yes. If they have that.

Q Okay. Or multiple riders?
A (PAYNE) There's a lot of alternate ratemaking mechanisms out there that, yes, could prevent the use of deferrals.
Q Okay. And those are all the types of things we might explore, and more, in a generic docket?
A (PAYNE) I believe that's -- if the Company would like to push that. I don't believe that's anything ORS would look into pursuing.
Q No. I mean, in terms of understanding what the policies are in other states that --
A (PAYNE) Oh.
Q -- happen to be --
A (PAYNE) Yes.
Q -- that would matter.
A (PAYNE) It wouldn't, yes. It wouldn't have an influence.
Q Okay. I don't mean to suggest that we're going to propose any of those things in a generic docket on deferrals, just a statement.

And let's see here. And so, it sounds like we're in agreement that it may make sense to take measure of the context of rate states -- rate setting in other states before focusing just on deferrals?

A (PAYNE) Yes. I -- to that, yes.
Q All right. I have no more further -- I have no more questions, excuse me.
A Thank you.
CHAIRMAN RANDALL: Thank you. Mr. Ellerbe?
MR. ELLERBE: Thank you, Mr. Chairman.

CROSS-EXAMINATION

BY MR. ELLERBE:
Q Mr. Hamm, I've got a few questions for you, sir. You mentioned in your summary and in your testimony that you -- excuse me -- let me get this.
MR. ELLERBE: (To Mr. Erskine) May I get the ELMO on? I don't need it --
MR. ERSKINE: It's on.
MR. ELLERBE: -- immediately, but --
MR. ERSKINE: It's on.
MR. ELLERBE: Okay.
MR. ERSKINE: Put the paper down. It's on.
MR. ELLERBE: Okay. Great. Thank you, Randy. Appreciate it.
Q Excuse me. All right. Mr. Hamm, you mentioned that you had had quite a great deal of experience in utility matters in litigation before this commission in cases appealed to the Supreme Court. Do you recall that testimony?

A (HAMM) Yes, sir.
Q And one of the cases -- and you have -- any number of cases we refer to as Hamm-this or Hamm-that; you're aware of that?
A (HAMM) Yes, sir.
Q Okay. I want to ask you about one that was decided in 1992. SCE&G was involved, and the -- the -- the Court made a important pronouncement about how the Commission should approach a utility's expenses. And I think -- I'm going to read this to you and see if you recall it. I think it will be very familiar to you.

In that case, the Court said, "Although the burden of proof of the reasonableness of all costs incurred, which enter into a rate increase request, rest with the utility, the utility's expenses are presumed to be reasonable and incurred in good faith." There are a number of cases cited. And the -- the -- the opinion goes on to say, "This presumption does not shift the burden of persuasion, but shifts the burden of production on to the Commission or intervenors." Do you recall that law, sir?
A (HAMM) Yes, sir. I do.
Q Okay. And that is -- that's still the law in South

Carolina?

A (HAMM) Generally. The -- I think the Supreme Court is still modifying. Again, talking about this evolving policy about what they're willing to accept and what they're willing not and the burden that remains on, for example --

MR. DONG: Mr. Hamm --

A (HAMM) -- the utility --

MR. DONG: -- could you speak --

A (HAMM) -- of one of the most --

MR. DONG: -- closely --

A (HAMM) -- of one of the most --

MR. DONG: -- more closely to the mic?

A (HAMM) Excuse me.

Q There's still a presumption of reasonableness. utility's expenses are still presumed to be reasonable and incurred in good faith?

A (HAMM) That's the presumption, but that's a rebuttable presumption, and that's exactly what's taking place in this case.

Q Okay. And your -- your -- what you relied upon for rebutting the presumption were the exhibits to your testimony -- Exhibits 1 through 4?

A (HAMM) Part of them and the -- and other Supreme Court rulings, but yes. I -- my -- I state

directly in my testimony that the summary data that the Company provided to this commission does not meet -- once we've contested the expense -- does not meet the burden of proof even under the case that you cited by the Supreme Court.

Q May -- may we go through the exhibits, please, sir?

A (HAMM) Oh, of course.

Q Do you have them in front of you?

A (HAMM) Well, I --

Q They're attached to your --

A (HAMM) I have my notes.

Q Do you have your testimony? They were attached to your --

A (HAMM) I know they were.

Q -- testimony.

A (HAMM) I have my testimony. I don't know that I have --

MR. ELLERBE: Could -- could Mr. Hamm be given a copy of his --

MS. PITTMAN: We're looking for it now.

MR. NELSON: Yeah. I was going to say we -- we've turned the -- the one copy we had --

WITNESS HAMM: Thank you, Commissioner Belser.

MR. ELLERBE: I, in particular, need the exhibits.

COMMISSIONER BELSER: Before you give that to him, I do want to advise Counsel there are a couple of notes that I wrote on there, but what it was was where they were confidential, I highlighted just so I would not disclose confidential. And then, on the exhibits, I wrote "confidential," but that's all that should be written on those.

MR. ELLERBE: Maybe I'll -- and that's fine. I have no problem with that at all.

COMMISSIONER BELSER: Just wanted you to be aware.

MR. ELLERBE: Yeah.

WITNESS HAMM: And, Counsel, my understanding again -- excuse me. Counsel, my understanding is we are not -- the Company has relieved ORS from the burden of treating this as confidential and can speak freely about them in front of --

MR. ELLERBE: Yes, sir.

WITNESS HAMM: -- the Commission.

MR. ELLERBE: Yes, sir.

WITNESS HAMM: Okay.

THE EXAMINATION BY MR. ELLERBE CONTINUES.

Q So -- so we're all -- but here is SWH-1, correct,

sir?
A (HAMM) Yes.
Q Okay. And this is a request -- an audit information request from the ORS to Duke Energy Carolinas. Do you see that, sir?
A (HAMM) Yes, sir. I do.
Q And it's -- it's Number 55-1, right?
A (HAMM) Yes, sir.
Q And it says, "Please identify all litigation expenses contained in the Company's response to Utility's Rate Request 26 that are related to coal ash." Do you see that, sir?
A (HAMM) I do.
Q Okay. And the Company response says, "See the attached highlighted document." And, now, I'm going to show you this document, which unfortunately --
A (HAMM) Counsel, I -- I have that document in front of me.
Q Okay.
A (HAMM) I don't know if the Commission's going to be able to read that --
Q Yeah. It's --
A (HAMM) -- tiny print.
Q Well, we'll work -- we'll work through it. Now, is

this the response to that audit information request, Mr. Hamm?

A (HAMM) Yes. It is.

Q Is there anything wrong with that response? Didn't it provide the information that was requested?

A (HAMM) My answer is no.

Q But if -- the request for information was, "Identify all litigation expenses."

A (HAMM) Yes.

Q Do you see that?

A (HAMM) Yes. And you make reference to invoices, but they're -- the invoice provides the Commission with zero information with regard to the underlying activities that generated that dollar amount.

Q Mr. Hamm, this -- this document was not submitted to the Commission until you submitted it as an exhibit to your testimony.

A (HAMM) I know that.

Q The company did not submit it to the Commission.

A (HAMM) I can see why.

Q That -- that -- that was an AIR -- a discovery request from the ORS to the Company. The Company provided this spreadsheet. Do you see that, sir?

A (HAMM) I see the spreadsheet, but our position remains the same. It is essentially worthless.

Q Let's -- let's work our way through them, shall we?
A (HAMM) Please do.
Q Okay. Exhibit 2 -- do you have that?
A (HAMM) Yes. That's what I'm holding in my hand, sir. I think that's what I'm holding here. Yeah.
Q And that request is, "Of those coal ash litigation expenses identified, please identify what account they are booked to, and the SC retail portion that was included in the Company's application for recovery in rates in this docket." Do you see that, sir?
A (HAMM) Yes, sir. I do.
Q Okay. Is this the response?
A (HAMM) Yes. It's the response. It's the same document that we looked at without markings.
Q No, sir. I don't think that's correct. I think you will see that there are -- that the -- it was -- this one has the accounts they were booked to. And it also has in the far, right column "SC Retail Amount."
A (HAMM) That's correct.
Q Do you see that, sir?
A (HAMM) That's the allocation.
Q That's the -- which was requested in -- in -- in that ORS AIR 55-2?

A (HAMM) That's correct.
Q Right. So ORS asked for the account to which those expenses were booked and asked for the SC allocated amount, and that information was provided on that spreadsheet; is that right, sir?
A (HAMM) But we asked for information identifying individually what took place to generate those legal expenses.
Q Well, Mr. Hamm, let's -- let's work our way through, please.
A (HAMM) Please.
Q Okay. I'm now going to show you your Exhibit SWH-3.
A (HAMM) Yes, sir. I see it.
Q Okay. And the request there is, "How do the codes RC 8987 and RC 8749 relate to the document and information presented?" And then, the Company responded with explanations for those various codes. Do you see that, sir?
A (HAMM) I do.
Q Okay. Let's look -- now, I'm going to ask you to look at your fourth exhibit. This would be SWH-4. Do you see that, sir?
A (HAMM) I do.
Q Okay. And this is the -- this is the ORS AIR 55-4,

and it asks the Company to provide -- "Please elaborate on the 'potential insurance recovery for coal ash' included in the explanation for legal expenditures." Do you see that, sir?

A (HAMM) I do.

Q Okay. And do you see that explanation that --

A (HAMM) I do.

Q -- the response the Company --

A (HAMM) I read it.

Q Okay. Now, here's my question to you based on that: Did the Company ask -- did it -- were there any other information requests or discovery requests from ORS relating to these legal expenses that were disclosed by the Company in response to these audit information requests?

A (HAMM) We have had telephone conversations with the Company indicating that the responses were not sufficient for us to make a determination as to whether shareholders or ratepayers ought to pay for them.

Q Who had those conversations, Mr. Hamm?

A (HAMM) I believe --

Q So it wasn't you?

A (HAMM) It was not me.

Q Okay. Well, I would ask you not to give us any

hearsay testimony, please, Mr. Hamm.

Were there any written discovery requests from ORS to the Company following up on these issues?

A (HAMM) What you see are the responses we received to our discovery.

Q Thank you, sir. Did the -- did ORS ask for a copy of the insurance policy or policies that were involved in the litigation that AIR 55-4 asked about?

A (HAMM) No. We believe that the Company in trying to claim the expense needed to demonstrate that, whether we ask for it --

Q Shouldn't they --

A (HAMM) -- the burden is on the Company.

Q All right. Well, Mr. Hamm, that will be an argument.

A (HAMM) It is an argument.

Q Okay. There we go. And I don't want you to argue. I want you to answer my questions.

A (HAMM) I'm doing --

Q And you --

A (HAMM) -- the best --

Q And you know --

A (HAMM) -- that I can.

Q You know what your job is today.

A (HAMM) I hope so.
Q So the Company -- so the ORS didn't ask for the insurance policy?
A (HAMM) I feel like I'm chasing a squirrel here. We asked for the relevant information, and you -- you seem to be presenting the position to the Commission we get this summary data -- "Is that all you get?" We got it, and the data you gave the Commission -- it would be impossible for the Commission to know the underlying facts. And can I explain why?
Q No. Mr. Hamm, I -- I don't need a speech from you. You -- I'm -- this is cross-examination.
A (HAMM) Well, I know, but it's --
Q You've got a lawyer. Just let's answer --
A (HAMM) I get to explain my answer at some point.
Q Well, you've got a lawyer that's got redirect examination, but you --
MR. NELSON: And I would like him to have the opportunity to provide the full answer to the question.
MR. ELLERBE: No. Mr. Chairman, I -- my last question was: Did ORS ask for the insurance policies? The answer to that is: No. Redirect examination may be allowed to go into

that, but he can't suddenly highjack my cross-examination and get -- by giving a speech. That's -- that's bad practice.

CHAIRMAN RANDALL: Okay. Move on. It can be addressed on redirect.

THE EXAMINATION BY MR. ELLERBE CONTINUES.

Q Mr. Hamm, did -- did ORS ask for the pleadings from that -- any of that insurance litigation?

A (HAMM) No. It -- no. It did not.

Q Did ORS ask for any orders that had been issued in any of that insurance litigation?

A (HAMM) No. It did not.

Q Okay.

A (HAMM) We accepted the information provided by the Company, and we took the position it did not identify the underlying reason for the cost.

Q Let's go back, Mr. Hamm, and look a little bit more -- more closely if I could zoom in on these tiny documents.

A (HAMM) Sure.

Q The -- the -- I'm -- I want to direct people's attention to the top line entry on this.

A (HAMM) The one that's excluded from costs?

Q Yes, sir.

COMMISSIONER HOWARD: Mr. Chairman, I'm

missing something. I mean, I don't have some of these documents.

COMMISSIONER BELSER: They're in the --

MR. ELLERBE: -- confidential filing.

COMMISSIONER BELSER: They're in the notebook.

COMMISSIONER HOWARD: But I'd like to pull a confidential for review.

COMMISSIONER BELSER: Okay.

COMMISSIONER HOWARD: Okay.

A (HAMM) I have that line, Counsel.

Q All right.

MR. NELSON: If -- if -- if I can clarify what the issue is, Commissioner. I think there were -- I think two of these exhibits were confidential, and so you --

WITNESS HAMM: Including this one.

MR. NELSON: -- you may not have been provided with a copy of that.

COMMISSIONER HOWARD: Hold on a second. I don't see confidential or the nonconfidential.

MR. ELLERBE: Mr. Chairman, shall I proceed or shall we --

CHAIRMAN RANDALL: Hang on just one second.

MR. ELLERBE: Yes, sir.

CHAIRMAN RANDALL: Okay, I think.

MR. ELLERBE: Okay.
CHAIRMAN RANDALL: Are we all right now? Commissioner Howard, you okay?
COMMISSIONER HAMILTON: We just couldn't see it.
COMMISSIONER HOWARD: No. But I'll --
COMMISSIONER HAMILTON: It's blacked out.
COMMISSIONER HOWARD: I'll live through it.
COMMISSIONER HAMILTON: It -- it is small -- small print.
CHAIRMAN RANDALL: Okay. Yeah. Let's move ahead.
THE EXAMINATION BY MR. ELLERBE CONTINUES.

Q Mr. Hamm, I -- I've -- I've -- I've zoomed in so we can see the top line, which was a monetary amount of $1.6 million, which is the largest figure by -- substantially, the largest figure on this spreadsheet; is that right, sir?

A (HAMM) By actual dollar amount, yes, sir.

Q Okay. And do you see that the explanation is, "Legal fees and expenses incurred relating to a Dan River matter, which are excluded from costs of service"? Do you see that, sir?

A (HAMM) Yes, sir.

Q And did you hear Mr. Kerin's testimony yesterday

when he said that the Company had excluded from this case and it was not seeking any recovery relating to the Dan River spill and the fines and the guilty plea and the penalties associated with that Dan River spill?

A (HAMM) I heard him say that. I didn't see any evidence to support it.

Q Well, is that not evidence to support it right in front of you, sir?

A (HAMM) No.

Q Let me ask you to look at the -- another page that we -- from your exhibit. Okay. This is the same line that we talked -- looked at earlier with a little bit more information.

A (HAMM) South Carolina Allocated Retail.

Q South Carolina Allocated Retail, but that $1.6 million is blank. No -- no part of that expenditure was associated to South Carolina retail. Do you see that, sir?

A (HAMM) I see that.

Q Okay.

A (HAMM) And that's not an issue in our case.

Q But that's a legal fee that the Company voluntarily and "willfully," to use Mr. Payne's term, determined that it would not seek recovery for in

this rate case; isn't that right, Mr. Hamm?
A (HAMM) Well, I think that as a result of the North Carolina decision, you agreed that you wouldn't.
Q And we didn't. And it's out of the case.
A (HAMM) But that's not the issue -- that's not the issue before this commission.
Q And if we look down the list, we see various other entries that are not included in the South Carolina cost of service; is that right, sir?
A (HAMM) I -- I've looked at that and I acknowledge that, but you, I believe, are attempting to switch attention to irrelevant matters, rather than focusing the Company's attention on how you described the expenses you seek.
Q Well, let's -- let's -- isn't it the case, if you'll look with me at Page 4 of your surrebuttal testimony.
A (HAMM) Identify a line, please.
Q Line 17. You said, and I'll -- I'll read it. You tell me if I read it correctly. "Dr. Wright makes no attempt to justify that DEC wants its customers to pay all legal costs."
And --
A (HAMM) And my point is I was referring to the legal costs they're seeking in this case. I'm not

referring to costs the Company's not recovering. But he does make the broad statement that legal costs are regular expenses, are normal, and ought to be recovered. And I'm simply pointing out to the Commission, that is the wrong basis to start their analysis.

Q Okay. But, Mr. Hamm, the question I had for you and you anticipated and you didn't let me ask the question --

A (HAMM) Well, I didn't -- I wanted to help you out.

Q Yes. I appreciate that. You -- you asserted in your surrebuttal testimony that DEC wants its customers to pay all legal costs when you just acknowledged two minutes ago that this exhibit demonstrates that DEC actually eliminated the costs just as Mr. Kerin testified yesterday, and as Dr. Wright backed him up when he testified.

A (HAMM) Our office is only focusing on those costs it is seeking in this proceeding. The Company, in this list, say that they are not seeking those. That's not what we're attempting to do. We're questioning and challenging the costs that you seek in this proceeding based on, we think, very misleading summary examples, and I'll be happy to give you several reasons what's wrong with each one

of them.
Q Let's talk about the Carolina Water Service case that you cited in your surrebuttal testimony. You recall citing that case?
A (HAMM) You get to ask the questions. I thought we were on Duke.
Q Did you not cite the Carolina Water Service --
A (HAMM) I did.
Q -- case?
A (HAMM) I did. But right now we're here in Duke.
Q Yes, sir. But you -- you -- in your testimony, you described the Carolina Water Service order as something that ought to influence -- I assume. You brought it up in your testimony --
A (HAMM) Exactly.
Q -- that it was something, so I can ask you cross-examination about you -- you do recall that?
A (HAMM) Oh, I certainly do.
Q Okay. Thank you. Are you aware that there were several different categories of litigation expenses that were addressed by this commission in the CWS case?
A (HAMM) Yes. Some of which they accepted. For example, Carolina Water Service's initial attempt to file an action against CPA to see if they could

sort of break the stalemate and the Commission ultimately determined that they were going to allow those expenses because they thought that was reasonable.

Q You anticipated where I was going, Mr. Hamm.

A (HAMM) Funny how that works.

Q Yeah. And I'm -- I've highlighted a paragraph from the order, and this -- this would be Order 2018-802, which is the order on after rehearing.

And the -- the Commission's order says, "We hold that litigation expenses in the federal case brought by CWS against the US EPA and the Town of Lexington should be allowed to be amortized."

A (HAMM) Yes.

Q "CWS Witness Babcock indicated that although the case was dismissed and would have been difficult to win, the filing of that litigation was a smart, strategic effort to try to unlock the logjam created by the 1997 208 plan."

A (HAMM) That's -- that's what it reads.

Q Okay. "And the Commission allowed -- said that was an appropriate expense and should be included in rates."

A (HAMM) And which is consistent with my testimony when I said the Commission needs to look at the

underlying expense, the reason that the expense was incurred and did management decisions create an expense, that it wants ratepayers to bail them out of.

Q And this would be very similar to the Company pursuing insurance coverage to try to recover for coal ash costs; wouldn't it Mr. Hamm?

A (HAMM) No. I'm so glad that you asked that question. There's a significant problem in the assumption that you make there. When you're seeking insurance recovery, number one, we need to know: Well, what has prompted the challenge? Did the Company acquire the wrong insurance? Did the Company's conduct related to Dan River discharges cause the insurance company to say, "No. We're not going to provide coverage, because the Company itself failed to meet certain standards required in the -- in the insurance policy."

The Commission and the Company has provided this commission with zero information as to the reason for that. We have repeated summary litigations. We have repeated summary reference to insurance litigation, but the Company never provides whether or not one of the issues inside of that is that the insurance company is resisting you

because you broke the law in the first place.
Q Mr. Hamm --
A (HAMM) It's not in the evidence in this case. That's all I'm trying to say.
Q But you -- we agreed earlier that we have -- you attached to your testimony, all of the discovery requests from the ORS to the Company relating to coal ash expense, correct?
A (HAMM) And that's correct.
Q And -- and --
A (HAMM) And our position is -- wait a minute. I get to answer this. Our -- our position is and was: This is the best you could give us? And then we got to decide was that enough? And our position is: No.
Q We --
A (HAMM) And our position is that the Commission could make no determination about the underlying reasons because you didn't tell them.
Q Mr. Hamm, I think that's the fourth or fifth time you've made that exact point.
A (HAMM) Well, I'm answering repeated questions --
Q Yeah.
A (HAMM) -- on the same matter.
Q No, sir. We -- we've also got in the record now,

as exhibits to your surrebuttal testimony, all of -- all of the Company's responses to the -- all of the discovery requests that ORS submitted to the Company now, correct?

A (HAMM) Yes. And our position is that what you gave us was so summary it wasn't enough. But some -- the Commission, if the Commission can divine what the reasons for the litigations were, why the resistance from the insurance carriers from this, then they can do it. We are unable to do that. And based on this summary information, our position is: You didn't meet your burden of proof. And the -- and the CWS case stands for the proposition: You've got to first make sure why ratepayers ought to pay for it. Nobody in your -- none of your witnesses addressed that.

Q Mr. Hamm, let me ask you another thing about the CWS order.

A (HAMM) Please do.

Q On Page 18 of the order, the -- the Commission's order relies on the North Carolina case of "State ex rel. Utilities Commission v. Public Staff, North Carolina Utilities Commission." Are you --

A (HAMM) I'm very familiar with that case.

Q Are you familiar with that case?

A (HAMM) Yes. I am.
Q Okay. I'll ask you to look at something briefly on that. It's -- the highlighted portion is what I want to ask you about.
"The Public Staff and the Attorney General contend that the Commission improperly included, as operating expenses, legal fees incurred by Glendale in contesting the amount of a penalty assessed against it for a violation of administrative regulations."
Isn't it the case that what that case was about, the North Carolina case that was cited in the CWS order, was about a -- a penalty that had been assessed against the utility for environmental violations; is that correct, sir?
A (HAMM) Yes. But remember, and I invite the commissioners to read the order, it's going to the underlying question as to North Carolina Supreme Court saying: The Company didn't meet its burden and the Commission was reversed because they said they were bailing -- essentially, bailing the Company out and they didn't meet it and they disallowed it.
Q And it was disallowed on the basis that the Company followed in -- in not including in this case any

costs associated with penalties, fines, guilty pleas. That's what -- that was Mr. Kerin's testimony. Dr. Wright's testimony, also.

A (HAMM) And I don't --

Q Isn't that -- wasn't that correct, Mr. Hamm?

A (HAMM) He said that. I -- I think that is a very misleading answer, because the whole position here is this commission, and they're going to do it in this case, based on a review of your company's testimony, the ORS witnesses, and they're going to -- they've got to determine who caused the expense.

We've now -- we know, as a matter of law, you start off with a presumption. But that presumption is immediately, if it's challenged, which it's been in this case, the burden shifts to you. The -- you already know. The Commission says, "We're now interested in knowing, was the underlying details that caused it and in the Carolina Water Service" -- wait a minute, don't shake your head no. I'm being -- I'm testifying accurately. I know you don't like it, but in Carolina Water Service, the -- the Commission said, "You lost an environmental lawsuit. You took it to federal court. You lost." They were imposed a penalty, which isn't a big deal to ORS, because the Commission doesn't require

ratepayers to pay penalties. I'm sure you know that.

And then our position was: Well, why in the world are -- are ratepayers paying for the legal expenses when the Company was found to be in violation of the law? Simple as -- simple as --

Q And in that --

A (HAMM) -- a squirrel on a tree.

Q In that same CWS order that you just referenced, the Commission allowed expenses associated with the case that the Company lost, because they found that it was a reasonable and prudent approach by the Company.

A (HAMM) It did. And that doesn't change our position at all. It is, in fact, intensifying what we're saying. The Commission has to look at these cases, case by case. The Commission on that side said, in that case, "Yes, it was a long shot, but we can see why that might have been a reasonable expense" and the Commission allowed it.

But the Commission went on to say, "Once they could make a finding," in this case a violation of the law, and they pursued it. They just said that the "ratepayers shouldn't pay close to half a million dollars on an issue the Company's lost."

Q Well, if the Company has litigation expenses associated with negotiating a settlement with a North Carolina regulator or a South Carolina regulator, that's appropriate, prudent, reasonable business expense, isn't it, Mr. Hamm?

A (HAMM) I haven't suggested otherwise.

Q Okay.

A (HAMM) But I have suggested: You've got to have the evidence to know what the underlying reason for the expense is, which you keep ignoring.

Q No, sir. I -- I would ask the Commission to pay attention to what Mr. Kerin and Dr. Wright testified to yesterday, because that's exactly what they said generated the litigation expenses that the Company is seeking to recover in this case.

A (HAMM) And I -- and I heard that testimony and I don't think it was totally responsive to the issue in it. We're talking -- you and I are talking about an issue that neither you or I are going to -- are going to decide.

I am simply saying to the Commission, "Look at these things and the underlying data." The Commission will make that determination. But the Commission did accept that there may be circumstances where a company imposes costs that

should have been borne by shareholders and ratepayers, and they said, "If we find that circumstance, we're not going to approve it."

CHAIRMAN RANDALL: Thank you.

MR. ELLERBE: I have no further questions, Mr. Chairman.

CHAIRMAN RANDALL: Thank you. Commissioners? Commissioner Belser?

EXAMINATION

BY COMMISSIONER BELSER:

Q Mr. Hamm.

A (HAMM) Yes, ma'am.

Q I'm looking at your Surrebuttal Exhibit SWH-2 on the second page, please. It's that -- that copy of the spreadsheet. Are you with me?

A (HAMM) Hold on a second. Hold -- hold it up so I can see which one you're referring to.

Q (Complies.)

A Okay. I -- I know what you're talking about. I have it here in front of me somewhere, but go ahead.

Q Well, would you look at -- did y'all add -- did -- did you or anyone at ORS add anything to that? There's some --

A (HAMM) No.

Q -- figures at the bottom. I'm looking over -- well, kind of in the middle and then over on the left, where it says, "Coal ash related" and an amount. And then, "Non coal ash related" and an amount, under the monetary amount column. And then under the "South Carolina Retail Amount" column, it's got "The South Carolina allocated portion." Did y'all --

A (HAMM) I -- I -- quite honestly, the upper material is the material as we received it from the Company. I -- I believe internally, we did some calculations to understand how it was allocated.

Q So that --

A (HAMM) So that number may have come --

Q That bottom part --

A (HAMM) Yes.

Q -- is something that ORS may have added?

A (PAYNE) Yes. Likely, yes.

Q No? Yes?

A (HAMM) And -- and -- yes. And it was -- it was done to give us a better understanding, and quite honestly, I went through and used the machine to make sure that the calculations were correct.

COMMISSION BELSER: I think that's all I'm going to do at this point. Thank you.

CHAIRMAN RANDALL: Commissioner Hamilton?

COMMISSIONER HAMILTON: Thank you, Mr. Chairman.

EXAMINATION

BY COMMISSIONER HAMILTON:

Q Mr. Payne or Ms. Smith, on what we've been discussing the last few minutes between the attorneys, on the ledger statement that -- that's been the focus of discussion, normally the -- the ORS requires other than a ledger statement to verify an expense?

A (PAYNE) Yes. I also believe it's part of the audit request that I was being shown earlier. I do believe there's a 55-5, which -- in which we asked for the invoices to support those. Between surrebuttal -- personally I didn't follow up to that. I -- I don't know that we actually received those. I did check at one point that we hadn't. To this date, I do not know if we've received those invoices.

Q Do you know, Ms. Smith?

A (SMITH) I don't -- I believe we didn't receive any invoices. And I believe the calculation was made by the Company.

Q So all you had was a ledger statement and never

received the invoices is your testimony?

A (SMITH) That is correct.

A (PAYNE) To our knowledge, yes.

COMMISSIONER HAMILTON: Thank you very much. That's all I have, Mr. Chairman.

CHAIRMAN RANDALL: Commissioner Howard? Commissioner Howard?

EXAMINATION

BY COMMISSION HOWARD:

Q I don't who to ask. Ms. Smith, I'll try with you. Your Exhibit 9 is marked "Confidential." Is it still confidential?

A (SMITH) Yes.

Q What is the subject of that confidentiality?

A (SMITH) Well, because there was -- there was -- there was information there regarding vendors and usually we kind of keep that confidential.

Q Well, let me ask you about legal expenses. Is that confidential?

A (SMITH) Well, I guess under our new statute, we are allowed to receive confidential information and to review it, but it's within the agency.

Q If -- if you're allowing that to go in the rates and the ratepayers are paying that, why is it confidential?

A (SMITH) I think that's kind of more a legal issue as far as the confidentiality and what's to be included and recovered.
Q Mr. Hamm, you want to add to that?
A (HAMM) Well, we think that's a serious question. Our position is: If they -- they're going to expect customers to pay for expenses, they need to be prepared to give it in such detail that fully explains the expense.

We understand -- in fairness, now. I -- I feel compelled. There are contracts and other documents that reflect negotiated positions between Duke and others and why those are -- are confidential. But nothing prevented the Company from preparing and saying, "Here's the invoice and -- and this is which case it is attached to. This is the reason it's going on." We just never got any of that.
Q Well, that's my point.
A (HAMM) Confidentiality can be abused is what we're concerned about.
Q Well, I'm trying to think how to word this. How -- who at ORS can determine whether a consultant fee is reasonable? Are there any guidelines -- who determines what a -- an acceptable legal fee is --

hourly fee for attorneys? Who can determine how many hours, if that invoice is correct, how many billable hours that the ratepayers have to pay? Who determines those factors --

A (HAMM) Well --

Q -- in -- in ORS?

A (HAMM) Let me answer your question in this way: We are -- we're not empowered to say that $500 is too much or whatever. We are aware and part of my experience comes to play when I'm asked to review documents whether we have a basis to say that fees or charges are excessive. But we never -- we never got a chance to get to those kinds of issues here, because -- forget the dollar amounts to begin with. What is it responding to? Is it a result of something the Company did that was adverse and the Company's now defending its own decision? Or is it normal commercial litigation? That's why you want to look at invoices, so we can make a judgement and then tell you, for example, about any of these invoices here, why we would, perhaps, have an objection to it. And because of the summary nature and this is all we got, we couldn't do it. So we took the position that we didn't -- the Company didn't meet its burden, and therefore, we

recommended disallowance.
Q I guess I still don't understand it.
A (HAMM) Okay.
Q I mean, what is an acceptable legal hourly rate in a rate-case expense? And what are the variables to affect that? And I guess the whole thing came and I still don't understand, and I understand it, but I don't understand it --
A (HAMM) Okay.
Q -- why Ms. Smith's Exhibit 9 is confidential.
A (HAMM) Well, number one --
Q Particularly in view of the fact that ORS is pretty well a proponent against having any confidentiality.
MR. NELSON: Let me -- let me interject here, because I think this is addressing a legal issue. Under the new statute, everything that we get from the Company is confidential. We do have an agreement that we've worked out with Duke where they indicate to us specifically items that they want to have considered as confidential. We accept that. If -- if they -- if they want to say that certain things are confidential because of the statute, everything is supposed to be, that

they do the favor of us by saying 99 percent of it isn't. But if they deem it to be still confidential, then when we file testimony or we put exhibits in that contains that confidential information, we need to file it as a confidential document. We're -- we're -- we're bound by that.

MR. ELLERBE: Okay. And I agree with Mr. Nelson. Last year, 2018, the General Assembly revisited the -- the provision that allows ORS to ask for information from the companies and they put in a statutory provision that says: Anytime the companies provide the information, it's automatically confidential. Duke has agreed -- entered into an agreement with ORS -- to say that we will tell you those things that are confidential. We'll mark them "Confidential," and as to everything else, we waive our statutory claim of confidentiality.

So I think it's a little bit unfair if y'all are, you know, trying to penalize us. We -- we tried to work with ORS and -- and on limiting -- because it does make their lives difficult if they have to keep everything confidential. So, appreciate it, Mr. Nelson.

Q I guess my attitude is -- what my attitude is: I don't know what an expert should pay, you know, how much pay he gets. I'm sitting here as a commissioner and I don't know that these expenses are reasonable except what ORS says. And I guess that's the way this situation works. I just have to accept ORS as -- without questioning ORS's determination of what's legal or what should be put in rate base -- the rates.

A (HAMM) Well, let me answer those for you --

CHAIRMAN RANDALL: Get to that microphone.

A (HAMM) To be clear, on the legal expenses we're: contesting, we never got to look at the underlying: What was happening? What the rate was? And so -- and our position was, "Well, they didn't give it to us. They have the burden of proof. And we're simply not going to approve it."

On some of these, were for trial preparation, it is clear that that is an allowable expense. It's a -- trial-case expenses are something this commission has approved for years. It's commonly approved by commissions in various jurisdictions, and we were very scrupulous in not challenging those kinds of expenses.

Q I guess I'll sum up my thought by this: I would

assume that there would be some kind of guidelines that would -- would limit the amount of hourly rates an attorney could charge if it's going in the rates, instead of just having carte blanche because of a confidentiality agreement.

A (HAMM) Well, ultimately this commission can seek and ask for whatever relevant information it wants. All the office of ORS can say is, "We tried to get some of this data. We didn't get what was sufficient." And we're saying, "Well, you don't need to worry about it, because there's not enough information to prove it to begin with."

If they're -- could the Commission get in a situation where some party says, "Well, my Lord, they were paying an attorney X or a witness X." Somebody would need to raise that. I -- just for example, I remember in the SCE&G case, their economic witness was being paid 1500 bucks an hour. I will tell you, that didn't surprise me, nor did it alarm me, based upon his experience and my independent knowledge of his work over the years.

So we all sort of bring our experiences in -- in judging rates, and I wasn't -- I wasn't shocked or alarmed, nor did I think that cost was unreasonable.

You, as a commissioner, may have had a different judgement. And, of course, this exact process, when a witness is up, you-all have the right to ask the kinds of questions to elicit the information you're now seeking. So, just -- this is the -- an opportunity in every case that you have, to further explore that. To just say, "Well, I wish ORS had done so-and-so," you have the right to ask the Company, "Well, why didn't you do," or whatever.

But I'm -- I -- I do not want to tread on the discretion of this commission to make its professional decisions. The South Carolina Supreme Court has said, as an initial matter, you have the discretion and ability to make the decisions you make. And I don't want to get in the middle of that.

Q I'm getting that look from my chairman, so I'm going to let -- I'm going to just go ahead and let it go.

A (HAMM) Is -- is that saying -- another way of saying --

CHAIRMAN RANDALL: Thank you.

A (HAMM) -- "Good night"?

Q Then I say, "Good night, Irene."

CHAIRMAN RANDALL: Yes, sir. Commission Williams?

VICE CHAIRMAN WILLIAMS: Thank you, Mr. Chairman. I have a couple of questions.

EXAMINATION

BY VICE CHAIRMAN WILLIAMS:

Q I think it was Mr. Payne who made the statement that we're arguing the details. That was in response to a question from the Company's counsel regarding the details and some of the costs that ORS had disallowed. And I use that as a -- a backdrop for my questioning for Mr. Hamm. You used the word "evolution" several times in your testimony.

A (HAMM) Yes. And I was referring to policy of both this commission and the Supreme Court.

Q Uh-huh. Uh-huh. And I appreciate a good cross-examination and a good witness, so I -- the back and forth, in my opinion, has been very helpful. Because it seems to me, and I -- you know, I could be wrong. I have to look at all the testimony and continued hearing testimony -- but it seems to me that, based off what I've heard so far, that maybe at some point in time, this submission, for example, by the Company for legal fees -- maybe at

some point in time, is it -- is it fair to say, Mr. Hamm, that at some point in time in the past that maybe that presumption that expenses were made in good faith, would have not been rebutted? Is that a fair statement to make?

A (HAMM) Yes.

Q Okay.

A (HAMM) Yes.

Q But now that -- that presumption has been rebutted, what was once acceptable may not necessarily be acceptable.

A (HAMM) Yes, sir.

Q Okay. I guess -- I guess the question becomes: Is that fair to the Company?

A (HAMM) Absolutely. The Company controls what it requests. It controls the evidence that you -- it presents to you.

CHAIRMAN RANDALL: Get -- get in the mic.

A (HAMM) This entire process --

CHAIRMAN RANDALL: Get to the microphone. We still can't hear you.

A (HAMM) This entire process is controlled by what the Company files, what we're looking at. I mean, deferral issues as an example. You know, they're seeking things through deferrals that they didn't

put in the test year and are wanting to treat them differently. And we're just saying -- we're trying to raise the kind of question that we think the Commission ought to ask. Now, maybe you might not get to the -- our same conclusion, but our ultimate goal is to ask the question and then learn from you what that regulatory policy is so we'll know the next time we come in front of you: If we encounter this, we should reasonably expect the Commission to do that.

And my whole -- my whole life as a regulatory lawyer has been based on: Let's get a clear understanding of what the law requires, how the Commission views its responsibilities, and have its orders demonstrate that it heard the various decisions and it decided its decision in a particular way.

That's one of the cases I won in the Supreme Court where the Supreme Court said the Commission couldn't issue summary orders. It had -- it had to provide the detail and the rationale. And that's -- but that's the -- the role of the Commission.

The role of our ORS and its staff is to give you our best judgment about what we think is reasonable. We don't start off saying they should

get nothing. That would be inappropriate.
Q And -- and just to sort of flesh that out a little bit, I can't remember the -- the discovery request by name, but there were several discovery requests that were put on the ELMO by the Company's counsel.
A (HAMM) Yes.
Q And it seems to me that ORS made -- well, obviously it made a request. But they gave the Company an opportunity to explain itself, if -- if you will.
A (HAMM) That's our position, absolutely.
Q And it seems to me the Company decided to stand on what they submitted.
A (HAMM) That's our position.
Q Which means we have to make a determination whether or not, considering now that presumption has been rebutted and the burden has shifted to the Company, whether or not they've met their burden?
A (HAMM) Yes, sir.
Q Which, again, considering your acknowledgment or your -- your opinion that this -- this policy area, this area of law is evolving, may not have necessarily been the case in proceedings in the past?
A (HAMM) Absolutely, yes.
Q Thank you, sir, for your testimony.

A (HAMM) Yes, sir.

CHAIRMAN RANDALL: Thank you, Commissioner Belser?

EXAMINATION

BY COMMISSIONER BELSER:

Q Mr. Payne, you indicated that you believed that there was an interrogatory sent to Duke requesting the actual invoices?

A (PAYNE) Yes. That's 55-5, I believe.

Q Can you -- I hate to ask for a late-filed exhibit, but would you provide a late-filed exhibit of that interrogatory and the response?

A (PAYNE) Yes.

COMMISSIONER BELSER: Mr. Nelson, is that okay?

MR. NELSON: Yes, ma'am.

Q Can you do so in the morning so that -- that Duke counsel can look at it, please? I'm -- I'm sorry to ask for something so quick, but they need to have a chance to look at it.

MR. NELSON: We -- we will obtain it as quickly as we can and provide it to the Commission and provide it to the Company.

CHAIRMAN RANDALL: Okay. We'll -- we'll do that as Exhibit Number 49.

Q And if it needs to be maintained as confidential, just please mark it as such, and let us know, if you would.

Mr. Payne or Ms. Smith, this spreadsheet, there -- one of you testified, I think it was Ms. Smith, or we had some testimony that the Company indicated that they were getting electronic invoices these days from -- for legal expenses; is that correct?

A (SMITH) That's correct.

Q And --

CHAIRMAN RANDALL: Speak up when answering.

A (SMITH) That is correct.

CHAIRMAN RANDALL: Thank you.

Q Okay. Was there any indication that the -- what they were getting electronically, did not contain the detail that was expected from what you've previously seen in hard-copy invoices?

A (SMITH) Yes. That's correct. I mean, we pretty much just received the -- a spreadsheet, an Excel spreadsheet. I mean, anybody could make -- put a Excel spreadsheet together with explanations, what the services were. But there was no indication of any kind of third party being involved. So we just add up -- added an additional request and asked for

more information and we did that like two more times and that just --

Q Did you ever get any indication of like a time sheet that an attorney would keep saying: "On this day I worked on the rate case and had calls with the client and this, this, and this, this many hours"?

A (SMITH) No. We received some type of time -- time sheet, but there was no indication to any case that was worked on or a person -- for a person -- a specific person. So, no. I don't know if -- till today, I don't know if that time sheet was from an outside person or company-generated.

Q You --

A (SMITH) And that's part of my exhibit.

Q You both have reviewed time sheets or invoices from legal counsel in other cases, have you not?

A (SMITH) Yes. We have .

A (PAYNE) Yes.

Q And have -- have you been made aware that sometimes that the -- the Company and the attorneys want them held as confidential because there could be information in there that could be classified as -- as attorney-client privileged information? Have you heard that explanation?

A (PAYNE) Yes.
Q Okay. Did you receive any indication of that -- any of that from Duke at this time?
A (SMITH) No.
Q Thank you very much.
CHAIRMAN RANDALL: Thank you. Commissioners, any other questions?
VICE CHAIRMAN WILLIAMS: Mr. Chairman, I have one more question --
CHAIRMAN RANDALL: Commissioner Williams.
VICE CHAIRMAN WILLIAMS: -- for Mr. Payne.

EXAMINATION

BY VICE CHAIRMAN WILLIAMS:
Q Mr. Payne, on Page 13 of your direct prefiled testimony, you discussed estimated O&M expenses included by the Company of $4,025,000 for the Customer Connect program?
A (PAYNE) Yes, sir. That was their proposed adjustment.
Q Okay. How did the Company determine this estimated amount?
A (PAYNE) I believe Company Witness Hunsicker laid it out a little -- laid out her support for it. I -- I don't have that in front of me here, but, essentially they said that they had fixed-priced

contracts and they had additional labor detail prescribed in that contract. And I believe they also accounted for about 1.8 million in contingency for, I believe the term was "known risks" and "unexpected" or "unforeseen circumstances" or something of that nature.

So, basically, what they were looking to do was to increase the O&M from the test-year level of 640,000 to what they projected to be 4.6 million through 2019 and 2020.

Our position was to give them test-year initially, through, I believe, it was Kim Smith's rebuttal testimony, she pointed out their 2018 actual expenditures were 3.189 million, I believe. And I believe Ms. Smith's surrebuttal exhibits reflects an adjustment to get them to that level of O&M expense.

Q Okay. And -- and did you determine what -- what level of reasonableness did you assign to that?

A (PAYNE) For the 3.189 million being actually incurred, we believed that as a known and measurable level of expense.

For the amounts that they projected and claimed to be known and measurable, we were not comfortable with those projections. And, again, I

believe the largest part that we would take issue with of -- well, you haven't had -- and I will say we have not requested or seen the fixed-price contract, that would obviously help, to the extent. But I believe if you take what their projected 4.6 or $4.7 million amount, and you remove that contingency, which really is very speculative in nature just from the name of a contingency. If you remove that $1.8 million amount, you really come back to what their 2018 actual amount is. So I believe that -- that 2018 actual to be a very reasonable amount.

I also want to address the idea that the Company wants to defer the incremental amounts over that or has proposed a -- a deferral for any incremental amounts and above what we proposed to be included in O&M, which in this case would be anything above the 3.189.

I believe it's also important to look at the idea that that Customer Connect system could potentially cause the Company to have savings down the road. I think those savings should also be taken into effect, and also the idea that, from their testimony, it seems that those are developmental costs as opposed to the operating

costs going forward once that project is developed. So I think it's also important to take into effect what those O&M expenses would be in 2021 and 2022 once those projects are developed and rolled out.

Q Thank you.

A (PAYNE) You're welcome.

CHAIRMAN RANDALL: Thank you, Commissioners. Anything else? Mr. Nelson, redirect.

MR. NELSON: I think it's -- or I probably should say, I don't have any, so I don't -- I don't have any questions. I think everybody's kind of worn out. I'm -- I'm done. Thank you, Mr. Chairman.

CHAIRMAN RANDALL: Thank you. Okay. Thank you,, folks for your testimony. You are -- you may step down and are excused.

(Witnesses excused)

CHAIRMAN RANDALL: Tomorrow -- we're in an unusually -- no, not unusually, usually, but we're in a very busy time right now. Tomorrow we've got Hager, Hevert -- Hevert, Sullivan, their panel, Kim Smith; then we got another ORS panel. I'm not sure who we'll start with. Y'all just tell me in the morning. The Commission also has a Commission meeting at

[Please note: Correction noted at page -32 reflects the witness' testimony during the hearing in this matter.]

1790-1

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BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2018-319-E

In the Matter of:	)	
	)	
Application of Duke Energy Carolinas, LLC	)	**REBUTTAL TESTIMONY OF ROBERT B. HEVERT FOR DUKE ENERGY CAROLINAS, LLC**
for Adjustments in Electric Rate Schedules	)	
and Tariffs and Request for Accounting Order	)	
	)	

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("GASB") statement No. 62, which states the utility should accrue carrying charges on the regulatory asset:

> During the period between the date on which the new asset is recognized and the date on which recovery begins, the carrying amount should be increased by accruing a carrying charge.[166]

Although Mr. Payne acknowledges that GASB establishes accounting standards for accruing a carrying charge on regulatory assets, he observes that ultimately, it is the Commission that determines the manner in which the utility is allowed to recover the costs. As discussed below, Mr. Payne's recommendation is counter to fundamental corporate finance principles.

Q. MR. PAYNE ACCEPTS THE COMPANY'S PROPOSAL TO INCLUDE CAPITAL-RELATED COSTS IN RATE BASE, BUT OPPOSES OPERATING-RELATED COSTS BECAUSE IN HIS VIEW, IT WOULD CAUSE THE COMPANY TO EARN A RETURN ON OPERATING COSTS.[167] DO YOU AGREE WITH MR. PAYNE ON THAT POINT?

A. No. The Company proposes to include operating-related deferred costs such as

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that are unexpected and/or non-recurring". While I generally agree with this statement, I believe it is important to also highlight several other criteria for an accounting order including: (1) the matching principle of matching large capital and operating costs with cost recovery in base rates; (2) earnings degradation from large capital and operating expenses; and (3) the Company's financial stability and ability to attract capital on reasonable terms. The Company included these arguments in its petition in Docket No. 2016-240-E - Petition of Duke Energy Carolinas, LLC for an Accounting Order to Defer Certain Costs Related to Advanced Metering Infrastructure (AMI), at 5-6.

166 Direct Testimony of Zachary J. Payne, at 3.

167 Direct Testimony of Zachary J. Payne, at 6, 8, 10, 11, 13 and 15.

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operation and maintenance and property taxes in rate base to earn a fair return at the Company's weighted-average cost of capital, which would only make it whole on an economic basis. Because the expenditures required actual cash outflows, the Company has incurred financing costs for these deferred costs. If it is not authorized to include these costs in rate base and earn a return on them, the Company will suffer a negative net present value, which would be borne by its investors.

Q. PLEASE EXPLAIN WHY THE COMPANY WILL INCUR A NET PRESENT VALUE LOSS IF THE OPERATING-RELATED COSTS ARE NOT INCLUDED IN RATE BASE.

A. The Company's proposal to include operating-related regulatory assets in rate base is analogous to corporate finance discounted cash flow valuation. Discounted cash flow valuation includes both the "return of" and "return on" to calculate the present value of an investment. The concepts of "return of" and "return on" can be seen in the methods used, for example, in valuing a bond. To derive the present value of a bond, the amortization, or "return of" principal, and the interest, or "return on", both must be included to correctly calculate the value. Table 6, below, provides an illustrative example of that process for a hypothetical five-year bond valued at $10 million.[168] Importantly, when interest is excluded from the calculation, there is a

[168] I have assumed straight-line amortization of 5-years, a coupon rate of 5.00 percent and year-end repayments.

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significant reduction in the present value (in this hypothetical case, 13.41 percent).

Table 6: Discounted Cash Flow Valuation of Hypothetical Bond[169]

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Beginning Principal		$10,000,000	$8,000,000	$6,000,000	$4,000,000	$2,000,000	
Amortization (5-Yr Straight-Line)		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	
Ending Principal	$10,000,000	$8,000,000	$6,000,000	$4,000,000	$2,000,000	$0	
Interest @ 5.00%		$500,000	$400,000	$300,000	$200,000	$100,000	
Present Value of Amortization & Interest							
Amortization + Interest		$2,500,000	$2,400,000	$2,300,000	$2,200,000	$2,100,000	
Discount Factor (1/(1+Interest)^Year)		0.95 x	0.91 x	0.86 x	0.82 x	0.78 x	
Present Value		$2,380,952	$2,176,871	$1,986,826	$1,809,945	$1,645,405	$10,000,000
Present Value of Amortization Only							
Amortization		$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	
Discount Factor (1/(1+Interest)^Year)		0.95 x	0.91 x	0.86 x	0.82 x	0.78 x	
Present Value		$1,904,762	$1,814,059	$1,727,675	$1,645,405	$1,567,052	$8,658,953
Reduction in Present Value							-13.41%

This example illustrates the same concept as including operating-related costs in rate base. The amortization, or "return of", of the regulatory asset is not a "sufficient level of cost recovery", as Mr. Payne suggests. Rather, because the Company has expended cash for these operating costs upfront, a carrying charge is necessary to recover these expenditures at cost on a present value basis.

169 Please note that Equation [2], which provides the "intrinsic value" formula for common equity, is the same construct as that which is applied in Table 6.

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Q. DO YOU AGREE WITH MR. PAYNE'S POSITION THAT INCLUDING OPERATING-RELATED COSTS IN RATE BASE CAUSES THE COMPANY TO EARN A RETURN ON THESE COSTS?

A. No, I do not. Although the Company does accrue a carrying charge on those deferred costs, carrying charges reflect the economic value required to avoid a loss in present value. From a somewhat different (but related) perspective, the carrying charge reflects the financing costs associated with the initial cash outlay. Absent the carrying charge, the Company's financial profile would be diminished.

Q. MR. PAYNE ALSO CITES DEFERRED DEPRECIATION EXPENSE AS AN OPERATING-RELATED COST THAT SHOULD NOT BE INCLUDED IN RATE BASE.[170] DO YOU AGREE WITH MR. PAYNE'S POSITION?

A. No. I view deferred depreciation expense as having financial implications analogous to capital-related costs, in that both represent a cash outlay that must be financed. Mr. Payne's proposal to exclude depreciation-related regulatory assets from rate base prevents the Company from being able to earn a fair return on its original capital costs that were deferred as a regulatory asset.

[170] Direct Testimony of Zachary J. Payne, at 6, 8, 10, 11 and 15.