STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-2, SUB 1219

In the Matter of: Application by Duke Energy Progress, LLC, for Adjustment of Rates and Charges Applicable to Electric Utility Service in North Carolina	)))))	**POST-HEARING BRIEF OF SIERRA CLUB**

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Sierra Club respectfully submits this Brief in opposition to the application for a general rate increase filed by Duke Energy Progress, LLC (DEP or the Company) in the above-captioned docket.

INTRODUCTION

DEP asks this Commission to approve an enormous increase in its rate base—including more than $404 million (DEP Late-Filed Ex. 13) for the cleanup of the Company's coal ash mess, which represents just a fraction of the multi-billion-total price tag over the next 30 years. (Tr. vol. 11, 658.) DEP apparently considers the recovery of every dollar of those costs—and a rate of return—from its captive ratepayers to be a foregone conclusion, a mere matter of showing that it didn't waste money when dealing with its contractors. Sierra Club disagrees and, along with the North Carolina Attorney General's Office and the North Carolina Utilities Commission Public Staff—entities tasked with protecting ratepayers' interests—has offered evidence demonstrating that the Company's history of imprudence has led to costs that today's ratepayers should not be required to shoulder.

DEP contends that its history of coal ash mismanagement is not relevant to these proceedings and that the question of reasonableness of specific expenditures during the test period is dispositive in itself. This position is wrong. In judging DEP's application, the Commission should consider both whether the Company's expenditures were reasonably and prudently incurred and also whether the Company's design, construction, operation, and maintenance of its coal ash impoundments were reasonable and prudent.

The Company's oft-repeated refrain that the February 23, 2018 order approving its last rate increase governs this question does not convert the order into binding precedent or prevent the Commission from reviewing the Company's history of coal ash mismanagement. Rather, the current application stands upon its own merit and its own facts. Moreover, as the Attorney General's Office, the Public Staff, and Sierra Club argued before the North Carolina Supreme Court, the 2018 order was plagued by errors of law. We urge this Commission to avoid repeating those errors. In addition, the order was based on a different record, one that suffered from various discovery missteps by the Company.

The Company alone has the burden of proving its case-in-chief when it requests a rate increase through a general rate case. In neither the prior case nor in this one has DEP met that burden. Indeed, members of this Commission found the Company's evidentiary presentation in the prior rate case "le[ft] something to be desired." The Company's presentation this time around was no different. Again, the Company depends on witnesses whose testimony is of questionable value because they lacked knowledge or experience of the matters about which they testified and expressed opinions and conclusions for which they had insufficient foundation. Like Jon Kerin before her, DEP's primary witness on coal ash, Jessica Bednarcik, only first assumed responsibility for DEP's response to coal ash issues in 2015 without any pertinent prior experience concerning the subject. (Tr. vol. 13, 37 ("Q. [. . .] prior to 2013, you didn't have any firsthand experience of coal ash management issues at any of the DEP plants; is that correct? / A. I did not have firsthand.").)

No DEP witness had firsthand knowledge of Company coal ash practices earlier than 2009. While witness Bednarcik was somewhat more well-versed than 2018 DEP witness Kerin, her conclusory testimony about the Company's past compliance with governing laws and regulations and the reasonableness of its actions with respect to storing coal ash in unlined pits in contact with groundwater simply cannot be afforded any substantial weight. While witness Bednarcik may have consulted with Company employees and reviewed historical documents in preparation for the proceedings, her testimony did not include those historical documents. Indeed, a number of potentially key documents were made available only after specific requests by Commissioners for the documents. (DEP Late-Filed Exs. 5, 10, 17–21).

Despite DEP's failure to present evidence about its history of coal ash management, the Attorney General's Office, the Public Staff, Sierra Club, and other intervenors *did* introduce evidence showing: (1) that, by the 1980s, the Company understood that the storage of coal ash in the types of large, unlined surface impoundments it operated across the state placed the state's water resources at risk of contamination by heavy metals and other pollutants; (2) that, despite its understanding of risks and the industry trend away from wet storage of coal ash, the Company failed to take prudent action to mitigate those risks, resulting in contamination of groundwater in violation of North Carolina law; and (3) that the Company's acts and omissions resulted in higher costs today to excavate ash ponds and address groundwater contamination.

Given this evidence, the task facing the Commission is to decide how, to what extent, and at what cost the Company's history of coal ash management affected its current and expected future expenditures for permanent disposal of the ash and remediation of contamination. The fact that such a determination is not simple does not mean it is impossible. The Commission has broad discretion to set just and reasonable rates and need not choose between across-the-board denial of all cost recovery or approval of the Company's entire request. For example, the Commission could determine the year by which DEP should have stopped disposing of ash in unlined basins and disallow the costs of excavating and properly disposing of that ash now—*i.e.*, the costs of double handling.

In addition, North Carolina's public utilities law explicitly prohibits the recovery from ratepayers of costs resulting from unlawful discharges to surface waters from coal ash ponds. Unpermitted discharges from DEP's coal ash ponds convey untreated, pollutant-laden wastewater into nearby surface waters in violation of federal and state law. DEP's own sampling shows that seeps from its dams discharge pollutants at concentrations above relevant surface water quality standards. Thus, the seeps are unlawful discharges and the resulting remediation costs—*e.g.*, pond closure costs—are not recoverable.

Finally, DEP seeks the recovery of significant capital costs incurred at its aging coal units. Because these units are uneconomic, will remain so into the future, and, in some cases, will retire soon, it was imprudent for DEP to invest millions of dollars without first conducting a comprehensive analysis to determine whether the investment of additional ratepayer dollars at each unit is reasonable.

LEGAL STANDARD

Under North Carolina law, all rates by public utilities "shall be just and reasonable." N.C. Gen. Stat. § 62-131(a). The ratemaking statute emphasizes that fairness to consumers is a critical consideration and includes a directive that "the Commission shall fix such rates as shall be fair both to the public utilities *and* to the consumer." N.C.G.S. § 62-133(a) (emphasis added). For its operating expenses, a utility may recover from ratepayers only those expenses that are reasonable. N.C.G.S. § 62-133(b)(3). In addition, a utility may recover the cost of property that is "used and useful" for providing current service with rates set to give a utility the opportunity to receive a fair return on such costs. N.C.G.S. § 62-133(b)(1), (c).

While the ratemaking formula does direct the Commission to set a rate of return that will enable the public utility "to compete in the market for capital funds," N.C.G.S. § 62-133(b)(4), setting that rate is the second step of the Commission's task, *id.* § 62-133(b). Before reaching that question, the Commission must first ascertain whether costs for which the utility seeks recovery were spent on property that is "used and useful" for providing current electric service and whether those costs were reasonably and prudently incurred. *Id.* § 62-133(b)(1). In addition, the Commission cannot authorize recovery of costs resulting from unlawful discharges from coal ash ponds. *See id.* § 62-133.13. Concerns about DEP's overall financial health or its ability to attract investors have no bearing on whether the closure costs of coal ash ponds are used and useful property or whether such costs were reasonable. Instead, such

concerns may be considered as part of the Commission's selection of an overall rate of return.

The Company's argument that consideration of past coal ash management practices has already been conclusively decided by the Commission and is res judicata is not supported by law. As the North Carolina Supreme Court has explained, the Commission's ratemaking authority "is a legislative rather than a judicial function," and that "[i]n fixing rates . . . the Commission [is] exercising a function delegated to it by the legislative branch of the government." *State ex rel. Utils. Comm'n v. Thornburg*, 325 N.C. 463, 469, 385 S.E.2d 451, 454 (1989). Because the Commission is exercising a legislative function, its treatment of certain costs in previous rate cases is not governed by the principle of res judicata. A change of policy position by the Commission is appropriate in a subsequent rate case to deny a return on certain costs. *Id.* at 469–71. In *Thornburg*, the Court upheld the Commission's subsequent ruling that "reexamined the ratemaking treatment of [certain costs] in order to develop a more consistent and equitable approach." *Id.* at 466. See also *State ex rel. Utils. Comm'n v. Edmisten*, 294 N.C. 598, 603, 242 S.E. 2d 862, 866 (1978) ("Actions of an administrative agency which involve the exercise of a legislative rather than a judicial function are not res judicata.").

ARGUMENT

I. RATEPAYERS SHOULD NOT PAY FOR COSTS THAT RESULTED FROM DUKE ENERGY PROGRESS'S DECADES OF IMPRUDENT AND UNREASONABLE MANAGEMENT OF COAL ASH.

DEP's primary contention is that its prior handling of its coal ash waste stream was reasonable because it was "consistent with industry standards and environmental regulations." (Tr. vol. 17, 138; Tr. vol. 19, 140.) First, undisputed evidence shows that the Company repeatedly violated applicable law and regulations. (*See infra* I.A.3.) In addition, and perhaps more fundamentally, a public utility like DEP with a monopoly franchise owes a duty of care that is more than meeting the regulatory minimum. It has a duty to protect life, property, and the environment from harm and to avoid taking unreasonable risks in the performance of its lawful activities. That duty includes an obligation to properly handle, store, and manage a waste stream known to contain heavy metals and other contaminants. DEP breached this duty.

As the General Assembly has declared, one purpose of the regulatory regime established in Chapter 62 is ". . . to encourage and promote harmony between public utilities, their users and the environment." N.C.G.S. § 62-2(a)(5). Accordingly, "reasonableness" under N.C.G.S. § 62-133(b)(3) must mean something more than just not getting caught or, if caught, not getting prosecuted, fined, or sanctioned. The electric generating industry has been well aware for decades of the fact that regulatory compliance by itself may not ensure protection from the serious environmental risks posed by storage of coal ash in unlined ponds. (Joint Ex. 8 (1982 EPRI Manual), 4-2 ("[a]n engineering assessment of

site adequacy must therefore address (1) whether the operation complies with prevailing regulations, and (2) whether the site poses a threat to the local environment. Both problems must be addressed simultaneously").) By continuing to dispose of coal ash in unlined pits, DEP ignored these risks.

A. The Company has not met its burden of proving that all of the coal ash costs for which it now seeks recovery were reasonably and prudently incurred.

When the Commission considers the evidence presented during a general rate case, "the burden of proof shall be upon the public utility whose rate . . . is under investigation to show that the same is just and reasonable." N.C.G.S. § 62-75; *State ex rel. Utils. Comm'n v. Central Tel. Co.*, 60 N.C. App. 393, 394, 299 S.E.2d 264, 265 (1983) ("The burden of proof is upon the utility seeking a rate increase to show that the proposed rates are just and reasonable."). While the costs incurred by a utility are presumed to be reasonable, *State ex rel. Utils. Comm'n v. Conservation Council*, 312 N.C. 59, 64, 320 S.E.2d 679, 683 (1984), once intervenors present affirmative evidence that a utility's costs are unreasonable, the utility has the burden to prove that it is entitled to recover those costs. *State ex rel. Utils. Comm'n v. Intervenor Residents*, 305 N.C. 62, 76, 286 S.E.2d 770, 779 (1982).

Here, intervenors have presented ample evidence to put at issue the reasonableness and prudence of the Company's historical coal ash management policies and practices. They showed that by the 1980s DEP knew of the risks posed by storing coal ash in large, unlined surface impoundments, in contact with groundwater and that, despite that knowledge, the Company failed to take timely

action to mitigate such risks. (*See infra* I.A.1–2.) They showed that DEP's imprudent management of coal ash resulted in contamination of groundwater and surface water in violation of federal and North Carolina law. (*See infra* I.A.3.) And they showed that DEP's imprudence resulted in excavation and remediation costs that are higher today than they would have been if action to address known risks had been taken sooner. (*See infra* I.A.4.)

Once intervenors carried their initial burden, DEP was obliged to prove the reasonableness of its costs. Here, DEP was not able to carry that burden. Because the ultimate burden rests with the Company, any uncertainty with respect to the reasonableness of costs should be resolved in favor of the disallowance.

1. *The Company knew of the risks posed by storing coal ash in large, unlined surface impoundments, in contact with groundwater by the 1980s, at the latest.*

The voluminous record in this proceeding establishes that the environmental risks associated with the practice of mixing coal ash with water to form a slurry and sluicing that mixture to unlined basins for long term storage, as compared with permanently disposing of ash in dry landfills, were well understood as early as the 1970s. (*See generally* Tr. vol. 13, 588–95; Tr. vol. 15, 1477–84; Tr. vol. 14, 598–602.) When large accumulations of ash are left saturated in water in unlined pits hydrostatically connected to groundwater, there exists a heightened risk that constituents of ash will migrate into the groundwater or seep out of the impounded area. (Joint Ex. 8 (1982 EPRI Manual), 2-11 ("inadequately lined ponds provide a greater opportunity for groundwater

contamination, because the soil immediately below the pond is always saturated and under a constant head of pressure from the overlying"); Tr. vol. 13, 583–86; Tr. vol. 14, 597, 619–20.) As described by witness Bednarcik, such risks are a fact of elementary chemistry, hydraulics, and hydrology. (Tr. vol. 12, 225 ("by having the water on top of the ash, water has to move its way down, right? So by having the water on the ash, it will continue to push down through the ash and going into the groundwater"), 34 ("Q. Would you agree that there was a risk of a release to the environment, whether through groundwater or otherwise, as long as those basins had water in them and ash in them? / A. I would say that yes, as long as they had water in them, they would continue to have that hydraulic head, yes."); *see also* Tr. vol. 15, 619–20; Tr. vol. 13, 586.)

Whether these basic scientific principles were established and generally understood in the 1980s is not in dispute. The Company's own witnesses acknowledge these risks were recognized in the early 1980s. (Tr. vol. 19, 144; *see also* Tr. vol. 19, 443 ("the information that's out there is indicating, at a national level, that there is a potential for groundwater impacts").) The applicability of such principles to the storage of coal ash in unlined surface impoundments and the awareness of the dangers posed by that method of storage were documented in 1979. (Joint Ex. 3 (Los Alamos Report), 6 ("[t]here is growing awareness that the discarded wastes from coal combustion are a serious potential source of surface and ground water contamination").) Numerous other government and industry documents from the 1980s make clear that the risks posed by storing large quantities of coal ash in unlined surface

impoundments, in contact with groundwater were well understood by the utility industry. (*See*, *e.g.*, Joint Exs. 5 (1980 TVA/EPA Coal-ash Leachate Report), 6 (1980 TVA/EPA Behavior of Coal Ash Particles in Water Report), 7 (1981 EPRI Coal Ash Disposal Manual), 8 (1982 EPRI Manual for Upgrading Disposal Facilities), 13 (1988 EPA Report); *see generally* Tr. vol. 13, 588–600; Tr. vol. 15, 1477–84; Tr. vol. 14, 598–602.) The industry-supported Electric Power Research Institute (EPRI) recognized in 1982 that "the potential for groundwater degradation should be noted, especially when an unlined ash pond is constructed on a site with relatively permeable soils and a shallow groundwater table. The existence of a constant hydraulic head (standing water) in the pond makes leachate generation and migration inevitable." (Joint Ex. 8 (1982 EPRI Manual), 4-19.)

DEP cannot avoid the scientific facts presented in these historical documents. The highlighting of pertinent facts by intervenors is not "cherry-picking" nor are these basic concepts of chemistry and hydrology understood differently now than they were forty years ago. (Tr. vol. 14, 700–01.) DEP attempts to downplay these facts, arguing that they are not reflected in the executive summaries or ultimate conclusions of the reports. As Sierra Club witness and hydrogeologist Mark Quarles explained, "many times if you look further back into the document, you'll find that . . . the executive summary really doesn't give the whole picture." (Tr. vol. 14, 666–71.)

DEP witness Marcia Williams voiced disagreement with intervenor witnesses' citation to a number of historical documents pertaining to knowledge

of coal ash pond risks (though, notably, she did not take issue with their reliance on the 1979 Los Alamos Report). (Tr. vol. 19, 272–307.) These criticisms are without merit. Witness Williams's primary criticism focuses on the lack of certainty about the future federal regulation of coal ash disposal and the delay in the adoption of anticipated performance standards. (*Id.*) But irrespective of governmental foot-dragging, the cited reports and manuals present scientific facts about the migration of contaminants from coal ash ponds into groundwater. (Joint Ex. 13 (1988 EPA Report to Congress), ES-3 (highlighting the fact that most "utility waste management facilities were not designed to provide a high level of protection against leaching" and 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").) Whether decisionmakers in Washington acted in a timely manner when confronted with such facts or not has no bearing on the validity of the underlying principles of chemistry and hydrology and the fact that the application of such principles to coal ash ponds was understood by the industry.

It is no secret that regulation of an influential industry by the federal government is inherently political. EPA's slowness in regulating coal ash disposal is not a factor of scientific uncertainty but, rather, reflects the sway held by industry and the tradition of staunch opposition to federal regulation by industry and many elected leaders. (*See*, *e.g.*, DEP Late-Filed Ex. 16 (USWAG and Progress Energy comments on 2010 Proposed CCR Rule) (opposing regulation of coal ash under Subtitle C of RCRA).) Indeed, despite RCRA's requirement that

the U.S. Environmental Protection Agency (EPA) review and revise its solid waste disposal regulations at least every three years, 42 U.S.C. § 6912(b), EPA waited more than thirty years to review and revise regulations applicable to coal ash and only issued a proposed rule after being ordered to do so by a federal court. *See Appalachian Voices v. McCarthy*, 989 F. Supp. 2d 30 (D.D.C. 2013). The politics of federal regulation of coal ash are again front and center with EPA's recent about-face and attempts to weaken certain requirements of the 2015 federal coal combustion residuals rule (2015 CCR Rule) after a petition from industry complaining that the regulations were too stringent. *See, e.g.*, EPA, Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals From Electric Utilities; A Holistic Approach to Closure Part A: Deadline To Initiate Closure, 85 Fed. Reg. 53,516 (Aug. 28, 2020). The Company's inability to predict such regulatory and legislative developments at the federal or state level does not mean it was unable to understand and foresee the environmental consequences of improper design, construction, operation, repair, and maintenance of the ponds it chose to use for coal ash storage. Similarly, the relative priorities of state and federal regulators do not change DEP's knowledge of the foreseeable consequences of its actions. The ability or willingness of the North Carolina Department of Environmental Quality (DEQ) to use its limited resources to commence enforcement actions against DEP does not absolve DEP of its duty to act with care.

Stated simply, witness Williams's personal interpretation of historical documents and the emphasis she places on the history of the federal regulation

of coal ash are unavailing. No part of her testimony provides any firsthand information about the Company's actions, and her mere two-and-a-half-year involvement with the EPA's delay of action on coal ash regulation simply does not provide any insight or better understanding of the questions before this Commission. Contrary to the Company's assertions, witness Williams is not an expert on groundwater. Witness Williams holds an undergraduate degree in math and physics. (Williams Rebuttal Ex. 1.) For almost the first decade of her tenure at EPA, witness Williams focused on statistical analysis and air pollution, not groundwater; her involvement with solid waste regulation lasted only two and a half years. (*Id.*) In addition, witness Williams is not an expert on North Carolina law. (*Id.*) Accordingly, her interpretation of the state's groundwater rules should be afforded no weight.

What does help to inform the questions before this Commission is the collection of industry and government documents detailing the state of scientific knowledge in the 1980s and the industry's understanding of that knowledge. Indeed, given the consensus about the risks posed by wet storage of coal ash in unlined pits, the electric generating industry began shifting to dry handling and storage. As early as 1978, EPA noted, with respect to the Company's Mayo plant, that "[w]ater carriage of fly ash and once-through bottom ash sluicing systems are inconsistent with existing and expected . . . standards of performance for new sources," and that dry fly and recirculating bottom ash handling systems "appear necessary to assure that chronic and acute toxicity conditions do not occur in Mayo Creek, Crutchfield Branch and the make-up

water reservoir." (Sierra Club Bednarcik Rebuttal Cross Ex. 2 at PDF 498.) EPA further recognized the ability of the industry to shift to dry ash handling systems, finding that the technology "is feasible, is not excessively costly, and is being instituted by many power companies now." (Id. at PDF 503.) In 1981 there was an even split between the use of wet and dry ash disposal, (Joint Ex. 7 (1981 EPRI Manual), 3-8), but by 1988, EPA confirmed the national trend away from wet disposal systems toward dry handling methods. (Joint Ex. 13 (1988 Report to Congress), 4-23 ("These trends in utility waste management methods have been changing in recent years, with a shift towards greater use of disposal in landfills located on-site.").) By the end of the 1980s, the Company had all the information it needed to understand that "business as usual" with coal ash was simply not reasonable.

2. *The Company failed to take timely action to mitigate the risks associated with its storage of coal ash in large, unlined surface impoundments, in contact with groundwater.*

DEP is correct that the regulatory regime in place in the 1980s and '90s did not require the Company to immediately end the use of wet ash disposal and switch to dry handling. But the fact that the Company had a choice between these two methods does not mean that the environmental risk profiles of the two were the same. (*See*, *e.g.*, Sierra Club Bednarcik Direct Cross Ex. 1 (2007 CCP Environmental Management Program Plan), Doc. Ex. 3909 [PDF 12] ("Current ash ponds or surface impoundments are generally unlined and have a large, constant hydraulic head. As a result, this management practice has a greater

potential to impact groundwater than dry handling options.").)[1] Nor does it absolve the Company from its obligation to implement its chosen method in a reasonable and prudent manner in light of the site-specific risks inherent in the method chosen. It failed to do this.

The Company knew or should have known what risks were associated with its waste disposal choice. As discussed above, those risks are a matter of basic chemistry and hydrology. Having chosen to continue mixing its coal ash with large volumes of water and to send it to unlined ponds, the Company should have exercised a greater degree of care, commensurate with the risks understood to go along with wet handling and storage. DEP argues that its compliance with existing regulatory requirements was enough. Putting aside the fact that the Company's record of compliance is far from perfect, the appropriate standard of a care for a reasonable and prudent public utility is not whether the utility has avoided criminal prosecution or civil sanction. Instead, a utility must take affirmative actions to minimize the risk that contaminants from its coal ash waste will enter the environment. DEP failed to take such actions.

One obvious first step in minimizing potential risks was monitoring the groundwater quality around their coal ash ponds. Without comprehensive monitoring of groundwater, the only way to know whether ash constituents have been released into the environment will be after it is too late and pollutants have reached a receptor. (*See* Joint Ex. 8 (1982 EPRI Manual), 4-19 ("monitoring of groundwater and leachate is nevertheless necessary to provide convincing proof

[1] Exhibit was moved into the record on September 29, 2020. (Tr. vol 12, 281.)

of a safe disposal practice").) Given the consensus about the risks posed by wet storage of coal ash in unlined pits, the prudent response would have been to monitor groundwater and, if leaking was detected, to implement corrective action measures.

The groundwater monitoring protocols outlined in the industry manuals published in the early 1980s provided a roadmap for understanding both the importance of monitoring groundwater and how to do it. (Joint Ex. 7 (1981 EPRI Manual), 4-12 ("[g]roundwater resources in the vicinity of the site should be surveyed to establish background data on water quality; depth, direction, and rate of flow of groundwater; and potential interaction between the [disposal unit] and ground and surface waters; and hydraulic conductivity and attenuating capacity of the site soils").) Contrary to witness Williams's testimony that groundwater monitoring in the 1980s and '90s wasn't sophisticated enough or reliable, (Tr. vol. 19, 366–68), the monitoring requirements included in the 2015 CCR Rule in large part mirror what EPRI had laid out in the 1980s.[2] *See* 40 C.F.R. §§ 257.91–.95 (federal regulations governing groundwater monitoring systems). The fact that guidance documents were improved upon and updated when new information was made available does not mean that a utility should not heed the guidance available to it. Indeed, as DEP is quick to point out, reasonableness is defined by acting pursuant to the information available at the

[2] In that 1981 manual, EPRI also recognized that the bottom of an ash disposal site should be maintained at least five feet above the seasonal high water table, (Joint Ex. 7 (1981 EPRI Manual), 4-12), the same safeguard ultimately adopted in the 2015 federal coal ash rule. *See* 40 C.F.R. § 257.60.

time. The Company cannot now have it both ways and say it was acting reasonably in the 1980s when it ignored guidance that was available at that time and opted to do nothing while waiting for more complete information.

But ignoring available information and sitting on its hands is exactly what the Company did. Despite the consensus about risks from ash ponds and the importance of monitoring groundwater, DEP declined to establish comprehensive groundwater monitoring at its coal ash sites, claiming doing so would have been premature. (Tr. vol. 19, 162.)

Where it did install monitoring wells, the Company drew conclusions from the resulting data showing that it was not asking the right questions. The Company knew as far back as the 1980s that its ponds were leaking coal ash constituents, (Tr. vol. 13, 598–600), but did not consider that fact important. Rather, its focus was on whether the contamination caused "major" or "significant" impacts. In deciding not to implement comprehensive groundwater monitoring or take other action to mitigate groundwater contamination risks, DEP relied upon the 1979 A.D. Little report, which concluded that "no *major* environmental effects have occurred." (Tr. vol. 19, 147 (emphasis added).) Based on that report, DEP "conclude[d] that continuing wet disposal of coal ash would have no significant impact on groundwater at [DEP] sites." (*Id.* at 162.)

Its focus on the severity of impacts, rather than the cause, highlights the Company's complete disregard of state groundwater regulations that prohibit exceedances of water quality standards to "maintain and preserve the quality of the groundwaters, prevent and abate pollution and contamination of the waters of

the state, protect public health, and permit management of the groundwaters for their best usage by the citizens of North Carolina." 15A N.C. Admin. Code 2L.0103.

The Company has an obligation not to allow pollutants from its facilities to enter the groundwaters of the state *in the first place*. Nevertheless, as DEP witness Wells testified, the Company ignored that obligation and focused, instead, on whether contamination *that had already reached groundwater* was migrating beyond a compliance boundary—*i.e.*, whether the contamination would cause a violation of law. (Tr. vol. 19, 163 ("The data did not reflect a pattern of ash constituents migrating out from the landfills at levels that posed a significant risk to the environment or human health.").) While the Company may reasonably argue that no corrective action, such as pumping and treating contaminated groundwater, was required until contamination moved beyond a compliance boundary, it cannot likewise justify its failure to conduct additional groundwater monitoring. One will not find what one does not look for. The failure to monitor groundwater in the face of known releases was not reasonable.

Similarly, DEP's reliance on the opinion testimony of witness Williams to justify its continued operation of unlined ash ponds without comprehensive groundwater monitoring must also fail. Witness Williams's conclusion that "[DEP] reasonably and prudently would have believed that its ash basins would not result in groundwater contamination *at levels that would result in damage*" exemplifies the same misplaced focus. (Tr. vol. 19, 266–67 (emphasis added).) The relevant question for the Company was not whether its ponds would result in

damage or violate the law, but whether they would result in contamination of groundwater.

Despite its own recognition that constructing new unlined ponds after 1985 was not reasonable, the Company continued to use them without any noticeable change to operations for nearly four decades. In addition to implementing a more robust groundwater monitoring system, the Company had a number of other options to lessen the risks posed by its millions of tons of ash sitting in unlined ponds across the state. Those options included "reducing the amount of coal ash which is entering the pond by converting the facility to dry fly ash and bottom ash handling . . . , removing ash from the basin on a frequent basis, eliminating wastewater streams and hydraulic loading from non-coal ash sources, removing the ash and installing a bottom liner, lowering the water level and/or dewatering the pond to decrease hydraulic loading, and ultimately pond closure." (Tr. vol., 13, 618.)

In 1982, EPRI identified available disposal options that could lessen the risks associated with storing coal ash in unlined surface impoundments, including the conversion from wet to dry disposal systems. (Joint Ex. 8 (1982 EPRI Manual), S-2.) In addition, EPRI recognized that "ponding is not considered a method for permanent disposal" and that the "increased land requirement and eventual problem of site closure favor dry disposal." (*Id.* at 2-2.) The Company was aware of these options and even considered converting to dry ash handling, (*id.*; DEP Late-Filed Ex. 19), but ultimately decided to take no action. Witness Wells confirmed that "other options were available and being employed in other

parts of the country" and that "even within Duke . . . we employed other options where it was appropriate." (Tr. vol. 19, 515.)

Dewatering was the single most important step to eliminate or reduce the hydraulic pressure of the standing and interstitial water in the basin, and thereby reduce seepage and migration of ash constituents to surface water and groundwater. (Tr. vol. 13, 612, 616, 618.) For ponds where DEP was no longer sending ash, a prudent step to minimize groundwater contamination (and the risk of catastrophic dam failure) would have been to dewater the pond. (Tr. vol. 13, 616–18.) Nevertheless, after the coal units at the Cape Fear and H.F. Lee plants were retired in 2012 and ceased generating coal ash, DEP took no immediate action to start the process of dewatering those facilities' ash ponds. (Tr. vol. 13, 94–95.)

DEP claims that it needed to keep its ash ponds operating in order to manage stormwater and other wastestreams, (Tr. vol. 19, 145), but, as witness Bednarcik acknowledged, other options for those wastes were readily available and are now being implemented. (Tr. vol. 12, 94.) Again, the Company ignored prudent options and only took action under force to do so by regulators. DEP argues that acting before being required to do so by regulators would have constituted unreasonable gold-plating, (Tr. vol. 19, 180), but ignores the fact that in a limited number of instances it did go beyond regulatory requirements. At the Mayo plant, DEP converted from wet to dry handling of fly ash in 2009 (before the 2014 enactment of the North Carolina Coal Ash Management Act (CAMA) or even the 2010 proposal of the federal coal ash regulations) and from wet to dry

handling of bottom ash in 2013 (also before the enactment of CAMA or the final federal regulations). (Tr. vol. 19, 182, 985.) Accordingly, the Company's argument that it was only prudent to be proactive with respect to mitigating coal ash management risks once it had regulatory certainty fails.

The Company also argues that its actions were prudent because other utilities also disposed of coal ash in unlined ponds. "Everybody else was doing it" is an excuse that doesn't work for misbehaving teenagers nor for misbehaving utilities. The performance of peer utilities is relevant in the context of prudence review as a substitute for competitive forces. *See* Scott Hempling, *Regulating Public Utility Performance: The Law of Market Structure, Pricing and Jurisdiction* at 216–66 (ABA 2013). Thus, while the actions of similarly-situated contemporaries may bear on whether a utility is managing its business in an efficient manner despite the lack of a competitive market, that does not mean that industry-wide imprudence is allowable. Such application of the prudence standard would encourage the axiomatic race to the bottom. The comparison to other industry actors cited by Hempling comes from a Federal Energy Regulatory Commission (FERC) decision involving whether a utility's level of investment in customer conservation programs was prudent. *See* Arizona Pub. Serv. Co., 21 FERC ¶ 63,007, at 65, 103 (1982). In that case, where there was no regulation setting a required level of investment, and the utility did not violate the law or breach its duty of care with respect to the investment it made. *Id.* Accordingly, this decision does not support the assertion that because other utilities stored ash in leaking ponds, DEP was prudent to do so as well.

DEP knew or should have known that its continued storage of coal ash in unlined pits located below the groundwater table, adjacent to lakes and rivers, and within floodplains, presented an unreasonable risk to the environment and surrounding communities. Despite this knowledge, the Company failed to take appropriate action to mitigate such risks until forced by regulators to do so.

3. The Company's storage of coal ash in large, unlined surface impoundments, in contact with groundwater resulted in contamination of groundwater at every one of its facilities in violation of North Carolina law.

The record taken as a whole reveals evidence of the Company's history of coal ash management by significant inattention, inaction, and neglect in maintaining its ash ponds. This inattention, inaction, and neglect resulted in contamination of groundwater at every ash disposal site, violations of federal and state law, and, ultimately, a guilty plea by the Company of criminal negligence in violation of the Clean Water Act. (Hart Ex. 3 (Joint Factual Statement).) On all counts, DEP admitted that it had failed "to exercise the degree of care that someone of ordinary prudence would have exercised in the same circumstances." (Hart Ex. 2 (Pleas to Criminal Information), 31, 35, 37.)

Far from being an anomaly in an otherwise unblemished record of compliance with environmental laws, the federal criminal investigation showed the Dan River spill to be the foreseeable result of a pattern of mismanagement at the Company's coal ash basins. (Hart Ex. 3 (Joint Factual Statement), ¶¶ 57–59, 70–80.) DEP's pattern of mismanagement of coal ash facilities also led to the contamination of surface waters and groundwater across the state and the repeated violation of environmental laws. In the plea agreement, the Company

admitted that it "allowed unauthorized discharges of pollutants from coal ash basins via 'seeps' into adjacent waters of the United States" at coal ash sites across North Carolina. (*Id.* ¶ 3.) At its H.F. Lee site, DEP admitted that seeps unlawfully discharged coal ash contaminated wastewater containing elevated levels of chloride, arsenic, boron, barium, iron, and manganese into the Neuse River. (*Id.* ¶¶ 145–49.) DEP also pled guilty to unlawful discharges from its Asheville ash ponds into the French Broad River, (*id.* at 49–50), and admitted that a "boron plume emanating from the coal ash ponds" at its Sutton site had been observed since 1990 and that "[f]rom at least 2010 through 2013, the groundwater monitoring wells at Sutton reported unnaturally elevated levels of some constituents, including manganese, boron, sulfate, and total dissolved solids." (*Id.* at 57.)

Despite the Company's attempts to characterize the Dan River spill and resulting criminal charges as a minor blip on an otherwise impeccable record, federal investigators found that violations had occurred "from at least [a certain date]," leaving open the precise date the charged misconduct may in fact have begun. (Hart Ex. 3 (Joint Factual Statement), 2, 24, 27, 47, 49, 50, 57.) Indeed, the character of the criminal violations and the nature of the surface impoundments themselves indicates that DEP's negligent actions and omissions did not suddenly start at some date in 2010, 2011, or 2012, but were instead a continuation of firmly established operating practices.

Indeed, as early as 1996, the Company recognized that it could face liability for groundwater contamination originating from ponds at its Cape Fear,

H.F. Lee, Robinson, Roxboro, Sutton, and Weatherspoon sites and notified its insurers. (Attorney General's Office Fountain Cross Ex. 5 (1996 Notice to Insurers), Docket No. E-2, Sub 1142.)[3] The North Carolina 2L rules impose strict liability on any person whose activities cause the concentration of any substance in groundwater to exceed the limits set by the rules. 15A N.C. Admin. Code 2L.0103(d) (2018). Contamination beyond the "compliance boundary" surrounding each basin and above the limits set by the rules was illegal. *See* N.C. Gen. Stat. § 143-215.1(i); 15A N.C. Admin. Code 2L.0102(3), 2L.0107(a), (b). Once actual or threatened 2L rule violations were discovered, DEP was required to stop its basins from contaminating groundwater—to abate, contain, or control the migration of contaminants. 15A N.C. Admin. Code 2L.0106. However, there is no record evidence that after notifying its insurers of the threatened violations, DEP took any action to control the exceedances, eliminate their source, or reduce the potential liability it reported.

In the years that followed, contamination of groundwater by DEP's ash ponds was ignored. For example, a 2004 report regarding coal ash management at DEP's Sutton plant identified "high levels of arsenic" at a groundwater monitoring well near an unlined pond onsite and noted that the Sutton ponds would need to be "emptied and placed in a lined containment to eliminate the leaching of the ash products into the ground water system." (Hart Ex. 25, 2.) That

[3] Per its December 6, 2019 Order Scheduling Investigation and Hearings, Establishing Intervention and Testimony Due Dates and Discovery Guidelines, and Requiring Public Notice, the Commission took judicial notice of all documents received into evidence in Docket No. E-2, Sub 1142.

same year, the Company prepared a number of reports assessing ash management at its Cape Fear, H.F. Lee, and Weatherspoon plants. (DEP Late Filed Ex. 19.) These reports recognized risks to groundwater posed by disposal of coal ash in unlined ponds: "a liner would be required for the pond to protect groundwater quality in the surrounding area." (*Id.* (H.F. Lee Assessment at 28; Cape Fear Assessment at 24; Weatherspoon Assessment at 22).) Nevertheless, DEP continued to send water and ash to its unlined basins.

By the 2010s, contamination of groundwater with coal ash pollutants was widespread.[4] In a 2013 enforcement action brought against DEP, the state regulator alleged that sampling revealed numerous exceedances of state groundwater standards beneath seven DEP facilities between 2010 and 2013. (Wells Public Staff Cross. Ex. 6 (May 20, 2013 Complaint), Docket No. E-2, Sub 1142, at 18–20; Wells Public Staff Cross Ex. 7 (Aug. 16, 2013), Docket No. E-2, Sub 1142, at 16, 21–23, 27–30, 32–35, 37–38, 41–45.) At six sites, DEQ affirmatively concluded that the 2L rule exceedances were violations caused by coal ash pollution and not attributable to naturally occurring conditions. (Wells Public Staff Cross. Ex. 6 (May 20, 2013 Complaint), Docket No. E-2, Sub 1142, ¶¶ 84–89; Wells Public Staff Cross Ex. 7 (Aug. 16, 2013), Docket No. E-2, Sub 1142, ¶¶ 90, 116, 117, 140–42, 157, 179–88.) As part of its 2015 plea agreement, the Company admitted that "[m]onitoring of groundwater at coal ash basins owned by [DEP] has shown exceedances of groundwater water quality

[4] Additional evidence of DEP's violation of the state groundwater rules was presented by Attorney General witness Steven C. Hart and Public Staff witness Jay B. Lucas. (*See* Tr. vol. 13, 626–93; Tr. vol. 15, 1487–93.)

standards for pollutants under and near the basins including arsenic, boron, cadmium, chromium, iron, manganese, nickel, nitrate, selenium, sulfate, thallium, and total dissolved solids." (Hart Ex. 3 (Joint Factual Statement), ¶ 138.)

4. *The Company's failure to address the risks associated with its imprudent and unreasonable management of coal ash resulted in excavation and remediation costs that are higher than they would have been had action to address those risks been taken sooner.*

The costs for which DEP now seek rate recovery include the costs of dewatering basins, excavating ash, transporting ash, disposing of ash in landfills, monitoring groundwater quality at ash basin sites, and remediating groundwater contamination. As the Company recognized in 2007, "sluicing ash followed by removal and landfilling requires 'double handling' of the ash, increasing site O&M costs." (Sierra Club Bednarcik Direct Cross Ex. 1, Doc. Ex. 3909 [PDF 12].) Had the Company acted reasonably with respect to its coal ash handling in the past, it could have avoided the double handling in which it is now engaged and a portion of its current costs could have been avoided. (Tr. vol. 14, 613–16.)

As evidence presented in this proceeding shows, the Company's decision to continue sending coal ash to unlined ponds for decades did not satisfy the applicable standard of care. Each year DEP's ponds were in operation meant another year's worth of coal ash being deposited in contact with groundwater. One option before the Commission is to determine the date by which the Company should have converted to dry handling and disposal of coal ash, ascertain how much ash was sent to the ponds after that date, and disallow the costs needed to excavate and transport that ash. This would be a relatively

straightforward exercise of arithmetic (tons x dollars/ton excavation cost). (*See* Tr. vol. 14, 614.)

Evidence presented here also shows that the decades-long use of unlined ponds for ash disposal led to widespread contamination of groundwater. If the Company had switched to dry handling and begun dewatering its ponds sooner, thereby decreasing the hydraulic head at those ponds, contamination would not have been as widespread. (Tr. vol. 14, 615–16, Tr. vol. 13, 618.) Another option for the Commission, therefore, is to disallow some portion of DEP's groundwater remediation costs. In addition, with less contamination, fewer monitoring wells would be required. Thus, disallowance of some portion of the Company's groundwater monitoring costs also would be appropriate.

For these same reasons, DEP's failure to adequately monitor its groundwater resulted in additional costs. Had the Company been aware sooner of the migration of contaminants from its ash ponds and had taken appropriate action to stop such migration, groundwater contamination would be less widespread today. In addition, appropriate corrective action following discovery of contaminant migration would almost certainly have included the cessation of wet ash disposal. Therefore, fewer tons of ash would have been deposited in the ponds and fewer tons would now require excavation.

Other than conclusory statements made in opposition to intervenors' testimony on this issue, DEP has offered no affirmative evidence that its costs would *not* have been lower if it had acted with a reasonable level of care in the past. When asked whether she or "anyone else at the Company attempt[ed] to

evaluate whether the current costs would be lower if the Company had switched to dry ash handling earlier," witness Bednarcik could not identify any analysis that was conducted. (Tr. vol. 12, 246–48.)[5] Similarly, when asked whether he had "evaluated whether any groundwater impacts could have been avoided or mitigated if the Company had ended its storage of coal ash in wet ponds earlier," witness Wells could not identify any evaluation conducted by anyone at the Company. (Tr. vol. 19, 529–33 ("I don't know if there's any evidence to support that. I just don't know.").) When asked whether he had "analyzed whether an earlier shift to dry handling would have resulted in different closure costs today," witness Wells answered that "I have not looked." (Tr. vol. 19, 534.)

Accordingly, DEP cannot establish that the costs incurred to clean up its leaking ponds are reasonable or that shifting all of those costs from the Company and its shareholders to North Carolina ratepayers is just.

B. The Company's coal ash is not "property used and useful"; thus, it cannot earn a rate of return on the costs it incurred to excavate and dispose of that ash or to remediate contamination caused by decades of mismanagement.

A North Carolina public utility can receive a return on the reasonable cost of its property, but only when that property is "used and useful" for providing

[5] In the prior Duke Energy Progress rate case, Company witness Kerin admitted that, while he had not analyzed the question, an earlier switch to dry handling of coal ash could have resulted in fewer tons of coal ash to excavate from a pond and, therefore, in lower closure costs: "Q. And you have not analyzed whether different ash-handling practices in the past might have resulted in different costs today, have you? / A. No, I have not. . . . Q. Do you know whether pond closure costs could have been reduced if the Company had switched earlier to dry handling of coal ash? / A. It would depend. / Q. Okay. So for example, if a pond was being excavated and fewer tons of coal ash had been going there for the last 10 years, those excavation costs would presumably be lower? / A. Yeah. If you're excavating by—if you excavate a basin, tons do play into the overall cost of excavating it." (Tr. vol. 17, 34–35, Docket E-2, Sub 1142.)

current service. N.C. Gen. Stat. § 62-133(b)(1), (c). Most of the costs DEP has incurred involve preparing pond closure plans, excavating coal ash, transporting the ash to landfills, disposing of it permanently, and remediating contaminated groundwater. Such costs are not property that is used and useful for providing current electric service. Rather, these costs, incurred to manage wastes, are non-capital operating expenses.

Furthermore, much of the coal ash being managed today was generated years ago and has no connection to the Company's provision of current service to the ratepayers from whom the Company now seeks rate recovery. Indeed, at many of the ponds, DEP stopped disposing ash wastes and/or ceased generating electricity years ago. Such past activity is not used and useful to current customers and, thus, those customers cannot be required to pay a return for services enjoyed by past customers. *See State ex rel. Utils. Comm'n v. Pub. Staff-N.C. Utils. Comm'n*, 333 N.C. 195, 202, 424 S.E.2d 133, 137 (1993) (*Carolina Trace*) (reversing Commission's order that put into rate base costs of a facility that was not providing current service).

Finally, DEP's election of an accounting treatment for its coal ash-related management costs does not convert those costs into property used and useful. Accordingly, the Commission should reject DEP's request for a return on any of its coal ash cleanup costs.

C. Costs that resulted from unlawful discharges to surface waters of the state are not recoverable.

Section 62-133.13 of the Public Utilities Act—as amended by CAMA—expressly prohibits rate recovery of costs resulting from unlawful discharges to surface waters:

> The Commission shall not allow an electric public utility to recover from the retail electric customers of the State costs resulting from an unlawful discharge to the surface waters of the State from a coal combustion residuals surface impoundment. . . . 'unlawful discharge' means a discharge that results in a violation of State or federal surface water quality standards."

N.C. Gen. Stat. § 62-133.13.

An unlawful discharge includes the discharge of pollutants through seeps,[6] which "occur when water, often carrying dissolved chemical constituents, moves through porous soil and emerges at the surface." (Hart Ex. 3 (Joint Factual Statement), 41–42.) DEP's coal ash ponds are constructed of earthen dams without liners, which causes seeps to form in the dam walls. (*Id.* at 41.) As witness Bednarcik admitted, the National Pollutant Discharge Elimination System (NPDES) permits under which the Company operated its coal ash ponds for decades authorized the discharge of wastewater from designated outfalls only, not from seeps. (Tr. vol. 17, 361.)

[6] Other provisions of CAMA refer to "discharge[s] from [ ] toe drain outfall[s], *seep[s]*, and weep[s]," N.C. Gen. Stat. §§ 130A-309.212(a)(2), (b)(1), (c)(1), (d)(1) (emphasis added), and under the fundamental rule of statutory construction "the words of a statute must be read in their context and with a view to their place in the overall statutory scheme." *Food & Drug Admin. v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 133 (2000) (*citing Davis v. Michigan Dept. of Treasury*, 489 U.S. 803, 809 (1989)); *see also McLeod v. Nationwide Mut. Ins. Co.*, 115 N.C. Ap283, 288, 444 S.E.2d 487, 491 (1994).

In its plea agreement with the U.S. government, DEP admitted that it "allowed unauthorized discharges of pollutants from coal ash ponds via 'seeps' into adjacent waters of the United States" at its North Carolina coal ash sites. (Hart Ex. 3 (Joint Factual Statement), 3, 41–43.) With respect to its H.F. Lee site, DEP pled guilty to unlawful discharges in violation of its NPDES permit from seeps into the Neuse River, which caused "exceedances of state water quality standards for chloride, arsenic, boron, barium, iron, and manganese." (*Id.* at 44–47.) At its Asheville site, DEP pled guilty to unlawful discharges into the French Broad River. (*Id.* at 49–50.)

Environmental audits performed as a condition of DEP's plea agreement identified unpermitted seeps that discharged pollutants into surface waters in violation of federal and state law at five of DEP's coal ash sites (Asheville, Cape Fear, H.F. Lee, Mayo, and Roxboro). (Tr. vol. 15, 1488–89; Lucas Ex. 14; *see also* Public Staff Wright Rebuttal Cross Ex. 2, Docket No. E-2, Sub 1142.) Unpermitted seeps discharging polluted wastewater into surface waters also were identified as part of various state law enforcement actions against DEP brought by DEQ. The Department identified unpermitted seeps at five of DEP's coal ash sites (Asheville, Cape Fear, H.F. Lee, Mayo, and Roxboro.) (Tr. vol. 15, 1468, n. 45 (incorporating by reference Lucas Exs. 8, 9, Docket No. E-2, Sub 1142); *see also* Wells Public Staff Cross. Ex. 6 (May 20, 2013 Complaint), Docket No. E-2, Sub 1142, ¶¶ 78–82; Wells Public Staff Cross Ex. 7 (Aug. 16, 2013), Docket No. E-2, Sub 1142, ¶¶ 55–59, 84–88, 108–12, 135–38.) In addition, DEP entered into Special Orders on Consent (SOCs) with DEQ that

confirmed the existence of seeps at the Cape Fear, H.F. Lee, Mayo, and Roxboro coal ash sites containing coal ash constituents. (Lucas Exs. 7–9.)

Discharges from these unauthorized seeps contained coal ash constituents at concentrations above water quality standards. At the Asheville site, contaminated wastewater, discharged through multiple seeps, contained boron and iron at concentrations above water quality standards. (Public Staff Wright Rebuttal Cross Ex. 2, Docket No. E-2, Sub 1142, at 11. 3633) Sampling of seeps showed elevated concentrations of arsenic, boron, iron, and manganese at the Cape Fear site, (*id.* at 56–57), of arsenic, boron, iron, and manganese at the H.F. Lee site, (*id.* at 68–70), of boron and manganese at the Mayo site, (*id.* at 80–82), and of boron, manganese, and sulfate at the Roxboro site, (*id.* at 92–94).

Finally, DEP has agreed that dewatering and closing the leaking coal ash ponds will eliminate the source of the seepage and the unlawful discharge of pollutants. In 2015, the Company sought partial summary judgment on DEQ's claims regarding unpermitted discharges on the theory that, because it committed to closing certain coal ash ponds and because such closure would eliminate discharges to surface waters via seeps, further relief would be unnecessary. In two separate orders, the court granted DEP's requests, holding that "dewatering, excavating and removing the contents of the coal ash basins" would eliminate seeps and remedy the violations regarding unpermitted discharges alleged in DEQ's complaints. (Witliff Ex. 5.3, ¶¶ 8–9, Docket No. E-2, Sub 1142; Witliff Ex. 5.4, ¶¶ 9–10, Docket No. E-2, Sub 1142.) DEP also recognized the fact that dewatering and closing ponds would abate seeps when it

entered into Special Orders on Consent (SOCs) for its coal ash ponds. Those SOCs resolved multiple notices of violation issued by DEQ for unlawful seeps at DEP coal ash sites. (Lucas Exs. 7–9.) DEP agreed that the removal of free water from coal ash ponds "is expected to substantially reduce or eliminate seeps" and committed to remove water from its ponds on an accelerated schedule. (Lucas Ex. 7, 2; Lucas Ex. 8, 2; Lucas Ex. 9, 2.)

The fact that ash pond closures are required by CAMA does not guarantee DEP the recovery of closure costs from ratepayers. The Act's closure requirements do not negate the necessity of dewatering and closure of leaking ash ponds to address unlawful seeps and end the discharge of pollutants to surface waters. Irrespective of CAMA, accelerated dewatering of DEP's ponds that are subject to SOCs is required to address discharges from unpermitted seeps. (Lucas Exs. 7–9.) Moreover, the superior court ruled that closure of DEP's ash ponds would eliminate seeps. (Witliff Ex. 5.3, ¶¶ 8–9, Docket No. E-2, Sub 1142; Witliff Ex. 5.4, ¶¶ 9–10, Docket No. E-2, Sub 1142.) Accordingly, the costs of dewatering and ash pond closure activities that eliminate seeps and the resulting unlawful discharges to surface water on the timeline required by the SOCs—*i.e.*, sooner than would be required under either CAMA or the federal rule— are not recoverable from ratepayers.

II. RATEPAYERS SHOULD NOT PAY FOR COSTS OF CAPITAL PROJECTS AT DUKE ENERGY PROGRESS'S UNECONOMIC COAL UNITS.

Among the costs for which DEP seeks recovery in this proceeding are various capital investments at its coal-fired boilers. As part of its duty to set just

and reasonable rates, the Commission must decide whether it was reasonable and prudent for the Company to continue investing millions of dollars in aging coal units that had not operated economically for years. N.C. Gen. Stat. §§ 62-30, 62-32, 62-131(a), 62-133.

As Sierra Club witness Rachel Wilson testified, DEP's coal-fired units operated at a loss during the test period: "for each of DEP's coal units, the costs to maintain and operate the unit exceeded the value provided by the unit" between 2016 and 2018. (Tr. vol. 15, 42.) DEP undertook huge capital investments at its uneconomic coal units either without evaluating the economics of their continuing operation or even when the units had negative value to ratepayers. (*Id.* at 46–47.) Investing significant amounts of capital in coal units that have a history of losing money without determining what those loses will look like going forward is a classic example of utility imprudence. When faced with projections of uneconomic operation for years to come and high capital costs to keep coal units operational, the prudent utility would at least evaluate the possibility of early retirement of the units. Incurring costs absent such an evaluation cannot be considered reasonable.

DEP contends that questions of past and future coal unit economics should be addressed in the context of an Integrated Resource Plan (IRP) docket. (Tr. vol. 11, 992.) Evaluation of coal unit economics in an IRP docket does not eliminate the Commission's task in the current proceeding. Moreover, such an argument rings hollow given DEP's historical refusal to evaluate the cost-effectiveness of the continued operation of existing coal units in its biennial

IRPs.[7] Regardless of the adequacy of past IRPs, DEP's burden in this proceeding remains: to demonstrate that expenditures it seeks to pass on to customers (and those on which it seeks to earn a return) were reasonable.

Indeed, an IRP docket cannot protect ratepayers from utility imprudence. In one recent example, the Virginia State Corporation Commission denied Dominion Energy Virginia's request for recovery from its ratepayers of investments in wet-to-dry ash handling system conversions at Dominion's Chesterfield power plant.[8] Despite the fact that Dominion's IRP had identified various possibilities for early retirement of the Chesterfield units, Dominion nevertheless invested in expensive upgrades at the plant. The Virginia commission found that the investments were not useful to customers because the coal units were slated to retire soon after the conversions were completed.

Here, DEP has sought recovery of approximately $478 million in capital costs at its Roxboro power plant, including approximately $337 million to convert the coal ash handling system from wet to dry and to reroute process and stormwater flows. (Tr. vol. 11, 1001–02.) At the Mayo plant, DEP has sought recovery of approximately $100 million, of which $87 million was for environmental projects. (*Id.*) The Company failed to undertake comprehensive retirement analyses for either Roxboro or Mayo before deciding to invest nearly

[7] In the Matter of 2018 Biennial Integrated Resource Plans and Related 2018 REPS Compliance Plans, Order Accepting Integrated Resource Plans and REPS Compliance Plans, Scheduling Oral Argument, and Requiring Additional Analyses, Docket No. E-100, Sub 157 at 90 (Aug. 27, 2019).

[8] Petition of Virginia Electric and Power Co. for approval of a rate adjustment clause, Final Order, Case No. PUR-2018-00195 (Aug. 5, 2019).

half a billion dollars at those plants. (Tr. vol. 11, 1002–03.) No evaluation of any kind was attempted for Roxboro, and the analysis DEP points to being performed for Mayo looked only at one option: replacing the coal unit with new gas-fired turbines. (*Id.* at 1003–04.) Consideration of just one alternative does not represent the type of comprehensive retirement analysis that would allow a prudent utility to make the best decision for its ratepayers.

PROPOSED FINDINGS AND CONCLUSIONS

In light of the foregoing, Sierra Club asks the Commission to make the following findings and conclusions:

1. DEP knew of the risks posed by storing coal ash in large, unlined surface impoundments, in contact with groundwater by the 1980s, at the latest.

2. DEP has stored coal ash in unlined pits, in contact with groundwater for decades despite knowledge of the risk such practice presented to the environment.

3. DEP failed to take timely action to mitigate the risks associated with its storage of coal ash in large, unlined surface impoundments, in contact with groundwater.

4. DEP's operation of unlined coal ash ponds in the years since the 1980s without implementing adequate groundwater monitoring or taking other steps to mitigate the risks of continuing to operate the ponds was unreasonable.

5. DEP's unreasonable operation of its coal ash ponds resulted in the contamination of groundwater and surface waters.

6. DEP pled guilty to criminally negligent violations of the Clean Water Act arising from mismanagement of its coal ash ponds.

7. The negligent actions that led to DEP's guilty plea were unreasonable.

8. DEP violated state law and regulations by allowing pollutants from its coal ash ponds to reach the waters of the state.

9. The actions that led to DEP's violations of state law and regulations were unreasonable.

10. DEP's unreasonable operation of its coal ash ponds resulted in excavation and remediation costs that are higher than they would have been if DEP acted to mitigate the risks of continuing to operate its ponds sooner.

11. DEP failed to meet its burden of showing that its operation of coal ash ponds between the 1980s and the test year was reasonable.

12. DEP failed to meet its burden of showing that its coal ash pond closure costs would not have been smaller if the Company had acted reasonably in the past.

13. Therefore, DEP has not established that the requested rate recovery for coal ash pond closure costs is just and reasonable, and recovery as requested is denied.

14. DEP's coal ash is not "property used and useful."

15. Therefore, DEP's request for a rate of return on the costs it incurred to excavate and dispose of its coal ash or to remediate groundwater contamination is denied.

16. DEP caused unlawful discharges to surface waters of the state from its coal ash ponds. Pond closure is necessary to abate those discharges.

17. Therefore, DEP's requested rate recovery of coal ash pond closure costs is denied.

18. Investing millions of dollars at coal-fired power plants that are uneconomic and will cease operation in the near future is not reasonable.

19. DEP failed to meet its burden of showing that capital costs at its Roxboro and Mayo powers plant were reasonably incurred.

20. Therefore, DEP's requested recovery of capital costs at its Roxboro and Mayo power plants are denied.

CONCLUSION

For the reasons set forth above, Sierra Club respectfully requests that the Commission deny DEP's request for recovery of its coal ash pond closure costs and capital costs at its Roxboro and Mayo power plant from ratepayers.

Respectfully submitted this 4th day of December, 2020,

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the foregoing *Post-Hearing Brief of Sierra Club* upon each of the parties of record in these proceedings or their attorneys of record by deposit in the U.S. Mail, postage prepaid, or by email transmission.

This the 4th day of December, 2020.

Catherine Cralle Jones