

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-7, SUB 1214

In the Matter of:)
Application by Duke Energy Carolinas,)
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 Carolinas, LLC (DEC or the Company) in the above-captioned docket.

INTRODUCTION

DEC asks this Commission to approve an enormous increase in its rate base—including more than \$341 million (DEC Late-Filed Ex. 12) 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, 872.) DEC 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.

DEC 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 DEC'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 June 22, 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 DEC met that burden. Indeed, members of this Commission found the Company's evidentiary presentation in the prior rate case "less than satisfactory." 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, DEC's primary witness on coal ash, Jessica Bednarcik, only first assumed responsibility for DEC's response to coal ash issues in 2015 without any pertinent prior experience concerning the subject. (Tr. vol. 25, 119 ("Q. But you don't have any firsthand experience with how—in respect to how the Company's coal basins were maintained prior to 2013, do you? / A. So I do not have firsthand knowledge.") (Bednarcik Cross).)

No DEC witness had firsthand knowledge of Company coal ash practices earlier than 2009. While DEC witness Bednarcik was somewhat more well-versed than 2018 DEC 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. (DEC Late-Filed Exhibits 7–10 and 16–19 were produced just days before the deadline for post-hearing briefs).

Despite DEC'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 DEC 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 DEC's coal ash ponds convey untreated, pollutant-laden wastewater into nearby surface waters in violation of federal and state law. DEC'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, DEC 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 DEC 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 DEC’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 CAROLINAS' DECADES OF IMPRUDENT AND UNREASONABLE MANAGEMENT OF COAL ASH.

DEC's primary contention is that its prior handling of its coal ash waste stream was reasonable because it was "consistent with industry standards" and "consistent with existing federal and state . . . law." (Tr. vol. 24, 98, 101.) 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 DEC 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. DEC 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 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”).)

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 DEC 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 DEC’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 DEC'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, DEC was obliged to prove the reasonableness of its costs. Here, DEC 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. 16, 747–53; Tr. vol. 20, 435–40; Tr. vol. 18, 35–38.) 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. 16, 742–45; Tr. vol. 18, 34.) As described by DEC witness Bednarcik, such risks are a fact of elementary chemistry, hydraulics, and hydrology. (Tr. vol. 15, 30 (“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. 18, 56; Tr. vol. 16, 742, 745, 833.)

Whether these basic scientific principles were established and generally understood in the 1980s is not in dispute. DEC’s own witnesses acknowledge these risks were recognized in the early 1980s. (Tr. vol. 27, 288 (“the information that’s out there is indicating, at a national level, that there is a potential for groundwater impacts”) (Wells Cross); Tr. vol. 28, 66 (“Q. The Company was aware that unlined ponds had the potential to impact groundwater and surface water back in the ‘80s; is that right? / A. Yes, I think that’s correct.”) (Wells Cross).) 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. 16, 747–53; Tr. vol. 20, 435–40; Tr. vol. 18, 35–38.) 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.)

DEC 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. 18, 133–34.) DEC 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. 18, 99.) In response to questions about a Duke Power Company sponsored report from 1984, witness Quarles pointed to

the elevated levels of arsenic, cadmium, selenium, and chromium observed in groundwater as well as the shortcomings of the groundwater monitoring system, (Joint Ex. 9 (1984 Duke Investigation), 29, Table 8), and noted his disagreement with the report's conclusion that the Company's pond did not have a significant impact on groundwater. (Tr. vol. 18, 99–104 (“when you read beyond the executive summary and get into the details as a scientist of what really matters, that would—that would have raised a flag—red flag to any competent engineer or hydrogeologist back in the early ‘80s”).)

DEC 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 does not take issue with their reliance on the 1979 Los Alamos Report). (Tr. vol. 27, 149–53, 155–57.) 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., DEC Late-Filed Ex. 13 (USWAG and Duke 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.

Stated simply, both witness Williams's criticism of intervenors' reliance on 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.

What does help to inform these questions 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. 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.*

DEC 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 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.”).) 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. DEC 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. DEC 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 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. 27, 136, 152, 211–13), the monitoring requirements included in

the 2015 CCR Rule in large part mirror what EPRI had laid out in the 1980s.¹ 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 DEC is quick to point out, reasonableness is defined by acting pursuant to the information available at the 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, DEC declined to establish comprehensive groundwater monitoring at its coal ash sites, claiming doing so would have been too hasty. (Tr. vol. 27, 38 (Wells Rebuttal).) As justification of its lack of action at its ash dumps across the state, DEC relied on flawed studies of groundwater conditions at one site. (*Id.* (citing Hart Ex. 24/Joint Ex. 9 and Joint Ex. 10).) As explained by witness Quarles, the evaluations of the Allen site on which the Company relied are based on seriously flawed assumptions and methodologies. (Tr. vol. 18, 43–50.) Perhaps most tellingly, both early investigations of the Allen

¹ 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.

site found elevated concentrations of arsenic in groundwater. (Joint Ex. 9 (1984 Duke Allen report), 29, Table 8; Joint Ex. 10 (1985 A.D. Little), 5-14.)

Nevertheless, the Company did whatever it could to explain away those findings, suggesting that unproved soil attenuation would prevent contaminant migration or that coal ash constituents were naturally occurring (without even installing background wells). (Tr. vol. 18, 43–49.) Next, using questionable conclusions regarding the Allen site, the Company erroneously concluded that groundwater monitoring was not needed at its other sites, a conclusion that ignored the basic principle that each site is unique with site-specific geologic and hydrogeologic characteristics, the understanding of which is necessary for informed determinations about surface and groundwater contamination risks. (Joint Ex. 12 (1987 Riverbend Report), Doc. Ex. 9433 [PDF 2].) At all but one of its sites, the Company failed to monitor groundwater until the mid-2000s, more than twenty years after the North Carolina 2L groundwater quality standards took effect. (Tr. vol. 18, 42.)

In addition to those flaws, the studies and their conclusions show that the Company was not asking the right questions. The Company knew as far back as the 1980s that its ponds were leaking coal ash constituents, but did not consider that fact important. Rather, its focus was on whether the contamination caused “major” or “significant” impacts. DEC witnesses focused not on the discharges, but on the severity of impacts. They testified that the 1979 A.D. Little report concluded that “no *major* environmental effects have occurred,” (Tr. vol. 27, 153 (emphasis added)), that the Company’s study at Allen “concluded that wet

disposal of coal ash had no *significant* impact on groundwater at [DEC] sites,” and that its 1987 Riverbend study supported the conclusion that “groundwater impacts from the Company’s ash basins were considered *minimal*.” (Tr. vol. 27, 38 (emphasis added).) 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 DEC witness James 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. 28, 74 (“There were certainly impacts . . . at the basin early, it’s just they weren’t expanding or migrating. . . . when I say early, meaning when we were looking in the ‘80s”).) 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, DEC'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 "[DEC] reasonably and prudently would have believed that its unlined ash basins would not result in groundwater contamination *at levels that would result in damage*" exemplifies the same misplaced focus. (Tr. vol. 27, 136 (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 1982 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., 16, 767–68.)

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.*; Hart Exs. 26, 39), 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. 28, 56.)

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. 16, 766–67; see also Witliff Ex. 5.3.1, 2, 7–8, Docket No. E-7, Sub 1146.) For ponds where DEC 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. 16, 766–67.)

Nevertheless, after the coal units at the Dan River plant were retired in 2012 and ceased generating coal ash, DEC took no immediate action to start the process of dewatering the facility’s two ash ponds. In 2014, when coal ash spilled from the site into the Dan River and onto surrounding properties, dewatering of the impoundments still had not begun. DEC did nothing to relieve the hydraulic pressure in the impoundments on the pipes that ran underneath them. The

record discloses no external obstacle preventing the Company from commencing dewatering of the ash basins after 2012. The delays were all internal.

DEC claims that it needed to keep its ash ponds operating in order to manage stormwater and other wastestreams, but, as DEC witness Bednarcik acknowledged, other options for those wastes were readily available and are now being implemented. (Tr. vol. 14, 30–31.) Again, the Company ignored prudent options and only took action under force to do so by regulators. DEC argues that acting before being required to do so by regulators would have constituted unreasonable gold-plating, but ignores the fact that in a limited number of instances it did go above and beyond regulatory requirements—*e.g.*, switching to dry handling of fly ash at the Belews Creek site; installing a liner at a Sutton site ash pond.

DEC 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 any 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, DEC 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.)

Far from being an anomaly in an otherwise unblemished record of compliance with environmental laws, the federal criminal investigation that followed the Dan River spill showed the spill to be the foreseeable result of a pattern of mismanagement at the Company’s coal ash basins. As part of the criminal plea agreement, DEC admitted that the Dan River spill had resulted from its failure to properly maintain and inspect a decades-old pipe under the coal ash pond despite repeated warnings of the need to do so. (Hart Ex. 3 (Joint Factual Statement), ¶¶ 57–59, 70–80.)

DEC’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 Riverbend site, DEC admitted that a constructed seep unlawfully discharged coal ash contaminated wastewater containing elevated levels of arsenic, chromium, cobalt, boron, barium, nickel, strontium, sulfate, iron, manganese, and zinc into the Catawba River. (*Id.*

¶¶ 153–54). DEC admitted that it “fail[ed] to exercise the degree of care that someone of ordinary prudence would have exercised as relates to coal ash and coal ash wastewater” at the Riverbend site. (Hart Ex. 2 (Pleas to Criminal Information), 36.)

Despite DEC 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 the Company’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 and 1997, DEC recognized that its ponds were likely causing violations of the North Carolina 2L rules’ prohibition on groundwater contamination and notified its insurers its potential liability. (Attorney General’s Office Fountain Cross Ex. 1 (1996 Notice to Insurers); Attorney General’s Office Fountain Cross Ex. 2 (1997 Notice to Insurers), Docket No. E-7, Sub 1146.)² According to DEC, its coal ash ponds had contaminated groundwater at levels “above the applicable state cleanup criteria.” (*Id.* at 5–7,

² Per its October 29, 2019 Order Establishing General Rate Case, Suspending Rates, Scheduling Hearings, and Requiring Public Notice, the Commission took judicial notice of all documents received into evidence in Docket No. E-7, Sub 1146.

Att. B.) The 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, DEC was required it 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, DEC 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 DEC’s ash ponds was ignored. For example, a 2003 ten-year coal ash management plan noted that, “in order to avoid mercury, selenium, sulfate, and cadmium contamination,” DEC needed to stop using unlined basins for coal ash storage. (Hart Ex. 26, 5.) In a 2007 “Environmental Management Program for Coal Combustion Products” plan, DEC recognized the long-term environmental, legal, and financial risks associated with coal ash management and stated that the riskiest form of coal-ash disposal is “disposal in surface impoundments.” (Hart Ex. 18/Sierra Club Bednarcik Cross Ex. 1.)

By the 2010s, contamination of groundwater with coal ash pollutants was widespread.³ In a 2013 enforcement action brought against DEC, the state regulator alleged that sampling revealed numerous exceedances of state groundwater standards beneath six DEC facilities between 2010 and 2013. (Wright Public Staff Cross. Ex. 1 (Aug. 16, 2013 Complaint), 18–20, 24–25, 27–28, 31–33, 36–38, Docket No. E-7, Sub 1146.) At three sites, DEQ affirmatively concluded that the 2L rule exceedances were violations caused by coal ash pollution and not attributable to naturally occurring conditions. (*Id.* ¶¶ 88, 163, 187.) As part of its 2015 plea agreement, the Company admitted that “[m]onitoring of groundwater at coal ash basins owned by [DEC] has shown exceedances of groundwater water quality 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 DEC 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

³ Additional evidence of DEC’s violation of the state groundwater rules was presented by Attorney General witness Steven C. Hart and Public Staff witness Charles Junis. (See Tr. vol. 16, p771–820; Tr. vol. 20, p443–48.)

removal and landfilling requires 'double handling' of the ash, increasing site O&M costs." (Sierra Club Bednarcik 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. 18, p57–58.)

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 DEC'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).

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. Another option for the Commission, therefore, is to disallow some portion of DEC'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, DEC'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, DEC 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," DEC witness Bednarcik could not identify any analysis that was conducted. (Tr. vol. 15, p51–53.)⁴ 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

⁴ 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, p34–35, Docket E-2, Sub 1142.)

anyone at the Company. (Tr. vol. 28, 70–74 (“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. 28, 75.)

Accordingly, DEC 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 current service. N.C. Gen. Stat. § 62-133(b)(1), (c). Most of the costs DEC 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, DEC 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, DEC'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 DEC'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 the North Carolina Coal Ash Management Act (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,⁵ which "occur when water, often carrying dissolved chemical constituents, moves

⁵ 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.*

through porous soil and emerges at the surface.” (Hart Ex. 3 (Joint Factual Statement), 41–42.) DEC’s coal ash ponds are constructed of earthen dams without liners, which causes seeps to form in the dam walls. (*Id.* at 41.) As DEC witness Bednarcik admitted, the National Pollutant Discharge Elimination System (NPDES) permits under which DEC operated its coal ash ponds for decades authorized the discharge of wastewater from designated outfalls only, not from seeps. (Tr. vol. 25, 130.)

In its plea agreement with the U.S. government, DEC 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 Riverbend site, DEC pled guilty to unlawful discharges in violation of its NPDES permit from an engineered seep into the Catawba River. (*Id.* at 47–49.) That constructed seep “resulted in documented unpermitted discharges from 2011 through 2013 containing elevated levels of arsenic, chromium, cobalt, boron, barium, nickel, strontium, sulfate, iron, manganese, and zinc into the Catawba River.” (*Id.* at 49.)

Environmental audits performed as a condition of DEC’s plea agreement identified unpermitted seeps that discharged pollutants into surface waters in violation of federal and state law at seven of DEC’s coal ash sites (Allen, Belews Creek, Buck, Cliffside, Dan River, Marshall, and Riverbend). (Tr. vol. 20, 445;

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).

Junis Ex. 14; see *also* Sierra Club Kerin Cross Ex. 8, 3-1-3-3, Att. B-2, filed in Docket No. E-7, Sub 1146; Sierra Club Kerin Cross Ex. 9, 3-1-3-3 filed in Docket No. E-7, Sub 1146.) Unpermitted seeps discharging polluted wastewater into surface waters also were identified as part of various state law enforcement actions against DEC brought by DEQ. The Department identified unpermitted seeps at six of DEC's coal ash sites (Allen, Belews Creek, Buck, Cliffside, Dan River, and Riverbend). (Tr. vol. 20, 429, n. 45 (incorporating by reference Junis Ex. 17, Docket No. E-7, Sub 1146); see *also* Wright Public Staff Cross Ex. 1, 13-14, 17-18, 23-24, 26-27, 30-31, Docket No. E-7, Sub 1146.) In addition, DEC entered into Special Orders on Consent (SOCs) with DEQ that confirmed the existence of seeps at the Allen, Belews Creek, Buck, Cliffside, and Marshall coal ash sites containing coal ash constituents. (Junis Exs. 7 and 8.)

Discharges from these unauthorized seeps contained coal ash constituents at concentrations above water quality standards. DEC's own consultants identified exceedances of water quality standards for coal ash constituents in surface waters into which the Company has discharged coal ash pond wastewater via unpermitted seeps. (Tr. vol. 6, p58-59, 75-76, Docket No. E-7, Sub 1146.) Specifically, the engineering firm that prepared the Corrective Action Plan (Part 2) for DEC's Allen site found concentrations of aluminum, cobalt, copper, and lead in surface water samples exceeding state water quality standards. (Quarles Ex. 11, 11, Docket No. E-7, Sub 1146.) At DEC's Marshall site, the firm found concentrations of cobalt, sulfate, and total dissolved solids in seep samples exceeding state water quality standards. (Quarles Ex. 19, Table 2-

13, Docket No. E-7, Sub 1146.) In addition, the court-ordered environmental audits revealed coal ash constituents discharged through seeps, including arsenic, boron, iron, manganese, and sulfate, at concentrations above background levels and above water quality standards. Sampling of seeps showed elevated concentrations of boron, manganese, sulfate, and total dissolved solids at the Allen site, (Sierra Club Kerin Cross Ex. 8, 3-1–3-3, Att. B-2, Docket No. E-7, Sub 1146), and elevated concentrations of boron, manganese, sulfate, and total dissolved solids at the Marshall site. (Sierra Club Kerin Cross Ex. 9, 3-1–3-3, Att. B-2, Docket No. E-7, Sub 1146).

Finally, DEC 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 DEC’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. 5.3.1, 2, 7–8, Docket No. E-7, Sub 1146; Witliff Ex. 5.3.2, 7, Docket No. E-7, Sub 1146.) DEC 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 SOC resolved multiple notices of violation issued by the North Carolina

Department of Environmental Quality (DEQ) for unlawful seeps at DEC coal ash sites. (Junis Exs. 7 and 8.) DEC 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. (Junis Ex. 7, 4; Junis Ex. 8, 2.)

The fact that ash pond closures are required by CAMA does not guarantee DEC 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 DEC’s ponds that are subject to SOCs is required to address discharges from unpermitted seeps. (Junis Exs. 7 and 8.) Moreover, the superior court ruled that closure of DEC’s ash ponds would eliminate seeps. (Witliff Ex. 5.3.1, 2, 7–8, Docket No. E-7, Sub 1146; Witliff Ex. 5.3.2, 7, Docket No. E-7, Sub 1146.) 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 CAROLINAS’ UNECONOMIC COAL UNITS.

Among the costs for which DEC 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, DEC's coal-fired units operated at a loss during the test period: "for each of DEC's coal units, the costs to maintain and operate the unit exceeded the value provided by the unit" between 2016 and 2018. (Tr. vol. 18, 156.) DEC 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. (Tr. vol. 18, p161–62.) Investing significant amounts of capital in coal units that have a history of losing money without determining what those losses 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.

DEC 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. 12, 75 (Immel Rebuttal).) 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 DEC's historical refusal to evaluate the cost-effectiveness of the continued operation of existing coal units in

its biennial IRPs.⁶ Regardless of the adequacy of past IRPs, DEC'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.⁷ 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, DEC has sought recovery of approximately \$150 million in capital costs at its Allen power plant, including the costs to convert the coal ash handling system from wet to dry by 2019. (Tr. Vol. 12, 100 (Immel Cross).) When the Company decided to retrofit the Allen facility, it knew that three of the five coal boilers at the plant would be retired by 2024, at the latest, per a court-ordered settlement of Clean Air Act violations. Thus, the Company undertook expensive upgrades at the plant even though it understood that the new equipment would

⁶ In the Matter of 2018 Biennial Integrated Resource Plans and Related 2018 REPS Compliance Plans, Order Accepting Integrated Resource Plans and REPA Compliance Plans, Scheduling Oral Argument, and Requiring Additional Analyses, Docket No. E-100, Sub 157 at 90 (Aug. 27, 2019).

⁷ Petition of Virginia Electric and Power Co. for approval of a rate adjustment clause, Final Order, Case No. PUR-2018-00195 (Aug. 5, 2019).

only be utilized for five years, at most. DEC has since moved up its retirement projections for the Allen plant—2022 for units 2, 3, and 4, and 2024 for units 1 and 5, (Tr. vol. 12, 89), meaning the Company will operate its new dry ash handling system for only three years at some units. Like Dominion’s spending at the Chesterfield plant, DEC’s investments at Allen simply are not prudent.

DEC points to an evaluation of early retirement options for the Allen units and Cliffside Unit 5 in defense of its investment decisions at those plants. (Tr. vol. 12, 71 (Immel Rebuttal).) However, that evaluation looked only at one option: replacing the coal units with new gas-fired turbines. (Tr. vol. 12, 92, 98.) 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. DEC 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. DEC 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. DEC 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. DEC'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. DEC's unreasonable operation of its coal ash ponds resulted in the contamination of groundwater and surface waters.

6. DEC 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 DEC's guilty plea were unreasonable.

8. DEC 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 DEC's violations of state law and regulations were unreasonable.

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

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

12. DEC 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, DEC 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. DEC's coal ash is not "property used and useful."

15. Therefore, DEC'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. DEC caused unlawful discharges to surface waters of the state from its coal ash ponds. Pond closure is necessary to abate those discharges.

17. Therefore, DEC'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. DEC failed to meet its burden of showing that capital costs at its Allen power plant were reasonably incurred.

20. Therefore, DEC's requested recovery of capital costs at its Allen power plant are denied.

CONCLUSION

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

Respectfully submitted this 4th day of November, 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 November, 2020.



Catherine Cralle Jones