NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION

April 20, 2020

Ms. Kimberley A. Campbell, Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

Re: Docket No. E-2, Sub 1204 – Application of Duke Energy Progress, LLC pursuant to G.S. 62-133.2 and Commission Rule R8-55 relating to Fuel and Fuel-related Charge Adjustments for Electric Utilities

Dear Ms. Campbell:

In connection with the above-referenced docket, we transmit herewith for filing the Public Staff's Findings of Fact and Conclusions of Law. Please note that with respect to FPWC Harrington Confidential Cross Exhibit 1, the 2012 Agreement discussed in this filing, I have conferred with counsel for DEP, and that document is no longer confidential.

By copy of this letter, we are forwarding a copy of the redacted version to all parties of record by electronic delivery. The confidential version will be provided to those parties that have entered into a confidentiality agreement.

Sincerely,

/s/ Dianna W. Downey
Staff Attorney
dianna.downey@psncuc.nc.gov

Attachment

DOCKET NO. E-2, SUB 1204

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of		
Application of Duke Energy Progress, LLC, Pursuant to G.S. 62-133.2 and Commission Rule R8-55 Regarding Fuel and Fuel-Related Cost Adjustments For Electric Utilities	))))	PUBLIC STAFF'S FINDINGS OF FACT AND CONCLUSIONS OF LAW

NOW COMES THE PUBLIC STAFF – North Carolina Utilities Commission, by and through its Executive Director, Christopher J. Ayers, and respectfully submits the following findings of fact and conclusions of law in the above-captioned fuel proceeding.

Applicable Legal Standard

In its Order in this docket on November 25, 2019, the Commission articulated the standard it applied as to prudence and reasonableness:

> [w]hether management decisions were made in a reasonable manner and at an appropriate time on the basis of what was reasonably known or reasonably should have been known at that time. . . . The Commission notes that this standard is one of reasonableness that must be based on a contemporaneous view of the action or decision under question. Perfection is not required. Hindsight analysis — the judging of events based on subsequent developments — is not permitted.

78 North Carolina Utilities Commission Orders and Decisions 238, at 251-52 (August 5, 1988); reversed in part, and remanded (on other grounds), Utilities Commission v. Thornburg, 325 N.C. 484, 385 S.E.2d 463 (1989) (Harris Order). When setting just and reasonable rates, the Commission must determine whether costs incurred by the utility were prudently incurred, which involves an

examination of whether the utility's actions, inactions or decisions to incur costs were reasonable based on what it knew or should have known at the time the actions, inactions, or decision to incur costs were made. Harris Order at 14 Challenging prudence requires a detailed and fact intensive analysis, and the challenger is required to (1) identify specific and discrete instances of imprudence; (2) demonstrate the existence of prudent alternatives; and (3) quantify the effects by calculating imprudently incurred costs. Harris Order at 14-15

As a general rule, if the utility presents evidence that costs were reasonably incurred and no additional evidence of prudence and reasonableness is presented, a prima facie case is made that the costs were reasonably incurred. State ex rel. Utilities Comm'n v. Intervenor Residents, 305 N.C. 62, 76-77, 286 S.E.2d 770, 779 (1982) Intervenors have a burden of production in the event that they dispute an aspect of the utility's prima facie case. Id. If the intervenor meets its burden of production through the presentation of competent, material evidence, then the ultimate burden of persuasion reverts to the utility, in accordance with N.C. Gen. Stat. § 62-134(c).

As described in more detail below, the Commission finds and concludes that based on what the Company knew or should have known at the time of the negotiation of the 2012 Agreement, it was unreasonable and imprudent for DEP to have entered into the 2012 Agreement. The Commission further finds and concludes that the Judgment Payment plus a portion of the liquidated damages should be excluded from recovery.

FINDINGS OF FACT

Background

1. In 2004, CertainTeed and DEP entered into a gypsum supply agreement (2004 Agreement). At the time, DEP was planning to install flue gas desulfurization systems (scrubbers) that would produce synthetic gypsum at its Roxboro and Mayo coal-fired plants, and CertainTeed was seeking to build its first wallboard manufacturing plant in the Southeast United States.

2. The 2004 Agreement defined the monthly minimum quantity (MMQ) of gypsum that DEP would deliver and CertainTeed would accept as 50,000 net dry tons of gypsum. The MMQ level was based on what DEP was willing to provide over the life of the agreement.

3. The parties never actually delivered and accepted gypsum under this agreement before it was superseded by the agreement executed in 2008.

4. In 2008, the parties executed an amended agreement (2008 Agreement) following CertainTeed's decision to delay construction of its plant because of the 2008 economic downturn. Under the 2008 Agreement, CertainTeed was required to accept and DEP was required to deliver the MMQ of 50,000 net dry tons of gypsum.

5. The scrubbers began coming on line in spring 2007 at Roxboro; every six months an additional scrubber came on line at each of the five units at Roxboro and Mayo, with the final scrubber coming on line in the spring of 2009.

The merger application, the JDA, and the Compass Lexecon study

6. The application for approval of the merger of Duke Energy Corporation and Progress Energy, Inc., was filed on April 4, 2011 in Docket Nos. E-2, Sub 998 and E-7, Sub 986. Alexander Weintraub, who signed the 2012 Agreement, filed testimony on behalf of DEP in the merger docket on May 20, 2011.

7. Attached to the merger application were a proposed Joint Dispatch Agreement (JDA) and a Compass Lexecon Analysis of Economic Efficiencies Under Joint Dispatch (Compass Lexecon study).

8. The premise of the JDA was that centralized economic dispatch of the combined companies' generation assets would reduce fuel costs. The savings would be the result of using the lower cost generation resources of each company to displace the higher cost resources of the other depending upon the marginal cost of production of each entity's available resources.

9. The Compass Lexecon study, and in particular Exhibit 1 to that study, showed that assuming the merger was approved, beginning with 2012, Duke Energy Carolinas' large coal-fired generating units' utilization would increase across the majority of months, while Progress Energy Carolinas' large coal-fired generating units' utilization would decrease across the majority of months. The study further found that during hours when DEC's high efficiency coal-fired generators have excess production capability, they can provide lower-cost energy when compared to DEP's somewhat less efficient large coal-fired generators (such as Roxboro and Mayo).

10. The merger was approved on June 29, 2012.

Coal dispatch and gypsum production at the time of execution of the 2012 Agreement

11. The dispatch of coal units bears a direct relationship to the production of gypsum, i.e., the less coal units are dispatched, the less gypsum is produced, all other things being equal.

12. DEP anticipated that coal dispatch would play less and less of a role in meeting energy requirements when it filed its 2010 Avoided Cost proceeding data and 2012 Avoided Cost proceeding data in response to Public Staff data requests.

13. DEC's coal units maintained a higher capacity factor and lower heat rate than DEP's coal units in 2010, 2011, and 2012, clearly indicating that DEC's coal units would be economically dispatched before DEP's Roxboro and Mayo units.

14. DEC placed its Buck Combined Cycle (CC) facility in operation in 2011, and its Dan River CC facility became operational in late 2012. Both of these plants became available to supply DEP when appropriate under the terms of the JDA.

15. DEP completed its H.F. Lee CC facility in late 2012 and its Sutton CC facility in 2013. Specifically with respect to the H.F. Lee CC facility, the certificate of public convenience and necessity (CPCN) granted on October 22, 2008 was conditioned on DEP submitting a plan to retire additional un-scrubbed coal-fired generation capacity reasonably proportionate to the amount of

incremental generating capacity authorized by the CPCN above 400 MW, or 550 MW. The H.F. Lee CC replaced 400 MW of existing coal-fired generating capacity with 950 MW of new natural gas-fired generation at the site. In its plan filed December 1, 2009, in Docket No. E-2, Sub 960, DEP proposed a plan to retire all of its coal-fired generating facilities in the state that did not have scrubbers (Sutton, Weatherspoon, and Cape Fear) by December 31, 2017. As part of the plan, DEP anticipated filing for a CPCN to construct 600 MW of CC generation at Sutton.

16. In the CPCN application for the Sutton CC facility, DEP asserted that building the CC units was more cost effective when compared to the cost of continuing to operate the existing coal units, including the cost of potential environmental modifications. The Commission granted the Sutton CC CPCN on June 10, 2010, on the condition that DEP permanently cease operation of the coal-fired units upon completion of the construction and placement into service of the Sutton CC facility.

17. Thus, well before negotiating and executing the 2012 Agreement, DEP was retiring coal-fired units and replacing them with natural gas-fired generation with capacity greater than the coal-fired capacity being retired.

18. In addition, well before negotiating and executing the 2012 Agreement, DEP's remaining coal-fired generation was being displaced by DEC coal-fired and natural gas-fired generation.

19. DEP's gypsum forecasts performed in December 2011 and May 2012 showed that DEP was not forecasting production of 50,000 net dry tons of gypsum a month through 2013.

20. No documentation was entered into evidence either in this proceeding or in the business court case that showed that at the time of the negotiation of the 2012 Agreement, DEP projected that it was capable of producing the amounts of gypsum it ultimately agreed to under the 2012 Agreement.

21. For 2008, 2009, 2010, and 2011, the highest annual production of gypsum at Roxboro and Mayo combined averaged only 35,280 net dry tons per month. In 2012, the two plants averaged only 47,686 dry tons per month.

The 2012 Agreement

22. Between June 2011 and February 2012, Company witness Coppola and Dave Engelhardt, Senior Vice President of Operations for CertainTeed negotiated the 2012 Agreement with an effective date of August 1, 2012.

23. Revising the 2008 Agreement was necessitated by design changes to the feeding system of the CertainTeed wallboard plant at Roxboro.

24. In addition, Mr. Engelhardt had noticed that both CertainTeed's need for, and DEP's ability to produce gypsum varied from what was anticipated in both the 2004 Agreement and the 2008 Agreement, and believed a more flexible arrangement would benefit both companies.

25. Actual gypsum production volumes for Roxboro and Mayo for 2008-2012 show that production volumes did vary.

26. Sometime before October of 2011, Engelhardt presented scenarios around a revised agreement (Roxboro Stockpile Scenarios) to Barbara Coppola of DEP.

27. CertainTeed witness Engelhardt sent a draft to DEP employee Coppola on October 20, 2011, in which he incorporated the Stockpile Scenarios. Engelhardt proposed changing to an annual production philosophy with the stockpile as buffer, ranging between a minimum of 100,000 net dry tons to a maximum of 600,000 net dry tons. He also proposed changing the MMQ from 50,000 net dry tons per month to 25,000 net dry tons per month.

28. On February 20, 2012, Coppola sent back DEP's changes to CertainTeed's draft, essentially rejecting CertainTeed's proposal and expressing a preference to maintain the supply quantity as it existed in the 2008 Agreement. The 2012 Agreement, executed by Alexander Weintraub of DEP, required a MMQ of 50,000 net dry tons of gypsum per month, and a minimum stockpile size of 250,000 net dry tons. The effective date of the 2012 Agreement was August 1, 2012.

29. Under the 2012 Agreement, CertainTeed had the right to terminate the Agreement and collect liquidated damages from DEP should DEP fail either to maintain the stockpile at 250,000 net dry tons or provide the 50,000 net dry tons MMQ.

30. The MMQ and stockpile provisions proposed by CertainTeed were less onerous that the provisions ultimately agreed to in the 2012 Agreement.

31. Under the Interim Supply Agreement executed in October 2018, DEP is supplying and CertainTeed is accepting no more than **[BEGIN**

CONFIDENTIAL] [redacted] **[END CONFIDENTIAL]** net dry tons of gypsum a month.

Avoided Landfill Costs/Calculation of Liquidated Damages/Disallowance

32. Avoided landfill costs for the gypsum sold to CertainTeed is five dollars a ton.

33. Under Section 6.3 of the 2012 Agreement, liquidated damages were to be calculated by multiplying the MMQ by the current price of gypsum in effect under the 2012 Agreement, plus $10/net dry ton, multiplied by the number of months remaining in the Agreement. Because the MMQ proposed by CertainTeed was half of the MMQ in the signed 2012 Agreement, liquidated damages would have been half of what DEP ultimately agreed to pay, even had DEP been unable to fulfill the MMQ or stockpile requirements proposed by CertainTeed.

EVIDENCE AND CONLUSIONS FOR FINDINGS OF FACT NOS. 1-5

The evidence supporting these findings and conclusions is contained in the direct and supplemental testimony and exhibits of Public Staff witness Jay B. Lucas, the rebuttal testimony of DEP witnesses Barbara A. Coppola and John Halm, the Opinion and Final Judgment (Judgment) in the lawsuit between CertainTeed Gypsum, Inc., and DEP,[1] and the entire record in this proceeding.

Summary of the Evidence

[1] *CertainTeed Gypsum NC, Inc. v. Duke Energy Progress, LLC*, Person County Superior Court No. 17 CVS 395. The Judgment was entered into evidence in this docket as FPWC Harrington Exhibit 3.

In his supplemental testimony, Public Staff witness Lucas testified that CertainTeed and DEP first entered into a gypsum supply agreement in 2004. At that time, DEP was planning to install flue gas desulfurization systems (scrubbers) that would produce synthetic gypsum at its Roxboro and Mayo coal-fired plants, and CertainTeed was seeking to build its first wallboard-manufacturing plant in the Southeast United States. Judgment ¶3[2] T p 16 Peter Mayer, Vice President of Sustainability and Quality Assurance at CertainTeed, testified at the business court trial. DEP Lucas Cross Exhibit 3, p. 280 Mayer was the primary negotiator of the 2004 Agreement on behalf of CertainTeed. Judgment ¶43 Danny Johnson of DEP was the primary negotiator on behalf of the Company. Id. According to Mr. Mayer at the business court trial, CertainTeed needed a guaranteed amount of gypsum, and he believed it was up to the Company to tell CertainTeed what DEP could provide over the life of the term of the contract. DEP Lucas Cross Exhibit 3, pp. 282, 287, 294 DEP told Mayer that the Company could guarantee 600,000 tons per year or 50,000 tons per month. Id. The 2004 Agreement defined the monthly minimum quantity (MMQ) as 50,000 net dry tons of gypsum to be delivered and accepted monthly. Judgment ¶48

According to witnesses Coppola and Halm, CertainTeed was investing approximately $200 million to construct a wallboard production facility that was projected to operate for approximately 20-30 years, which required an assurance of supply of gypsum sufficient to justify construction. They included a quote from

[2] Further details regarding the beginning of the contractual relationship between CertainTeed and DEP are found in paragraphs 35 through 52 of the Judgment.

Mr. Mayer's testimony at the trial, in which Mr. Mayer stated that "we definitely needed to convince our parent company that we had a guaranteed amount of gypsum to drive the profits, to pay for a return on the investment." DEP Lucas Cross Exhibit 3, p. 282 Witnesses Coppola and Halm asserted that no rational investor would have been willing to make such a substantial investment without having an assurance of cost-effective supply of gypsum that would be necessary to sustain operations. T p 168

According to the Judgment, the parties never actually delivered and accepted gypsum under the 2004 Agreement before it was superseded by the agreement executed in 2008. Judgment ¶53 DEP witnesses Coppola and Halm testified that in 2008, the parties executed an amended agreement (2008 Agreement) following CertainTeed's decision to delay construction of its plant because of the 2008 economic downturn. Judgment ¶3; T p 166 The trial court found that under the 2008 Agreement, CertainTeed was required to accept and DEP was required to deliver the MMQ of 50,000 net dry tons of gypsum, the same amount required under the 2004 Agreement. Judgment ¶¶ 87-88

DEP witnesses Coppola and Halm testified that from the very beginning of the transaction, a minimum monthly delivery and acceptance obligation was included. Specifically, the 2004 Agreement contained a Minimum Monthly Quantity (MMQ) delivery and acceptance obligation of 50,000 tons, which effectively resulted in annual delivery and acceptance obligation of 600,000 tons per year (subject to 10% variation). T p 167 These obligations were carried

forward into the 2008 Agreement, and as found by the Court in the CertainTeed litigation, the 2012 Agreement. Id. at 8

Public Staff witness Lucas testified that during the business court trial, DEP witness Coppola testified that the scrubbers began coming on line in spring 2007 at Roxboro; every six months an additional scrubber came on line at each of the five units at Roxboro and Mayo, with the final scrubber coming on line in the spring of 2009. T p 17

Commission Discussion

Based on the evidence, the Commission agrees with witnesses Coppola and Halm and that given the level of CertainTeed's investment in the wallboard facility at Roxboro, CertainTeed was looking for a guaranteed amount of gypsum for its wallboard facility. However, it is incorrect to conclude, as the Company has done, that the supply and acceptance obligation was set in the 2004 Agreement based on what CertainTeed determined was the minimum amount needed in order to be profitable. Indeed, as discussed later in this Order, CertainTeed proposed a lower MMQ in 2011 **[BEGIN CONFIDENTIAL]** [redacted] .**[END CONFIDENTIAL]** Based on the evidence provided by Mr. Mayer, CertainTeed's witness at the business court trial, the Commission finds that CertainTeed relied on the Company to define the amount that would be available, and the MMQ of 50,000 tons per month in the 2004 Agreement, carried over to subsequent agreements, was based on the representations of the

Company as to the amount of gypsum the Company could provide to CertainTeed.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 6-10

The evidence supporting these findings of fact and conclusions is contained in the dockets concerning the merger of Duke Energy Corporation and Progress Energy, Inc., in Docket Nos. E-2, Sub 998 and E-7, Sub 986; the direct and supplemental testimony of Public Staff witness Lucas; the rebuttal testimony of Company witnesses Coppola and Halm, and the entire record in this proceeding.

Summary of the Evidence

In its Order in this docket on November 25, 2019, the Commission took note of the dates of the events described by witness Lucas as related to the date that DEP entered into the 2012 Agreement. Specifically, the Commission noted that the application for approval of the merger of Duke Energy Corporation and Progress Energy, Inc., was filed on April 4, 2011, in Docket Nos. E-2, Sub 998 and E-7, Sub 986. The Commission further noted that on June 29, 2012, the Commission issued its Order Approving Merger Subject to Regulatory Conditions and Code of Conduct (Merger Order). The record in the merger docket shows that Alexander Weintraub, who signed the 2012 Agreement, filed testimony on behalf of DEP on May 20, 2011 and further supplemental testimony on June 13, 2012.

Attached to the merger application was a Joint Dispatch Agreement (JDA) (Exhibit 3). In his direct testimony, witness Lucas stated that under the JDA, which the companies entered into after the merger was approved, energy purchases between the companies are facilitated, thereby enabling the two companies to optimize the efficient dispatch of their combined generating fleets. In his supplemental testimony, witness Lucas described the Public Staff's research and analysis on the merger proceeding. He stated that pages 8 and 9 of the merger application stated:

> The centralized economic dispatch of [DEP's] and DEC's generation assets to serve their Carolinas customers is estimated to reduce the combined company's fuel costs by approximately $364 million over the five-year period 2012-2016. These savings are the result of using the lower cost generation resources of each company to displace the higher cost resources of the other depending upon the marginal cost of production of each entity's available resources in a given hour. By transitioning to joint dispatch on a real time basis, each utility's available energy can be used to displace the other's higher cost energy whenever such a cost difference exists without regard to the size of the difference.

Witness Lucas further testified that on June 13, 2012, DEP filed the Further Supplemental Testimony of DEP witness Alexander J. Weintraub. On pages 3 and 4 of his testimony, Weintraub stated, in part, "Roxboro and Mayo are coal plants and to the extent the operation of the JDA impacts the dispatch of Roxboro and Mayo, PEC has agreed to hold NCEMPA harmless from any negative impacts to the JDA." Witness Lucas testified that this statement is evidence that DEP believed that the merger could result in reduced dispatch of the Roxboro and Mayo plants when other plants such as DEC's Belews Creek plant are dispatched.

T pp 23-24 Witness Lucas included Lucas Table 2 showing the relative capacity factors and heat rates of the baseload units[3] at the Belews Creek, Marshall, Roxboro, and Mayo plants in 2010, 2011 and 2012:

Lucas Table 2 – Belews Creek, Marshall, Roxboro, and Mayo
Capacity Factors and Heat Rates in 2010, 2011, and 2012

Plant	2010 Capacity Factor (%)	2010 Heat Rate (BTU/KWH)	2011 Capacity Factor (%)	2011 Heat Rate (BTU/KWH)	2012 Capacity Factor (%)	2012 Heat Rate (BTU/KWH)
Belews Creek						
Unit 1	85.9	9,912	82.0	9,251	83.2	9,056
Unit 2	65.4	9,367	82.9	9,186	78.8	9,211
Marshall						
Unit 3	74.4	9,289	68.9	9,456	74.7	9,580
Unit 4	83.2	9,212	70.6	9,336	78.7	9,432
Roxboro						
Unit 2	66.8	8,934	44.6	10,024	71.2	10,158
Unit 3	80.1	10,564	58.9	10,791	60.2	11,324
Unit 4	72.8	11,666	62.2	10,979	66.2	10,269
Mayo						
Unit 1	76.6	10,484	55.1	10,809	55.1	11,174

According to witness Lucas, Lucas Table 2 above demonstrates that DEC's coal units maintained a higher capacity factor and lower heat rate than DEP's coal units from 2010 through 2012, which indicates they would be economically dispatched before DEP's Roxboro and Mayo units. The benefits of

[3] The units shown in Lucas Table 2 are coal-fired baseload units reported by DEC and DEP in the monthly baseload power plant performance reports required by NCUC Rule R8-53.

the DEC-DEP merger application, which was filed with the Commission in 2011, relied significantly on reduced fuel costs through joint dispatch of the joint generating fleets. Witness Lucas asserted that because DEP's baseload coal units had significantly higher heat rates[4] than DEC's coal units (15% or more as shown in Lucas Table 2 above), DEP should have realized at the time of the negotiation and execution of the 2012 Agreement that the Roxboro and Mayo units were likely to be dispatched less due to the JDA. T pp 25-26

Also attached to the merger application as Exhibit 4 was a Compass Lexecon Analysis of Economic Efficiencies Under Joint Dispatch (Compass Lexecon study). The Compass Lexecon study was introduced at the hearing as Public Staff Lucas Redirect Exhibit 3. The Compass Lexecon study, and in particular Exhibit 1 to that study, showed that assuming the merger was approved, beginning with 2012, Duke Energy Carolinas' large coal-fired generating units' utilization would increase across the majority of months, while Progress Energy Carolinas' large coal-fired generating units' utilization would decrease across the majority of months. The study further found that during hours when DEC's high efficiency coal-fired generators have excess production capability, they can provide lower cost-energy when compared to DEP's somewhat less efficient large coal-fired generators (such as Roxboro and Mayo).

[4] The heat rate for a coal plant is indicative of the amount of coal that must be burned to generate a kWh of electricity. A unit with a higher heat rate is required to burn more coal to generate the same amount of electricity as a unit with a lower heat rate.

In his supplemental testimony, witness Lucas noted that Ordering Paragraph No. 3 in the Commission's order dated June 29, 2012, on the DEC-DEP merger approved the JDA. This order was issued more than two months before DEP signed the 2012 Agreement on August 1, 2012. T p 26.

In their supplemental rebuttal, witnesses Coppola and Halm asserted that negotiations regarding the 2012 Agreement commenced in June 2011, well before there was any degree of certainty regarding the outcome of the merger and before important aspects of the JDA were solidified. They further testified that the parties had largely resolved the major commercial terms of the 2012 Agreement by February 2012, well before there would have been certainty regarding the merger or the ultimate impact of the JDA. T p 184

Witnesses Coppola and Halm stated that they had been advised that it was not possible to have finalized the JDA prior to the Commission's approval of the merger. They stated that DEP merger witness Weintraub stated in his initial testimony in the merger docket that DEC and DEP could not share proprietary information prior to approval of the merger. They also asserted that while the Compass Lexecon study projected total savings from the JDA over a five-year period, it also described the complexity of the JDA and that many issues other than fuel costs had to be considered. Witnesses Coppola and Halm testified that many of these issues could not be resolved until the merger was approved and proprietary information could be shared and analyzed. T pp 184-185 During the hearing, witness Coppola stated that she did not have access to the Compass Lexecon study at the time she was negotiating the 2012 Agreement; however,

she admitted it was filed in the Commission's docket and was available to DEP management. T pp 209, 236

Regarding Mr. Lucas's assertion that Mr. Weintraub's further supplemental testimony in the merger proceeding demonstrates that the JDA would impact the dispatch of Roxboro and May, witnesses Coppola and Halm testified that they believed the quoted language leads to the opposite conclusion. According to witnesses Coppola and Halm, the statement was simply an acknowledgment that the NCEMPA has a contractual right to capacity from Mayo and Roxboro and that its economic interests would be protected. Mr. Weintraub did not say that Mayo and Roxboro units were going to be dispatched or used for any purpose other than native load generation. They asserted that in fact, Mr. Weintraub's use of the words "to the extent" certainly suggested that no decision had been made, and that it was possible that no changes would transpire at either Roxboro or Mayo. T pp 185-186

Finally, witnesses Coppola and Halm testified that the JDA did not reduce the amount of generation at Mayo and Roxboro; rather, the primary cause of the reduced generation was lower gas prices. They noted that at the business court trial, DEP witness Eric Grant testified that the JDA had not caused the reduction in dispatch from Roxboro and Mayo. As Mr. Grant testified at the time of the business court trial, 80% of the megawatt hours had flowed from DEP to DEC under the JDA, and the business court rejected the position that the JDA caused a reduction in DEP's production of synthetic gypsum. T p 186

Commission Discussion

The Commission finds and concludes that at the time the 2012 Agreement was being negotiated and before it was signed in August 2012, Company management knew, or should have known, that the effect of the merger, and specifically the JDA, was projected to result in the increased dispatch of the more efficient DEC coal units and the decreased dispatch of the DEP coal units, including Roxboro and Mayo. In connection with this finding, the Commission gives substantial weight to the Compass Lexecon study and in particular Exhibit 1 to that study, which showed that assuming the merger was approved, beginning with 2012, Duke Energy Carolinas' large coal-fired generating units' utilization would increase across the majority of months, while Progress Energy Carolinas' large coal-fired generating units' utilization would decrease across the majority of months. To the extent that witness Coppola did not have access to this study, Company management was certainly aware of it and should have made it available, or at least should have considered the possible effects of the merger and the JDA in all aspects of its business relating to unit dispatch, including the gypsum supply obligations under the agreement with CertainTeed. The Commission notes that Alexander Weintraub, who testified in support of the merger and explained the JDA in testimony before the Commission, signed the 2012 Agreement. Mr. Weintraub, as signatory of the 2012 Agreement, presumably was aware of the obligations it imposed and should have considered the effects of joint dispatch under the merger on the future production of gypsum at Roxboro and Mayo.

The Commission also finds that while before the merger certain aspects of the Companies' business practices, such as coal blending, were proprietary to the individual companies, it was well known and documented at the time of the negotiation of the 2012 Agreement that the undisputed projected impact of joint dispatch would be the reduced dispatch of DEP's coal units, including Roxboro and Mayo. There is no evidence that the Company took this into account in its negotiation of the 2012 Agreement, and it should have.

The Commission does not find persuasive DEP's assertion that it was not the effects of joint dispatch under the JDA that actually caused the reduced dispatch of Roxboro and Mayo, but that it was lower natural gas prices. Company witness Grant's testimony during the business court trial regarding the effect of natural gas prices on joint dispatch after 2012, quoted by witnesses Coppola and Halm, bear no weight on the issue of what Company management knew, or should have known, before executing the 2012 Agreement. What is relevant to the Commission's determination is what was known, or should have been known, at the time the 2012 Agreement was negotiated, not what happened after the fact.

For the foregoing reasons, the Commission finds that it was unreasonable and imprudent for DEP not to have taken into account the possible effects of joint dispatch resulting from the merger at the time of the negotiation of the 2012 Agreement.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 11-18

The evidence supporting these findings of fact and conclusions is contained in the direct and supplemental testimony of Public Staff witness Lucas, the supplemental rebuttal of DEP witnesses Halm and Coppola, and the entire record in this proceeding.

Summary of the Evidence

In his direct testimony, witness Lucas testified that artificial gypsum is a by-product of the flue gas desulfurization (FGD) equipment installed at some coal-fired power plants. He testified that in 2004, DEP's predecessor, Progress Energy Carolinas, Inc. (PEC), began planning to install FGD equipment at its Roxboro and Mayo coal-fired power plants in order to comply with the stricter air pollution control requirements of N.C. Gen. Stat. § 62-133.6 (also known as the Clean Smokestacks Act or CSA) that was enacted in June, 2002. DEP's CSA compliance plan called for FGD equipment to be installed and operational at Roxboro Units 2 and 4 in 2007, Roxboro Units 1 and 3 in 2008, and Mayo in 2009.

In their direct testimony, Company witnesses Coppola and Halm testified that in the early- to mid-2000s, due to increasing environmental regulations, the Company was installing scrubbers on a number of its coal-fired generating units, including Roxboro and Mayo that would result in substantial amounts of gypsum being produced.

Public Staff witness Lucas testified as to what the Company's avoided cost data in 2010 and 2012 showed regarding DEP's planned dispatch of coal-fired units. He testified that DEP responses to data requests in the 2010 and 2012 Avoided Cost proceedings, respectively, provided DEP's planned dispatch of coal-fired units as a percent of total energy production in future years, as shown in Lucas Table 1 below:

Lucas Table 1 – Percent of Planned Coal Plant Dispatch in Avoided Cost Proceedings

Plan Year	2010 Proceeding	2012 Proceeding	Decrease
2011	92		
2012	93		
2013	86	68	18
2014	80	55	25
2015	67	56	11
2016	65	59	6
2017	63	59	4

He testified that as shown in Lucas Table 1 above, DEP anticipated that coal dispatch would play less and less of a role in meeting energy requirements when it filed its 2012 Avoided Cost proceeding data on June 25, 2012, more than two months before signing the 2012 Agreement on August 1, 2012.[5] In other words, DEP knew that coal plants were going to be dispatched less, resulting in reduced gypsum production, and should have taken that information into account when negotiating and signing the 2012 Agreement. T pp. 22-23 He also testified that

[5] Presumably, DEP ran the models that produced these numbers well in advance of filing its 2012 Avoided Cost data.

Lucas Table 2, shown above in Evidence and Conclusions for Findings of Fact Nos. 6-10, demonstrates that DEC's coal units maintained a higher capacity factor and lower heat rate than DEP's coal units from 2010, 2011, and 2012, which indicated they would be economically dispatched before DEP's Roxboro and Mayo units. T p 25

Regarding the Company's conversion to natural gas-fired generation, Public Staff witness Lucas testified that when DEP and CertainTeed executed the 2012 Agreement, DEP had only two operational CC units, both at the Smith Energy Complex. However, DEC had placed its Buck CC in operation in 2011, and its Dan River CC became operational in late 2012. Both of these plants became available to supply DEP when appropriate under the terms of the JDA. Furthermore, DEP completed its H. F. Lee CC (Docket No. E-2, Sub 960) in late 2012 and its Sutton CC (Docket No. E-2, Sub 968) in 2013. T p 26

He further testified that specifically with respect to the H.F. Lee CC, the CPCN application filed August 18, 2009 was filed under N.C. Gen. Stat. § 62-110.1(h). That statute allowed an electric public utility to apply for an expedited CPCN if the utility was subject to the Clean Smokestacks Act, N.C. Gen. Stat. § 62-143-215.107D(e); the application involves a request to construct a generating unit that uses natural gas as its primary fuel at a specific coal-fired generating site that the utility owns or operates on July 1, 2009; the coal fired-units at the site are not operated with flue gas desulfurization devices; the utility will permanently cease operations of all of the coal-fired generating units at the site on or before the completion of the generating unit that is the subject of the certificate

application; and the installation of the generating unit that uses natural gas as the primary fuel allows the utility to meet the requirements of the Clean Smokestacks Act. The Commission granted the certificate on October 22, 2009, subject to the condition that DEP cease operation of the three coal-fired generating units at the facility and that DEP submit a plan to retire additional un-scrubbed coal-fired generating capacity reasonably proportionate to the amount of incremental generating capacity authorized by the certificate above 400 MW. The H.F. Lee CC replaced 400 MW of existing coal-fired generating capacity with 950 MW of new natural gas-fired generation at the site. In its plan filed December 1, 2009, in the CPCN docket, DEP outlined a plan to retire all of its coal-fired generating facilities in North Carolina that did not have scrubbers (Sutton, Weatherspoon and Cape Fear) by December 31, 2017. As part of the plan, DEP anticipated filing for a CPCN to construct 600 MW of natural gas-fired CC generation at Sutton. The plan was approved by order dated January 28, 2010. T pp 26-28

Witness Lucas testified that in the CPCN application for the Sutton CC, DEP asserted that building the CC units was more cost effective when compared to the cost of continuing to operate the existing coal units, including the cost of potential environmental modifications. On June 10, 2010, the Commission granted the CPCN on the condition that DEP permanently cease operation of the coal-fired units upon completion of the construction and placement into service of the CC facility. T p 28

According to witness Lucas, this evidence shows that well before negotiating and executing the 2012 Agreement, DEP was aware that it was

retiring coal-fired units and replacing them with natural gas-fired generation. He presented Lucas Table 3 below showing the capacity factors of the Sutton and H.F. Lee plants: in 2010, 2011 and 2012:

Lucas Table 3 – Sutton and H. F. Lee **Capacity Factors in 2010, 2011, and 2012**			
Plant	**2010**	**2011**	**2012**
Sutton	48.1	31.0	24.7
H. F. Lee	65.4	37.7	22.9

T pp 28-29

Public Staff witness Lucas also testified regarding DEP's own gypsum forecasts. In a forecast performed on December 15, 2011, attached to witness Lucas's testimony as Lucas Supplemental Exhibit 4, DEP was not forecasting more than 50,000 dry tons per month from Roxboro and Mayo for any month in 2012. He also attached to his testimony Lucas Supplemental Exhibit 5, which was a gypsum forecast that DEP provided to CertainTeed on May 23, 2012 (almost three months before DEP executed the 2012 Agreement). The document shows that as of May 2012, DEP was not forecasting 50,000 tons a month in gypsum production from Roxboro and May through the end of 2013. T p 29

In addition to the gypsum forecasts, witness Lucas provided evidence of the actual production of gypsum at Roxboro and Mayo leading up to the execution of the 2012 Agreement. Attached to his testimony as Lucas Supplemental Exhibit 1 was a table which showed that for 2008, 2009, 2010, and 2011, the highest annual production at both plants combined averaged 37,748 wet tons per month

(2010), which equates to about 35,280 dry tons per month. In 2012, the two plants averaged 51,023 wet tons per month, which equates to 47,686 dry tons per month at a 93.46% wet-to-dry reduction. Witness Lucas asserted that the gypsum forecasts and actual production history demonstrate that in 2012 DEP knew, or should have known, that it was not producing and was not expected to produce 50,000 net dry tons of gypsum a month at Roxboro and Mayo. T pp 29-30

During the hearing, witness Lucas testified that DEP overcommitted in the 2012 Agreement. He asserted DEP had plenty of information on hand to realize it was not going to be able to meet that 50,000 ton per month minimum monthly quantity. First, Roxboro and Mayo, before 2012, for the previous three years did not come anywhere close to making 50,000 tons per month. Also, in the 2010 avoided cost proceeding, DEP predicted that coal-fired plants would be dispatched less and less. In 2010, they predicted that the next year coal dispatch would be about 92 percent of the time, and predicting less and less dispatch until about 2017 when coal dispatch would go down to 63 percent. Also, by 2012, natural gas prices had plummeted. They had plummeted around 2009 and stayed low. DEP had two natural gas-fired high efficiency plants under construction at the time that could have displaced Roxboro and Mayo's generation. The Joint Dispatch Agreement that was filed by DEP in April of 2011 predicted less and less dispatch of DEP's coal plants. T pp 45-46

Witness Lucas further asserted at the hearing that DEP had every reason to believe it could not meet the 50,000 tons, ever. It never had any indication it could have met its commitment and had indications that dispatch of Roxboro and

Mayo were going down, so it had every reason to at least examine not committing itself to 50,000 tons per month. T p 70 He testified that he did not know if DEP would have ended up in the same place had they accepted CertainTeed's proposed revisions, but it would have been less likely. T p 71 To avoid hindsight analysis, witness Lucas put himself in the shoes of DEP and what it knew in late 2011 and 2012, i.e., what information did DEP have on hand to determine how much it could commit. Based on that analysis, there was every indication that DEP could not meet that commitment of 50,000 tons per month. T p 71 He said he understood that Company witnesses Coppola and Halm asserted that they would have ended up in the same place, but there was no documentation provided to support that claim. T p 72

Company witnesses Coppola and Halm acknowledged in their supplemental rebuttal testimony that actual coal generation was generally declining over the period 2010-2012. They also acknowledged that the Company was retiring some of its smaller, less efficient coal-generating units during that time frame. They asserted that it is a leap of tremendous proportion to conclude from these facts that the Company had sufficient information to definitively conclude that it would be unable to satisfy its gypsum supply obligation over a 17-year period. They contended that it was not accurate to assume that gypsum production bears a linear relationship to capacity factors, and there are many factors that influence actual gypsum production. They stated that coal with a 3% sulfur content (e.g. Illinois Basin coal) will produce three times as much gypsum as 1% sulfur content (e.g. Central Appalachian coal) for the same volume of coal

burn with similar heat content. Similarly, limestone purity and SO2 removal efficiency can have a material impact on the amount of synthetic gypsum produced from a coal-fired unit independent of the unit's capacity factor. They stated that during the time period during which the parties were negotiating the 2012 Agreement, DEP was performing testing of various combinations of Illinois Basin coal at Roxboro and Mayo and that use of that higher sulfur coal would, all things being equal, increase the amount of gypsum being produced. T pp 182-183

Regarding Lucas Table 2, which provided a summary of actual capacity factors and heat rates at Belews Creek, Marshall, Roxboro, and Mayo during the period 2010-2012, witnesses Coppola and Halm asserted that the chart shows that the Roxboro capacity factor actually increased between 2011 and 2012. Furthermore, there was a scheduled outage at Roxboro Unit 2 in 2011 that would have impacted the capacity factor in 2011. T p 183

Regarding the Company's gypsum forecasts presented by witness Lucas, while agreeing that the two forecasts projected gypsum production levels lower than the MMQ over a short-term period, witnesses Coppola and Halm believed two factors should be taken into account. First, during the 2011-2012 time period, the gypsum stockpile was near the maximum capacity, and therefore, there was no scenario where DEP would be deemed to have failed to provide the MMQ in the short term, even if the actual gypsum production from Roxboro and Mayo was less than 50,000 tons per month. Therefore, they asserted, the fact that the short-term forecasts show monthly production less than 50,000 tons does not mean that

DEP did not have confidence in its ability to satisfy the MMQ in the short term. According to witnesses Halm and Coppola, the issue is not whether DEP would have been able to satisfy its delivery obligation over a single year, but whether it could satisfy its obligation over the entire term of the 2012 Agreement. T pp 187-188

Commission Discussion

It is undisputed that the dispatch of coal-fired units with FGD systems bears a direct relationship to the amount of gypsum produced; the more a unit is dispatched, the more gypsum is produced, and vice versa, all other things being equal. This is evidenced by the fact that gypsum production decreased at Roxboro and Mayo as those units were dispatched less. See Judgment paragraphs 176-177 (least cost dispatch resulted in DEP reducing operations of its coal fired units, including Roxboro and May, resulting in a reduction of DEP's production gypsum; forecasts predict continued reduction of operations at Roxboro/Mayo with continued reduced production of gypsum). Thus, what DEP knew or should have known about the state of DEP coal unit dispatch at the time of the negotiation of the 2012 Agreement is relevant to the issue of what the Company should have known regarding future gypsum production at Roxboro and Mayo.

The Commission finds that the Public Staff has presented persuasive evidence that in the 2010-2012 time frame, DEP was anticipating that coal dispatch at Roxboro and Mayo would play less and less of a role in meeting DEP's energy needs. Further, DEC's coal units maintained a higher capacity factor and lower heat rate than DEP's coal units in 2010, 2011, and 2012. The Commission

concludes that this clearly indicated that DEC's coal units would be economically dispatched before DEP's Roxboro and Mayo units, and this should have been taken into account by DEP when negotiating the 2012 Agreement.

Further, the Commission finds at the same time DEC's coal units were being projected to dispatch ahead of DEP's, DEC was completing construction of more economical natural gas units, and DEP was retiring coal units and replacing them with more economical natural gas units. All of the new natural-gas fired generation then became available for dispatch under the JDA. DEP management knew, or should have known, that these circumstances could have a direct impact on the dispatch of Roxboro and Mayo and on gypsum production.

Regarding the effect of other factors than dispatch on gypsum production, the Commission notes that while the Company witnesses opined that other factors could affect gypsum production, such evidence is speculative. The Company produced no evidence or documentation showing the extent to which those factors did affect gypsum production at Roxboro and Mayo or how those factors were considered in negotiation of the 2012 Agreement.

Further, regarding the use of the gypsum forecasts, while the Company witnesses criticized Mr. Lucas's use of short term forecasts as evidence that the Company should have known it could not meet its supply obligations under the 2012 Agreement, the Company did not produce any documentary evidence that the Company was projecting that DEP could satisfy those obligations. Instead, witnesses Coppola and Halm pointed to its experimental use of higher sulfur

Illinois Basin coal as indicative of its ability to meet its obligation in the long term. The Commission does not find this to be persuasive. The Commission does find that the best evidence of what the Company knew, or should have known, while negotiating the 2012 Agreement was that DEP had been producing less than 50,000 net dry tons a month at Roxboro and Mayo, and DEP was not projecting that it could fulfill a supply obligation that would require 50,000 net dry tons of gypsum a month. The Commission finds that it was unreasonable and imprudent for the Company not to have taken this information into account when negotiating the 2012 Agreement.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 22-31

The evidence supporting these findings of fact and conclusions is contained in the supplemental testimony of Public Staff witness Lucas, the rebuttal testimony of Company witnesses Coppola and Halm and of Company witness John Gaynor, the Judgment, the testimony of Dave Engelhardt in the CertainTeed lawsuit, and the entire record in this proceeding.

Summary of the Evidence

Public Staff witness Lucas described the negotiation and execution of the 2012 Agreement in his supplemental testimony. CertainTeed witness Dave Engelhardt, at the time of the negotiation of the 2012 Agreement, was CertainTeed's Senior Vice President of Operations. Judgment ¶65 Mr. Engelhardt testified during the trial that after 2008, CertainTeed changed the design of its plants, specifically the feeding system, and needed to update the

agreement to account for those changes. Having observed the way CertainTeed and DEP operated over the previous couple of years, Engelhardt had some thoughts on how to try to make the agreement more usable and build in some flexibility to cover variations. He had observed that production volumes on DEP's side varied and CertainTeed's market varied. T pp 17-18 Public Staff witness Lucas Supplemental Exhibit 1 reflects the actual production volumes for Roxboro and Mayo for 2008-2012, which confirm that production volumes did in fact vary.

During the hearing, Mr. Lucas testified that after the 2008 Agreement, CertainTeed realized it was not going to be able to make its commitment to the Company to take gypsum. CertainTeed had to pay approximately $32 million to get rid of gypsum it could not accept, i.e., CertainTeed got "burned" under the agreement. Thus, between the 2008 and 2012 Agreement, CertainTeed had reasons to be cautious. T pp 41, 47 He agreed that the CertainTeed facility at Roxboro did need a certain amount of gypsum to stay in business. CertainTeed offered a minimum delivery of 25,000 tons. CertainTeed did not want to overcommit to DEP on accepting a certain amount. Between 2008 and 2012, CertainTeed got in trouble and paid millions of dollars to dispose of gypsum, so CertainTeed had to keep a balance between a minimum amount and a maximum amount. T pp 53-54 It appeared to witness Lucas that in October of 2011, once CertainTeed was getting closer and closer to actually building a facility, they realized they might not want 50,000 tons per month. T p 55

Public Staff witness Lucas testified that Mr. Engelhardt provided a list of proposed modifications to the 2008 Agreement to DEP witness Coppola, entitled

"Roxboro Stockpile Scenarios" and which was attached to Mr. Lucas' testimony as Lucas Supplemental Exhibit 2 (entered into the business court trial as Exhibit 24).[6] Mr. Engelhardt also discussed the Roxboro Stockpile Scenarios with witness Coppola. T p 18; DEP Lucas Cross Examination Exhibit 4, p. 236 Mr. Engelhardt testified that witness Coppola told him when they reviewed the scenarios that she preferred to stay with the contract minimum monthly requirements and those numbers as they were stated in the 2008 Agreement (i.e. 50,000 MMQ). DEP Lucas Cross Examination Exhibit 4, p 236

During the business court trial, Mr. Engelhardt described what he was thinking regarding the Roxboro Stockpile Scenarios (which was entered into evidence at the trial as Exhibit 24) on pages 140-144 of the transcript of his testimony (DEP Lucas Cross Examination Exhibit 4). On page 142 of the transcript, Mr. Engelhardt testified that in the scenario where the Company produces less than 600,000 tons a year, "if the stockpile contains at all times above 100,000 tons, then it's okay….But if the stockpile drops blow [sic] 100,000 tons, then PE [DEP] needs to define and implement a replenishment plan to rebuild that to keep it above 100,000 tons." According to Mr. Engelhardt, he included the concepts in the Roxboro Stockpile Scenarios in the draft agreement he sent to Company witness Coppola in October 2011 (business court trial Exhibit 23, DEP Supplemental Exhibit 1). DEP Lucas Cross Examination Exhibit 4, p. 145

[6] The Commission notes that Mr. Halm was not involved in the negotiation of the 2012 Agreement. Judgment ¶126 Therefore, the Commission gives no weight to any testimony given by Mr. Halm regarding what DEP may or may not have considered leading up to the execution of the 2012 Agreement.

He put the stockpile proposal in Section 2.2.3(c) because that was where the stockpile information was in the prior [i.e., 2008] agreement. Id. at 146 He used the remedies in the existing [2008] agreement related to replenishment of the stockpile in Section 6.2 of the agreement. Id. at 149 He also proposed a new MMQ of 25,000 tons. Id. at 151

The trial court in the business court case found that Engelhardt was the first to propose a draft of the 2012 Agreement. The court found that Engelhardt proposed amending the MMQ to shift from a fixed contractual supply obligation to one that varied with the parties' variable business operations. Judgment ¶71 First, Engelhardt proposed a shift from a monthly emphasis to an annual term, with any default to be measured against that annual quantity. He also proposed a new MMQ of 25,000 net dry tons per month, which would be an absolute minimum amount the parties could deliver and accept each month, but the primary focus would be satisfying the annual obligation. Judgment ¶94 Second, Engelhardt proposed that the parties agree to maintain an absolute minimum and maximum volume for the Stockpile to protect their respective needs ("Stockpile Buffer"). The minimum would be set at 100,000 net dry tons, assuring that CertainTeed would always have access to at least two months' supply, and the maximum would be set at 600,000 net dry tons, with CertainTeed required to remove any excess. Judgment ¶95 DEP rejected most of Engelhardt's changes, including his MMQ proposal, expressing a preference to maintain the supply quantity as it existed. Judgment ¶¶71, 103, 104 The Court specifically found that throughout the negotiations for the 2012 Agreement, Coppola and DEP remained committed to

keeping the quantity term as it was. Consistent with its intent to keep the supply the obligation the same, DEP rejected the substance of Engelhardt's proposed changes. Judgment ¶118

Witness Lucas testified that Mr. Engelhardt sent a draft to DEP on October 20, 2011, in which he proposed changing to an annual production philosophy with the stockpile as buffer, ranging between a low of 100,000 tons to a maximum of 600,000 tons. According to witness Engelhardt, approximately a week later, he had a telephone conversation with witness Coppola, and she told him that DEP preferred to stay with the MMQ as it was stated in the 2008 Agreement. In an email to Engelhardt dated October 24, 2011, witness Coppola stated, "In general, we would like to leave the volume obligation as is." That email was attached to the testimony of Public Staff witness Lucas as Lucas Supplemental Exhibit 3. The 2012 Agreement was executed with an effective date of August 1, 2012. T pp 18-19

The 2012 Agreement was entered into evidence as FPWC Harrington Exhibit 1.[7] Section 2.2.3 provided that DEP would use commercially reasonable efforts to maintain at least 250,000 net dry tons of gypsum at all times during the term of the Agreement. Under that section, if the stockpile fell below 250,000 net dry tons, DEP had to provide replenishment plan. Judgment ¶148 Section 15.1 of the 2012 Agreement provided that a party had the right to terminate the agreement for a material breach of the terms of the agreement after 30 days' written notice of a default that has not been cured or is not capable of being cured.

[7] By letter dated April 20, 2020 in this docket, the Public Staff informed the Commission that the Company agreed that the confidential designation for this document should be removed.

In the event of termination, the non-defaulting party was entitled to exercise all remedies specified in Section 6.3 and 6.5, which included the payment of liquidated damages.

The trial court in the Judgment found that on August 17, 2012, witness Coppola emailed her supervisors a summary of the major changes to the 2012 Agreement. Coppola stated that there were "[n]o changes to the original intent of the document," explaining that the "primary changes" made in the 2012 Agreement reflected the parties' agreement that CertainTeed could install additional equipment in the storage area. The court noted that Coppola repeatedly stated that the volume obligations did not change, concluding that "[n]o changes to Article 3 – Gypsum Sales – this is important because there has been no change to the obligation to deliver material in the original volumes specified" and "[a]gain, the original terms around pricing and volumes remained untouched." Judgment ¶116; T p 19

In their supplemental rebuttal, Company witnesses Coppola and Halm asserted that in assessing whether or not it was imprudent for DEP to reject the majority of the changes proposed by CertainTeed, it is necessary to understand the precise details of what CertainTeed actually offered and assess whether what CertainTeed offered was better than what was already in effect. They explained that the delivery and acceptance obligations of the parties were measured in three distinct but related ways: (1) monthly delivery and acceptance quantifies, (2) annual delivery and acceptance quantities and (3) minimum and maximum Stockpile quantities. T p 174

Witnesses Coppola and Halm attached CertainTeed's proposed redline changes as DEP Supplemental Exhibit 1 (identified in the business court trial as Exhibit 23). According to Coppola and Halm, the modifications proposed by CertainTeed were intended only to provide greater monthly variability, but left in place the 600,000 ton annual quantity obligations and introduced new and potentially onerous provisions concerning DEP's obligation to maintain a minimum Stockpile. They cited paragraph 111 of the Judgment in which the trial court concluded that CertainTeed intended to allow for greater monthly variations while maintaining an annual quantity obligation and requiring a Stockpile Buffer. They opined that the reason CertainTeed may have been interested in obtaining more flexibility with respect to the monthly delivery and acceptance obligations is that during the time period in which CertainTeed's operations were ramping up, CertainTeed was typically unable to accept enough gypsum to satisfy the MMQ. Due to its contractual acceptance obligations, CertainTeed incurred more than $32 million addressing gypsum that it was not able to receive and utilize at its facility. T pp 174-175

Witnesses Coppola and Halm admitted that CertainTeed proposed that DEP would be obligated to maintain the Stockpile at 100,000 tons. They asserted that it would have been imprudent of the Company to accept CertainTeed's proposed revisions because the proposal did not offer DEP significant advantages over the existing agreement – that is, it left in place a 600,000 annual delivery obligation and may have imposed obligations related to the Stockpile that were potentially more onerous than those under the existing agreement. Further,

according to witnesses Coppola and Halm, even if DEP had accepted the more flexible terms offered by CertainTeed exactly as proposed, DEP would still be in the exact same situation as it is today. DEP would have been unable to satisfy the annual delivery requirements or maintain the minimum Stockpile amounts without incurring substantial additional costs to obtain gypsum from sources other than Roxboro and Mayo, and would still have had to exercise the right to discontinue supply and pay the liquidated damages. T pp 176-177

Regarding the Roxboro Stockpile Scenarios presented by the Public Staff as Lucas Supplemental Exhibit 2, witnesses Coppola and Halm contended that the exhibit represented an earlier iteration of CertainTeed's perspective on possibilities related to delivery obligations. During the hearing, witness Coppola testified that she believed that the scenarios were discussed around the same time Engelhardt sent his draft agreement, which was in October of 2011. T p 211-212 Witnesses Coppola and Halm asserted that like the redline of the agreement, these scenarios would have introduced a level of short-term flexibility while imposing firm obligations that were either the same as or more onerous than was currently in effect under the 2008 Agreement. T pp 177-178

Witnesses Coppola and Halm further argued that given that CertainTeed already had certainty of supply under the 2008 Agreement, there was no reasonable scenario in which CertainTeed would voluntarily waive its pre-existing minimum delivery rights and risk not being able to fully leverage its investment, particularly in light of the fact that there were no other economically viable sources of gypsum for the facility. They argued that this is supported by the conclusion of

the business court that while CertainTeed was willing to offer some monthly flexibility, it never intended to change the MMQ from the fixed volume of 50,000 net dry tons per month to a variable MMQ based on DEP's actual production at Roxboro and Mayo. T p 179

During the hearing, the Commission asked what was potentially more onerous about the smaller stockpile level offered by CertainTeed. Witness Coppola stated that it was hard to say because they did not get down to that level of granularity in the negotiations because they took a different path, the path that they finally ended up with in the 2012 Agreement, but the smaller stockpile level could have been more onerous than just a requirement to supply a replenishment plan for the 250,000-ton pile in the 2008 Agreement. T p 212 Witness Coppola further stated that she did not recall the thinking at the time when asked why she would be concerned about accepting a smaller stockpile when she was apparently confident that DEP was going to produce 600,000 tons of gypsum a year. T pp 215 She stated she did not know that she thought about this as particularly onerous at that time, but most likely they thought the 250,000 pile was adequate based on what they were producing. She went on to state that also gave DEP an additional buffer, but she did not recall the exact discussions or negotiations that occurred with CertainTeed to get them back to the 250,000-ton number in the 2012 Agreement. T p 215

John Gaynor, former employee of United States Gypsum (USG), testified on behalf of the Company. In his positions with USG, he was responsible for procuring synthetic gypsum for USG and oversaw the procurement process,

including contractual terms. His work also included developing new supply sources and agreements with power companies in connection with the development of three new greenfield wallboard plants. He reviewed the testimony of Public Staff witness Lucas; certain portions of the 2004 Agreement, the 2008 Agreement, and the 2012 Agreement. He also reviewed the redline agreement provided by CertainTeed (Coppola and Halm Supplemental Exhibit 1); and the Judgment. He concluded:

1. The flexibility offered by CertainTeed in the context of the negotiations of the 2012 Agreement would not have excused DEP from satisfying the annual delivery obligation that was already in effect and would potentially have imposed an absolute minimum stockpile obligation.

2. The financial viability of the CertainTeed manufacturing facility at Roxboro would have been highly dependent on an adequate supply of gypsum. Therefore, it is reasonable and consistent with industry practice for similar situations that CertainTeed would have obtained a firm monthly or annual delivery commitment from DEP in order to ensure that CertainTeed could maximize the use of its wallboard facility. And once CertainTeed had obtained such firm delivery commitment, as it did under the 2004 Agreement and actually constructed the wallboard facility, he did not believe that CertainTeed would have proposed or accepted any contract modification that would have materially reduced its long-term certainty of supply. T pp 254-255

CertainTeed is accepting gypsum from DEP pursuant to an Interim Supply Agreement executed in October 2018, attached to the Confidential Settlement,

Termination, and Release Agreement and submitted into evidence as FPWC Harrington Confidential Exhibit 4. Under Section 3.1 of the Interim Supply Agreement, DEP is making available for acceptance by CertainTeed **[BEGIN CONFIDENTIAL]** [redacted]. **[END CONFIDENTIAL]**

Commission Discussion

Having previously concluded that DEP management knew, or should have known at the time of negotiation of the 2012 Agreement that DEP would likely not have been capable of meeting a gypsum supply obligation that required production of 50,000 net dry tons of gypsum a month at Roxboro and Mayo, nor of maintaining a stockpile of 250,000 tons, the question becomes what was the prudent alternative and whether the prudent alternative was available. The Commission concludes that the alternative offered by CertainTeed in October 2011 was the less risky and prudent alternative and should have been accepted.

It is undisputed that between 2008 and 2011, CertainTeed expended millions of dollars disposing of gypsum that it could not use. Mr. Engelhardt of CertainTeed, knowing the consequences of not being able to meet gypsum acceptance obligations and having observed the operational characteristics of CertainTeed and DEP, believed a more flexible arrangement would benefit both companies. He shared and discussed CertainTeed's proposal with Ms. Coppola of DEP, providing her with the Roxboro Stockpile Scenarios and a redline draft that reflected those scenarios. The record reflects that what CertainTeed offered was changing from a monthly quantity to an annual production philosophy with the stockpile as a buffer, ranging between a minimum of 100,000 net dry tons to a maximum of 600,000 net dry tons. Mr. Engelhardt's testimony makes it clear that the 100,000 minimum stockpile was intended to protect CertainTeed's supply, while the 600,000 maximum was intended to protect DEP and keep the stockpile from getting too large. CertainTeed also proposed changing the MMQ from 50,000 net dry tons per month to 25,000 net dry tons a month.

The Commission further finds that DEP, without considering the consequences of being unable to meet its obligations, flatly refused to consider what CertainTeed proposed. DEP did not even attempt to negotiate. This is supported by Mr. Engelhardt's testimony at the business court trial, the Judgment, and the documentary evidence, including the email presented by Public Staff Lucas as Lucas Supplemental Exhibit 3. Ms. Coppola admitted as much during the hearing, stating that they did not get down to that level of granularity, and did not think about the stockpile proposal. Given the actual volumes of gypsum that

had been produced at Roxboro and Mayo leading up to the negotiations, given what was projected to be produced, and given the other facts and circumstances discussed in this Order, DEP was unreasonable and imprudent in insisting on the higher volume supply and stockpile obligations.

In making these conclusions, the Commission finds that DEP's assertion that there were no circumstances under which CertainTeed would have accepted less than 600,000 tons of gypsum per year to be unpersuasive. CertainTeed required some certainty of supply, but as discussed above, CertainTeed offered a lesser amount **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**. Further, the Commission finds that the MMQ and stockpile amount offered by CertainTeed were less onerous than the amounts agreed to in the 2012 Agreement. DEP appears to contend that CertainTeed's proposed stockpile amount, while lower in quantity (100,000 tons vs. 250,000 tons) was more onerous because under the 250,000 ton stockpile requirement, DEP would only have had to provide a replenishment plan, while under CertainTeed's proposal, not meeting the 100,000 ton stockpile minimum would have subjected DEP to damages. The Commission finds this to be a distinction without a difference. Under the 2012 Agreement, failure to maintain the 250,000 ton stockpile was a material breach of the agreement and subjected DEP to liquidated damages. Indeed, it was DEP's inability to keep the stockpile at 250,000 tons that led to the business court action.

In conclusion, it was unreasonable and imprudent for DEP to enter into the 2012 Agreement as it was written. The evidence shows there was considerable

risk associated with DEP's ability to supply sufficient quantities of gypsum and there is no evidence in the record demonstrating DEP took reasonable steps to mitigate that risk. DEP had the opportunity to negotiate terms that would have been more advantageous and realistic and failed to do so. For these reasons, some portion of the costs associated with DEP's imprudence should be disallowed as imprudent, as discussed below.

EVIDENCE AND CONLUSIONS FOR FINDINGS OF FACT NOS. 32-33

The evidence supporting these findings of fact and conclusions is contained in the supplemental testimony of Public Staff witness Lucas, the rebuttal testimony of Company witnesses Coppola and Halm, the Judgment, and the entire record in this proceeding.

Summary of the Evidence

In his supplemental testimony, Public Staff witness Lucas recommended that the Commission exclude the Judgment Payment of $1,084,216 ordered by the business court from recovery. He reasoned that the business court ordered the Judgment Payment because DEP breached the 2012 Agreement by not delivering the contractual amount of gypsum, and CertainTeed had to purchase gypsum at a higher cost. He contended that ratepayers should not be asked to pay the cost of DEP's failure to provide gypsum that DEP knew, or should have known, it could not provide. T pp 30-31

With respect to the liquidated damages, witness Lucas recognized that DEP would have had to dispose of gypsum it did not sell to CertainTeed. He explained that in 1988, DEP converted the Roxboro plant to dry ash handling and began disposing of coal ash in an on-site landfill. In 2008, DEP determined that placing artificial gypsum in the Roxboro on-site landfill would cost "$6 and $9 per ton for Roxboro and Mayo respectively" as shown in Lucas Supplemental Exhibit 6. T p 31 This number was not qualified in any way. T p 124

Witness Lucas testified that the Public Staff sent DEP a data request asking for analyses undertaken by DEP related to the CertainTeed contract, and specifically the analysis that DEP contended showed customers benefitted as a result of DEP's payment of liquidated damages. DEP's response produced the calculations that allegedly showed the settlement provided a net benefit to customers. DEP introduced the calculation at the hearing as DEP Lucas Cross Exhibit 5. Witness Lucas expressed several concerns about the assumptions used in DEP's analysis. First, DEP used an avoided landfill cost of $26/ton in its analysis. Mr. Lucas calculated a weighted average of $6.55/ton as shown in Lucas Supplemental Exhibit 7. Keeping all other assumptions the same, but changing the cost/ton to landfill the artificial gypsum at $6.55/ton results in a net detriment (not benefit) to customers of $42,847,000. Lucas Supplemental Exhibit 8 shows DEP's calculations with the Public Staff's calculations added, which includes eliminating the avoided pile management costs. Subtracting this total detrimental cost from the liquidated damages yields an amount of $46,053,000. He recommended that

the Commission allow DEP to recover only this amount as partial recovery of liquidated damages. T pp 31-32

At the hearing, two documents were introduced into evidence that shed additional light as to DEP's avoided landfill cost for the gypsum at Roxboro and Mayo. Public Staff Lucas Redirect Exhibit 1 (Exhibit 111 from the business court case) was an executive summary of the gypsum agreement between BPB (CertainTeed's predecessor) and DEP. It was dated February 11, 2004 and was provided by Danny Johnson, the person who negotiated the agreement on behalf of DEP. Referencing the gypsum that would be produced at Roxboro and Mayo, he stated, "On site landfill storage is estimated to cost about $5/ton." T p 118 Public Staff Lucas Redirect Exhibit 2, produced by DEP in discovery in this case, was a string of emails among DEP employees, including Danny Johnson. In the emails, Mr. Johnson provided avoided gypsum landfill disposal costs at $5/ton. T p 121 In both documents, Mr. Johnson did not use the word "incremental" or otherwise qualify the estimate, and as an employee of DEP, he would have known what "incremental" meant. T p 123 In the Judgment, referencing Exhibit 111, the business court found that absent beneficial reuse of the gypsum, DEP would incur significant costs to landfill the synthetic gypsum, which Johnson estimated to be approximately five dollars per ton.

In their supplemental testimony, DEP witnesses Coppola and Halm testified that even if DEP had accepted the more flexible terms offered by CertainTeed exactly as proposed, DEP would still be in the exact same situation as it is today. DEP would have been unable to satisfy the annual delivery requirements or

maintain the minimum Stockpile amounts without incurring substantial additional costs to obtain gypsum from sources other than Roxboro and Mayo, and thus would still have had to exercise the right to discontinue supply and pay the liquidated damages as it did in this case. T p 177

DEP witnesses Coppola and Halm also criticized Mr. Lucas for utilizing DEP's hindsight analysis to calculate his recommended disallowance. They testified that several of the assumptions were incorrect. First, with respect to the avoided landfill cost, they stated that Mr. Lucas used a Business Analysis Package (BAP) prepared in 2008[8] in which DEP identified an estimated cost to landfill of $6 and $9 per ton for Roxboro and Mayo. They claimed that it appeared that the landfill cost identified in the BAP only reflected the incremental cost of transporting and placing the gypsum in existing landfills and Roxboro and Mayo. Witnesses Coppola and Halm asserted that when CertainTeed failed to accept the required amounts of gypsum under the agreement, it paid $26 per ton to landfill gypsum at Roxboro. Further, they testified that the Company performed additional analysis for purposes of this case to assess the current cost of landfilling the amount of gypsum purchased by CertainTeed between 2009-2018, and calculated a cost of $22 per ton. T pp 188-193

Witnesses Coppola and Halm also testified that Mr. Lucas failed to take into account the cost of short-term pile management. They testified that the pile management is necessary and that there is no basis for ignoring those tangible

[8] During the hearing, it was determined that the date of the BAP was April 14, 2008. T p 157

costs or the benefits that customers received due to CertainTeed bearing the cost for those activities, which would otherwise be borne by the Company. T pp 193-194 During the hearing, Public Staff witness Lucas described a data response from the Company, which indicated that it is conceivable that the Company could have pursued an arrangement in which gypsum produced at Roxboro is immediately loaded and transported to a landfill, in which case minimal or no stockpile management costs may have been incurred. T pp 108-109

On redirect, Public Staff witness Lucas agreed that had DEP accepted the lesser minimum monthly quantity of 25,000 tons per month, it would have affected and essentially lowered its liquidated damages in the event of a default. T p 127 Under Section 6.3 of the 2012 Agreement, liquidated damages were to be calculated by multiplying the MMQ by the current price of gypsum in effect under the 2012 Agreement, plus $10/net dry ton, multiplied by the number of months remaining in the Agreement.

Commission Discussion

Having determined that it was imprudent and unreasonable for DEP to have entered into the 2012 Agreement, the Commission must now determine the amount that should be excluded from recovery. The Commission finds persuasive the Public Staff's argument that the Judgment Payment should be excluded from recovery. Having breached an agreement it should not have entered into, knowing that it could not provide the amount of gypsum it agreed to, DEP should not now

be permitted to recover this amount. Therefore, the Commission excludes $1,084,216 (system-wide cost) from recovery.

Regarding the liquidated damages, the Commission also finds the Public Staff's disallowance calculation to be reasonable, except for the per ton avoided landfill amount. Instead of the weighted amount used by the Public Staff based on the BAP, the Commission finds and concludes that the amount of $5 per ton used in the documentation entered into evidence at the hearing should be used in the calculation. The $5 per ton was provided by the DEP employee who negotiated the original agreement and was not qualified in any way. The business court found this to be the avoided landfill cost.

In making this finding, the Commission gives no weight to the per ton avoided landfill amounts presented by the Company. First, the Company presented no documentary evidence to support the $26 per ton amount it contends CertainTeed paid to landfill gypsum. Second, with respect to the $22 per ton analysis, DEP did not provide any underlying documentation for this analysis, and in any event, it is based on current numbers, not numbers contemporaneous with when DEP would have landfilled the gypsum. For these reasons, and using the calculation presented by the Public Staff but substituting the $5 per ton avoided landfill amount, the Commission concludes that the amount of $49,760,000 should be excluded from recovery.

[OR in the Alternative: In calculating the disallowance in this case, the Commission accepts for purposes of the calculation the Company's contention that

even had DEP accepted CertainTeed's proposal, they still would have ended up paying liquidated damages. Utilizing the calculation for liquidated damages contained in Section 6.3 of the 2012 Agreement, because the MMQ proposed by CertainTeed was half of the MMQ in the signed 2012 Agreement, liquidated damages would have been half of what DEP ultimately agreed to pay, even had DEP been unable to fulfill the MMQ or stockpile requirements proposed by CertainTeed. For this reason, in addition to disallowing the Judgment Payment, DEP shall not be allowed to recover one-half of the liquidated damages, or $44,450,000 (system-wide cost), from ratepayers.]

Respectfully submitted this the 20th day of April, 2020.

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