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Columbia Gas of Kentucky
A NiSource Company

RECEIVED
JAN 03 2020
PUBLIC SERVICE COMMISSION

January 3, 2020

HAND DELIVERED

Gwen R. Pinson
Executive Director
Public Service Commission
211 Sower Blvd.
Frankfort, KY 40601

RE: **KY PSC Case No. 2017-00453**

Dear Ms. Pinson,

Enclosed please find the original and ten (10) copies of the Prepared Direct Testimony of Michael D. Anderson and the Prepared Direct Testimony of Judy M. Cooper on behalf of Columbia Gas of Kentucky, Inc. in the above captioned matter.

Sincerely,

Brooke E. Wancheck

Brooke E. Wancheck
Assistant General Counsel

Enclosure(s)

Columbia Exhibit No. ______.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE APPLICATION	)	
OF COLUMBIA GAS OF KENTUCKY, INC.	)	Case No. 2017-00453
TO EXTEND ITS GAS COST INCENTIVE	)	
ADJUSTMENT PERFORMANCE BASED	)	
RATE MECHANISM.	)	

PREPARED DIRECT TESTIMONY OF
MICHAEL D. ANDERSON
ON BEHALF OF COLUMBIA GAS OF KENTUCKY, INC.

Brooke E. Wancheck,
Assistant General Counsel
P.O. Box 117
290 W. Nationwide Blvd.
Columbus, Ohio 43215-0117
Telephone: (614) 460-5558
E-mail: bwancheck@nisource.com

Attorney for
COLUMBIA GAS OF KENTUCKY, INC.

January 3, 2020

PREPARED DIRECT TESTIMONY OF MICHAEL D. ANDERSON

Q: Please state your name and business address.

A: My name is Michael D. Anderson and my business address is 290 W. Nationwide Blvd., Columbus, Ohio 43215.

Q: What is your current position and what are your responsibilities?

A: I work for NiSource Corporate Services Company as Director, Supply Development. My principal responsibilities include negotiation of pipeline capacity contracts; participation in proceedings and other matters before the Federal Energy Regulatory Commission ("FERC"); supervision of gas supply purchases, interstate pipeline nominations and invoice reconciliations; and the evaluation, analysis and development of potential non-traditional supply options such as landfill gas projects and commercial opportunities relating to shale gas resources, in particular relating to the Marcellus and Utica Shales. I perform these services and responsibilities on behalf of Columbia Gas of Kentucky, Inc. ("CKY" or the "Company") and CKY's natural gas local distribution affiliates in Kentucky, Pennsylvania, Maryland, Massachusetts, Ohio and Virginia.

Q: What is your educational background?

A. I received a Bachelor of Science degree in Fuels Engineering from the University of Utah in 1978. The Fuels Engineering curriculum consisted primarily of chemical engineering studies with specific emphasis on engineering analysis of conventional and synthetic fuel resources.

Q: Please describe your employment history.

A: From 1978 until 1982, I was employed by Marathon Oil and J. M. Huber Corporation as a Petroleum Engineer in the Permian Basin of West Texas and Southeast New Mexico. From 1982 through 1990, I was employed as Petroleum Engineer, Engineering Manager and Manager of Gas Supply for various subsidiaries of Texas Eastern Corporation ("Texas Eastern"). As Petroleum Engineer and Engineering Manager, I was responsible for the drilling and production department of Texas Eastern's Rocky Mountain exploration and production operations. My direct responsibilities included economic analysis, justification and management of drilling projects, preparation and submission of regulatory permits and applications for drilling, oversight of well completion operations, and oversight of production operations including in-field gas gathering/treating projects. In the position of Manager of Gas Supply, I was responsible for the analysis and negotiation of new gas supplies for system supply use and the renegotiation of existing gas-supply contracts to reduce contractual obligations to purchase gas supplies for system supply use under take-or-pay contracts.

I joined NiSource/Columbia in 1990, initially as Manager of Supply Planning, advancing to Manager of Economic Analysis in 1993. On May 1, 1997, I was promoted to Director, Supply Planning and on May 1, 2010 named to my existing position of Director, Supply Development.

Q: Have you previously testified before any regulatory commission?

A: Yes, I have testified on numerous occasions before the public-utility commissions of Ohio, Kentucky, Pennsylvania, Maryland, Massachusetts and Virginia.

Q: What is the purpose of your testimony in this proceeding?

A: The purpose of my testimony is to provide information on the Company's continual efforts to reduce its pipeline demand charges and support the Company's position regarding the basis from which the monthly demand costs of its upstream pipeline capacity should be determined for purposes of determining the Transportation Cost Index ("TCI") of the Company's Performance-Based Rate ("PBR") Mechanism.

Q: Please describe the Company's PBR Mechanism.

A: In Case No. 2014-00350 the Kentucky Public Service Commission ("Commission") approved the Company's PBR Mechanism which is comprised of three components: (a) a monthly Gas Cost Incentive ("GCI"); (b) an Off-System Sales Incentive ("OSSI") Mechanism; and (c) the TCI. The GCI compares the Company's actual natural gas purchase costs during a given month against a basket of daily, weekly and monthly indices published for each pipeline on which the Company purchases gas. Any cost savings generated by the Company are shared between the Company and its customers under a two-tiered structure with monthly savings of 0-2% shared 70/30 in favor of the customers and savings over 2% shared 50/50. Under the OSSI all net revenues generated by the Company from off-system sales are shared under the same two-tiered structure as the GCI. Lastly, the TCI is designed to capture and share between the Company and its customers any value realized by the Company in negotiating capacity contracts at rates less than the rates approved by the Federal Energy Regulatory Commission ("FERC").

Q. What was the original term of the Commission's order approving the Company's PBR in Case No. 2014-00350?

A. The original term of the Commission's order in Case No. 2014-00350 was April 1, 2015 through March 31, 2018.

Q. Has the Company filed to extend the PBR approved in Case No. 2014-00350?

A. Yes, the Company filed for a renewal and extension of its PBR in Case No. 2017-00453.

Q. Has that request been approved by the Commission?

A. Yes, the Commission approved with modification the Company's request.

Q. Please describe the Commission's modifications.

A. The Commission modified Columbia's request in two primary areas: (a) changing the requested end date of the extension from March 31, 2023 to March 31, 2021; and (b) changing the TCI benchmark for two of the interstate pipelines from which Columbia takes service from the rates approved by the FERC to the current discount rates negotiated by the Company. And further adjusting the benchmark within the TCI for Columbia's Storage Service Transportation ("SST") contract by adding a percentage gross-up factor that was indicated to be applied on the date of the Order to reflect increases in the FERC approved rates.

Q. What was the reasoning in the Commission's change in the TCI benchmark?

A. The Commission indicated two primary reasons: (a) the rate for the Company's discounted SST capacity contract had not changed since at least 2010; and (b) the Commission's desire that the TCI incorporate a continuing improvement when negotiating pipeline rates.

Q. Have you any comments regarding the Commission's reasoning?

A. Yes, I do. The fact that the discounted rate negotiated by Columbia has not changed is directly related to the Company's ability to negotiate the rate and preserve the discounted rate in light of increasing FERC rates. Thus, the low rates have remained constant for the benefit of Columbia's customers. Columbia's shareholders have also been able to share in the results of the extra efforts undertaken by Columbia to bring this cost savings under the PBR. The Tennessee Gas Pipeline and Columbia Gas

Transmission Corporation ("TCO")[1] negotiated discounts have enabled the Company to secure the lowest rate possible and maintain reliability of service in a very changing interstate pipeline environment. Beginning in 2012, TCO entered into negotiations with its customer base to implement a system Modernization Program. TCO's Modernization Program is designed to provide a mechanism for TCO to invest in the modernization of its interstate pipeline system through replacing bare steel and cast/wrought iron pipeline sections, the replacement of outdated and inefficient compressor systems, and restoration of late season storage deliverability. TCO's Modernization Program is now beginning its eighth year[2]. TCO's Modernization Program calls for the Phase I investment of $1.5 billion and Phase II investment of $1.13 billion. Integral to TCO's Modernization Program was the creation of a Capital Cost Recovery Mechanism ("CCRM") wherein TCO would begin to recover its Modernization Program investment beginning February 1st of each year following the prior year's program investment. The CCRM is incorporated into TCO's rates as a FERC approved rider, or stated differently, as an increase to TCO's

[1] TCO is a wholly owned subsidiary of TC Energy formerly known as TransCanada Pipelines, LP.
[2] TCO's Modernization program to date has been comprised of two phases. Phase I included annual investments of approximately $300 million per year for the years 2013-2017 and corresponding capital recovery periods of 2014-18. Phase II included roll-in of the unrecovered Phase I investments into base rates, storage investments totaling $120 million and additional annual investments in pipeline and compressor replacement of approximately $335 million per year for the years 2018-2020 and capital recovery period of 2019-2021.

base rates. The primary reason that the difference between the TCI benchmark and the FERC approved TCO rates has grown, as identified by the Commission, is the CCRM. Columbia worked tirelessly in the TCO Modernization Program negotiations to ensure the continuing and improving value of its discounted rate by assuring that its negotiated rate for its SST capacity contracts did not become subject to the CCRM rider when approved by FERC. The Company's efforts in TCO's Modernization Program development served as the equivalent a lower rate and demonstrate continual improvement in negotiating discounted transportation rates. If not for the Company's efforts in the negotiations regarding TCO's Modernization Program, the cost of gas to customers would be greater. The PBR has successfully incented the Company to aggressively seek and achieve incremental benefits that produce gas cost savings for customers while maintaining reliability of supply.

Lastly, the Commission reasoning appears to the Company as not recognizing the significant changes that have occurred in the natural gas industry since approval of its original PBR. These significant changes are centered on the discovery and development of immense natural gas resources in the Marcellus and Utica Shales of the Appalachian Basin. Prior to this discovery and development the natural gas that the Company used to serve its customers originated in the Gulf Coast region. This gas moved south to north on large interstate pipeline systems. Today, those same pipelines move natural gas in the opposite, north to south direction. This is critical to the understanding of the competitive nature of natural gas pipelines serving the Company. Previously, local distribution companies ("LDCs"), such as the Columbia companies, contracted for the majority of capacity and pipeline companies competed for the LDCs business as it represented the primary market for their services. Today, given the changed supply environment, the primary customers of the pipelines moving the Marcellus and Utica Shale supplies are natural gas producers. Whereas previously the pipelines willingness to provide flexible services was a part of their ability to negotiate with LDCs, the producers have no such interest without significant incremental costs. Therefore, the competitive environment has drastically changed.

Q. **Does the Company have a recommendation as to how the TCI benchmark should be set?**

A. Yes, Columbia continues to believe the FERC approved rates are the appropriate benchmark for the TCI. Columbia also sees that the Commission desires to encourage continual improvement when negotiating discounted transportation rates. Recognizing the significant changes in the capacity markets over the last several years, as noted above, Columbia submits that the TCI benchmark for Tennessee Gas Pipeline should be the FERC approved tariff rate and the TCI benchmark for Columbia's SST contract should be the FERC approved rate as of February 1, 2014, the year the PBR was first authorized by the Commission.

Q. Please describe how the Company arrives at the TCI benchmark for the SST contract.

A. Establishing the benchmark at this time and level recognizes the efforts the Company made in managing the TCO Modernization negotiations for its customers, as well as recognizing that time when changes to the natural gas production and flow regimes, driven by increasing volumes of Marcellus and Utica production, began affecting the competitive environment for the Company that exists today. As noted earlier, the Company successfully negotiated to avoid application of the TCO CCRM to its existing discounted SST demand costs. In addition to avoiding CCRM costs, the negotiations under TCO's Modernization Program Phase I established a reset of TCO base rates. These rates were reduced from a prior level of \$5.467 per Dth to \$4.83 per Dth. Establishing the TCI benchmark at \$4.83

per Dth and applying a percentage gross-up factor as described in the Testimony of Columbia witness Cooper accomplishes the Commission goal of continuous improvement as well as recognizes the changing competitive environment.

Q: Does this complete your Prepared Direct testimony?

A: Yes, however, I reserve the right to file rebuttal testimony if necessary.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE APPLICATION OF	)	
COLUMBIA GAS OF KENTUCKY, INC. TO	)	
EXTEND ITS GAS COST INCENTIVE	)	Case No. 2017- 00453
MECHANISM AND ITS OFF-SYSTEM SALES	)	
AND CAPACITY RELEASE REVENUE	)	
SHARING MECHANISM.	)	

CERTIFICATE AND AFFIDAVIT

The Affiant, Michael D. Anderson, being duly sworn, deposes and states that the prepared testimony attached hereto and made a part hereof, constitutes the prepared direct testi9mony of this affiant in the above-captioned matter, and that if asked the questions propounded therein, this affiant would make the answers set forth in the attached prepared direct pre-filed testimony.

Michael D. Anderson

STATE OF OHIO

COUNTY OF FRANKLIN

SUBSCRIBED AND SWORN to before me by Michael D. Anderson on this 30th day of December, 2019.

NOTARIAL SEAL
STATE OF OHIO

Michael Brehm, Attorney at Law
Notary Public, State of Ohio
My Commission Has No Expiration Date
Sec 147.03 RC

Notary Public

Columbia Exhibit No. _______

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the matter of:	)	
	)	
IN THE MATTER OF THE APPLICATION OF COLUMBIA	)	
GAS OF KENTUCKY, INC. TO EXTEND ITS GAS COST IN-	)	Case No. 2017-00453
CENTIVE ADJUSTMENT PERFORMANCE BASED RATE	)	
MECHANISM.	)	

PREPARED DIRECT TESTIMONY OF
JUDY M. COOPER
ON BEHALF OF COLUMBIA GAS OF KENTUCKY, INC.

Brooke E. Wancheck,
Assistant General Counsel
290 W. Nationwide Blvd.
Columbus, Ohio 43216-0117
Telephone: (614) 460-5558
E-mail: bwancheck@nisource.com

Attorney for Applicant
COLUMBIA GAS OF KENTUCKY, INC.

January 3, 2019

PREPARED DIRECT TESTIMONY OF JUDY M. COOPER

Q: Please state your name and business address.

A: My name is Judy M. Cooper and my business address is Columbia Gas of Kentucky, Inc., 2001 Mercer Road, Lexington, Kentucky, 40511.

Q: What is your current position and what are your responsibilities?

A: I am the Director of Government and Regulatory Affairs for Columbia Gas of Kentucky, Inc. ("Columbia"). I am responsible for the management of Columbia's regulatory policy, tariffs and filings with the Commission. I am also responsible for Columbia's local government and state government affairs including franchises, and monitoring legislation.

Q: What is your educational background?

A. I am a graduate of the University of Kentucky where I received a Bachelor of Science Degree in Accounting in 1982. I also received a Master in Business Administration from Xavier University in 1985.

Q: What is your employment history?

A: I was employed by the Kentucky Public Service Commission ("Commission") as an auditor in 1982. Subsequently, I served as Rate Analyst, Energy Policy Advisor, Branch Manager of Electric and Gas Rate Design, and Director of Rates, Tariffs and Financial Analysis at the Commission. In July of 1998 I joined Columbia as Manager of Regulatory Services. My job title has since been revised and expanded to that of Director, Government and Regulatory Affairs.

Q. Have you previously testified before the Kentucky Public Service Commission?

A: Yes, I have testified before the Kentucky Public Service Commission ("Commission") in several cases for Columbia: Case No. 2002-00117, "The Filing by Columbia Gas of Kentucky, Inc. to Require that Marketers in the Small Volume Gas Transportation Program be Required to Accept a Mandatory Assignment of Capacity";, Case No. 2007-00008, "In the Matter of Adjustment of Rates of Columbia Gas of Kentucky, Inc."; Case No. 2009-00141, "In the Matter of an Adjustment of Rates of Columbia Gas of Kentucky, Inc."; Case No. 2010-00146, "An Investigation of Natural Gas Retail Competition Programs"; Case No. 2013-00167, " In the Matter of Application of Columbia Gas of Kentucky, Inc. for an Adjustment of Rates for Gas Service"; and Case No. 2016-00162, "In the Matter of Application of Columbia Gas of Kentucky, Inc. for an Adjustment of Rates".

Q: What is the purpose of your testimony in this proceeding?

A: The purpose of my testimony is to provide information on the Company's Performance Based Rate Adjustment ("PBR") Mechanism and the Company's understanding of the Commission's Order dated October 22, 2019 approving Columbia's PBR mechanism with modifications, through March 31, 2021. Specifically, I will address the modification to the Transportation Cost benchmark of Columbia Gas Transmission pipeline for purposes of determining the Transportation Cost Incentive ("TCI") portion of the PBR.

Q: Please describe the Company's PBR Mechanism.

A: In Case No. 2014-00350, the Commission approved Columbia's PBR Mechanism which is comprised of three components: (a) a monthly Gas Cost Incentive ("GCI"); (b) an Off-System Sales Incentive ("OSSI"); and (c) the TCI. The testimony of Columbia witness Anderson explains each of these components in greater detail.

Q. Why does Columbia have a PBR Mechanism?

A: Columbia has a PBR mechanism as a voluntary ratemaking adjustment, authorized and approved by the Commission, to optimize its supply portfolio by undertaking incremental risk and efforts that have the potential to lower gas cost as compared to competitive benchmarks or otherwise applicable FERC approved rates. The performance results of the incentive are shared between customers and Columbia shareholders to create a mutual benefit for both parties.

Q: **Has the Commission encouraged performance based ratemaking by utilities subject to its jurisdiction?**

A: Yes, more than fifteen years ago, following a period that saw significant cost increases in natural gas and concern as to the reliability of supply, the Commission undertook a comprehensive review of the natural gas procurement practices of large local distribution companies ("LDCs") subject to its jurisdiction. The Commission determined that the LDCs had developed sound planning and procurement procedures for meeting the natural gas requirements of customers with reliability of supply at reasonable costs over the period of time since natural gas prices were deregulated. While natural gas commodity prices are deregulated, the services for delivery of natural gas from production fields and processing plants are largely provided by interstate natural gas pipeline companies and remain subject to regulation. The Federal Energy Regulatory Commission ("FERC") is the agency charged with regulatory oversight and approval of the services, rates and tariffs of interstate pipelines. However, it is sometimes possible to deviate from the rates found to be fair, just and reasonable by the FERC. In its Order of July 17, 2001 the Commission encouraged LDCs to consider innovative approaches, such as PBRs, as a means of improving gas procurement performance to mitigate higher gas prices, price volatility and lessen the impact on customers while ensuring that LDCs are able to recover all reasonable levels of gas costs.

Q: When did the Commission first approve Columbia's PBR mechanism?

A: Columbia was first granted approval of its PBR mechanism by Order dated March 27, 2015 in Case No. 2014–00350. Atmos Energy ("Atmos", formerly Western Kentucky Gas Company) and Louisville Gas and Electric Company ("LG&E") were the early pioneers in creating performance based ratemaking mechanisms for gas cost incentives. In compliance with the Commission's Order in Case No. 2012-00593[1], Columbia combined its limited gas cost incentive mechanism with its off-system sales capacity release revenue sharing mechanism to more closely align with the PBR mechanisms of Atmos and LG&E creating the first PBR for Columbia. This is the same mechanism that the Commission extended, with modifications by Order dated October 22, 2019 in this case.

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[1] *In the Matter of the Application of Columbia Gas of Kentucky, Inc. to Extend its Gas Cost Incentive Mechanism*

Q. What modification did the Commission make in its October 22, 2019 Order to the Transportation Cost benchmark of Columbia Gas Transmission pipeline for purposes of determining the Transportation Cost Incentive ("TCI") portion of the PBR?

A. The Commission changed the TCI benchmark for Columbia Gas Transmission from the FERC approved rate to the current, negotiated by Columbia, discount rate of $4.1850 per Dth. The Commission directed a percentage gross-up factor be applied according to any future changes in Columbia Transmission's FERC tariff rate going forward. The Order states , "[o]n the date of entry of this Order, percentage changes in Columbia Transmission's FERC tariff will be applied to Columbia Kentucky's Transportation Cost benchmark, setting forth a new benchmark for the period going forward."[2]

Q: What is the impact of this change to the Columbia Transmission benchmark?

A: The initial impact of this change is to completely remove any incentive to seek transportation cost savings. The consequence of changing the benchmark to the current negotiated discount rate presumes that a greater

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and Revenue Sharing Mechanism, Case No. 2012 -00593, Order dated October 25, 2013.

discount is available and must be secured to produce favorable performance results. Furthermore, this fails to recognize changing market environments as described by Company witness Anderson. It also creates a new risk for the Company. For example, would Columbia be denied recovery of a portion of its transportation costs if actual costs were greater than the newly established benchmark? If this is the case, it is difficult to understand why Columbia or other LDCs would seek continuance of the incentive program. However, I don't think this was an intended consequence because in modifying the PBR, the Commission states "should Columbia Kentucky be able to negotiate rates lower than it currently takes service under, or is able to maintain rates at this level despite rising tariff rates following FERC rate cases, it will still be allowed to partake in savings but not at the current level."

As the responsible regulatory authority, FERC has determined that the rates are fair, just and reasonable for the services provide by interstate pipelines in order to assure safe and reliable delivery of natural gas to the customers served by the pipelines. The FERC authorized rates are the prevailing market price. Within a PBR mechanism, a benchmark is utilized to establish the prevailing market price that would otherwise be applicable

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[2] Order at pages 2-3.

and by which performance is gauged. Replacing the FERC approved rate with a previously negotiated discount rate, as proposed in the Commission's Order, incorrectly assumes that the FERC approved rate is not the fair, just and reasonable rate that would otherwise be in effect for the services of the interstate pipeline.

If Columbia is not able to retain the current discounted rate, but obtains some other discounted rate, that is still less than the otherwise applicable FERC approved rate, an incremental gas cost savings would still be realized for customers. The PBR benchmark should be correctly established to incent this desirable behavior and avoid unintended consequences.

Q: How does Columbia calculate the percentage gross-up factor that the Commission's Order stated will be applied to the Columbia Gas Transmission benchmark according to any future changes in Columbia Transmission's FERC tariff going forward?

A: Columbia continues to believe that the FERC authorized rate is the appropriate benchmark as discussed in the testimony of Columbia witness Anderson. Calculation of a percentage gross-up factor is not applicable if Columbia's PBR mechanism is renewed as proposed. However, if the Commission determines the FERC rate is not the benchmark, then Columbia calculates the percentage gross-up factor in the following steps:

Step 1 – Calculate the difference in the FERC approved Columbia Transmission tariff rate when the PBR was first approved compared to the current FERC approved Columbia Transmission tariff rate:

2014 Applicable Tariffed Pipeline Demand Rate per Dth -	$4.831
2019 Applicable Tariffed Pipeline Demand Rate per Dth -	$6.612
Increase per Dth	$1.781

Step 2 – Calculate the percentage change :

Percentage Increase $1.781/$4.831 = 0.3686 or 36.9% increase

Step 3 – Apply the percentage change to the authorized benchmark. In this example the change is applied to the benchmark as stated in the Commission's Order to determine the new benchmark going forward as of October 22, 2019

New Columbia Transmission Benchmark $4.1850 * 1.369 = $5.729

Q: Do you have any other comments regarding the Columbia Transmission benchmark in the TCI component of Columbia's PBR?

A: Yes, Columbia's performance is compared to the benchmark on a monthly basis to quantify the PBR adjustment in accordance with its Gas Cost Adjustment tariff. Therefore, for administrative certainty and efficiency, benchmarks should be effective at the beginning of a month.

Q: Does this complete your Prepared Direct testimony?

A: Yes, however, I reserve the right to file rebuttal testimony if necessary.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE APPLICATION OF	)	
COLUMBIA GAS OF KENTUCKY, INC. TO	)	
EXTEND ITS GAS COST INCENTIVE	)	Case No. 2017- 00453
MECHANISM AND ITS OFF-SYSTEM SALES	)	
AND CAPACITY RELEASE REVENUE	)	
SHARING MECHANISM.	)	

CERTIFICATE AND AFFIDAVIT

The Affiant, Judy M. Cooper, being duly sworn, deposes and states that the prepared testimony attached hereto and made a part hereof, constitutes the prepared direct testimony of this affiant in the above-captioned matter, and that if asked the questions propounded therein, this affiant would make the answers set forth in the attached prepared direct pre-filed testimony.

Judy M Cooper

Judy M. Cooper

COMMONWEALTH OF KENTUCKY

COUNTY OF FAYETTE

SUBSCRIBED AND SWORN to before me by Judy M. Cooper on this 30 day of December 2019.

Stefan Fink

Notary Public #598041

My Commission expires: 03/26/2022