DIRECT TESTIMONY
OF
PHILIP A. WRIGHT
ON BEHALF OF KINGSPORT POWER COMPANY D/B/A
AEP APPALACHIAN POWER
BEFORE THE
TENNESSEE PUBLIC UTILITY COMMISSION
DOCKET NO. 18-_00125

Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.

A. My name is Philip A. Wright. My business address is 500 Lee Street East, Charleston, West Virginia 25301. I am the Vice President of Distribution Operations for Kingsport Power Company (Kingsport, KgPCo or Company), which is registered to do business in the State of Tennessee as AEP Appalachian Power. I also oversee operations for Appalachian Power Company (APCo) and Wheeling Power Company (WPCo). APCo, WPCo, and KgPCo are wholly-owned subsidiaries of American Electric Power Company, Inc. (AEP).

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I earned a Bachelor's Degree in Electrical Engineering in 1982 from West Virginia Institute of Technology and a Master's Degree in Engineering from West Virginia College of Graduate Studies in 1992. I am registered as a Professional Engineer in West Virginia. I have 34 years of utility experience, focusing primarily on transmission and distribution operations. In 1984, I joined APCo as an Electrical Engineer in Beckley, West Virginia. In 1988, I became the Area Supervisor in Oak Hill, West Virginia, and then in 1991 Engineering Supervisor of the Bluefield Division of APCo. In 1992, I was named Bluefield Division's Line Superintendent responsible for the construction and maintenance of the distribution and

transmission systems in that area. In 1996, I became the Operations Manager and, in 2000, Region Support Manager for APCo. I was named to my current position of Vice President of Distribution Operations in September 2005.

Q. WHAT ARE YOUR RESPONSIBILITIES AS VICE PRESIDENT OF DISTRIBUTION OPERATIONS?

A. I have oversight responsibility for the planning, construction, operation, and maintenance of the Company's distribution system. My duties include ensuring the reliable delivery of service to our customers and restoring service when outages occur. In addition, my responsibilities include overseeing the Company's distribution vegetation management program (VMP) and other distribution reliability-related programs.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY REGULATORY AGENCIES?

A. Yes. I have presented testimony before the Tennessee Public Utility Commission (Commission) in Docket No. 17-00032. I have also testified before the Public Service Commission of West Virginia and before the Virginia State Corporation Commission, both on behalf of APCo.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony in this proceeding is to sponsor the data contained in KgPCo Exhibit No. 1 (PAW), which provides the information and metrics that the Commission's order in Docket No. 17-00032 directed KgPCo to submit in subsequent TRP and MS filings such as this filing. I provide an update on the Company's Targeted Reliability Plan (TRP), including the status of both its VMP and System

Improvement Plan (SIP) components. In addition, I describe the major storm that KgPCo experienced during the 12-month period October 1, 2017 through September 30, 2018 ("Review Period"), and the operation and maintenance ("O&M") expenses KgPCo incurred to restore service after that major storm.

Q. PLEASE DESCRIBE KGPCO EXHIBIT NO. 1 (PAW).

A. KgPCo Exhibit No. 1 (PAW) provides the information and metrics that the Commission directed KgPCo to submit in its annual TRP & MS filings. The information covers the Review Period.

KINGSPORT'S TRP

Q. PLEASE IDENTIFY THE PROGRAMS APPROVED BY THE COMMISSION IN DOCKET NO. 17-00032, ON WHICH YOU ARE REPORTING IN THIS CASE.

A. Per the Commission's order in Docket No. 17-00032, Kingsport is reporting on the progress of the two component programs of the TRP that help maintain its distribution infrastructure: 1) its cycle-based VMP, and 2) its SIP.

Q. PLEASE BRIEFLY DESCRIBE THE STATUS OF THE VMP COMPONENT OF THE TRP.

A. With the approval of the VMP in August of 2017, the Company immediately contacted its vegetation management contractors for resource availability. Through these discussions, the Company was able to start the program in the early part of 2018, with the initial 4-year cycle anticipated to be completed over the period of 2018 – 2021. As part of these interactions with contractors, competitive bids were issued for work to be completed in 2018. Through September 2018, the Company has

completed vegetation management activities on 179 miles of rights-of-way. The Company will complete activities on approximately 13 of the 60 distribution circuits targeted in the program by the end of 2018. The Company is currently working with three different vegetation management contractors to provide resources and staff resident vegetation management crews in Kingsport. The VMP, while still relatively early in the implementation phase, is progressing as planned.

Q. PLEASE DISCUSS THE STATUS OF THE SIP COMPONENT OF THE APPROVED TRP.

A. As I described in my direct testimony in Case No. 17-00032, the SIP component of the TRP was designed to address the second most common reliability issue on KgPCo's distribution system, equipment failures, in phases over a 10-year period. The SIP component of KgPCo's TRP is underway and progressing well. During the Review Period, KgPCo incurred costs related to circuit inspections and maintenance; circuit improvements, including recloser replacements, small wire replacements, and sectionalizing; underground exit upgrades at the Highland Station, and pole inspections and replacements. Through September 2018, the Company has completed the inspection of over 2,100 wood poles, including over 400 streetlight poles, 300 overhead circuit miles and over 2,000 underground structures. In addition, the Company has already completed the replacement of over 100 wood poles as a result of these inspections.

MAJOR STORMS

Q. PLEASE DESCRIBE THE MAJOR STORM ACTIVITY EXPERIENCED DURING THE REVIEW PERIOD.

A. The Company experienced one major storm during the Review Period, starting on July 20 and ending on July 21. Starting on the evening of July 20, heavy rain and sustained high winds lashed the Company's service territory, causing damage that left nearly 14,000 KgPCo customers without power. Areas in and around the City of Kingsport experienced the most severe damage from the storm. Given the devastation, this storm met the IEEE criteria and was classified as a major storm. The same criteria used to classify the July 20-21 storm as a major storm were also used in Docket Nos. 16-00001 and 17-00032 to distinguish between major and non-major storms. The Company's restoration efforts following the July 20-21 major storm resulted in the Company incurring $498,569 in O&M expenses. Those costs, during the Review Period, consisted of such things as contract labor, meals, lodging, and crew transportation.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

Kingsport Power (10/1/17 - 9/30/18) Reliability Profile

PROFILE:	10/1/17 - 9/30/18	Footnote
Total Customer Accounts	48,160	[i]
Active Customer Premises	48,086	[ii]
Residential Customer Accounts	41,998	
OH Residential Services	29,882	[iii]
Total OH Distribution R-O-W (2-/3-phase miles, single phase miles)	2-/3-phase miles 410; Single phase miles 911	
OH Distr. R-O-W Miles Requiring Vegetation Management (2-/3-phase miles, single phase miles)	2-/3-phase miles 410; Single phase miles 911	
Distribution Circuits	60	
Distribution Pole Miles	1,321	
Distribution Cable Miles	258	
R-O-W Width	40 feet	
NEW OH & UG SERVICE CONNECTS:	**10/1/17 - 9/30/18**	
New Service Connects	433	
New Service Connects Total Costs	$1,122,236	
Average Time to Complete New Service Requests	4.07 Days	
Average Daily OT Worked per Lineman (hrs)	1.27	
RESOURCES/EXPENSES:	**10/1/17 - 9/30/18**	
Distribution Employees	51	
Distribution Reliability Program Employees	45	
Company OH Distribution Linemen	21	
Contract OH Distribution Linemen	16	
Restoration Vehicles	59	[iv]
Pole Inventory (UOM = each)	130	[v]
Cross Arm Inventory (UOM = each)	207	[v]
Wire Inventory (UOM = feet)	100,840	[v]
Distribution O&M Expenses	$7,069,703	
Distribution Capital Expenses	$16,620,310	
Distribution Reliability Improvement Expenses	$13,516,976	
Major Storms Restoration Expenses	$498,569	
Service Restoration Expenses (excl. major storms)	$1,139,509	
POLE INSPECTION PROGRAM:	**10/1/17 - 9/30/18**	
Utility or Contractor (provide name) Conducted	GeoForce	
Inspection Cycle (years)	10 years	
Number of Distribution Wood Poles on System	approx. 31,250	
Number of Distribution Wood Poles Inspected	2,139	
Distribution Wood Utility Poles Replaced (as a result of routine inspections)	108	
Distribution Wood Utility Poles Replaced as a result of major storms	14	
Distribution Wood Utility Poles Reinforced	0	

RELIABILITY IMPROVEMENT TARGETS:	**10/1/17 - 9/30/18**	
Number of Worst Circuits Targeted	13	
Number of Worst Devices Targeted	Not Available	[vi]
Number of Worst CEI Customers Targeted	Not Available	[vi]
OUTAGES (Including Major Storms):	**10/1/17 - 9/30/18**	
Major Storms	1	
Major Storms Impacting > 100,000 Customers	0	
Number of Outage Events	2,290	
Minimum Time for an Outage Event to Qualify as a Sustained Outage (min.)	6	
Average Number of Hours For Full Restoration (last customer on) Per Event	4.5	
Total Customer Hours Out	434,922	
Customer Hours Out – UG Mat'l	Included in OH material	
Customer Hours Out – Trees	285,934	
Customer Hours Out – Weather	30,185	
Customer Hours Out – OH Mat'l	44,972	
Customer Hours Out – Misc.	14,082	
Customer Hours Out – Public	27,924	
Customer Hours Out – Bulk Pwr.	3,441	
Customer Hours Out – Company	28,383	
Number of Customers with greater than 10 Outages	54	[vii]
Number of Customers with 7-10 Outages	1,404	[vii]
Number of Customers with 4-6 Outages	7,181	[vii]
Number of Customers with 1-3 Outages	30,755	[vii]
Number of Customers with 0 Outages	8,692	[vii]
1st Major Cause of Outages	Veg Inside RoW	
2nd Major Cause of Outages	Equipment	
3rd Major Cause of Outages	Animal	
4th Major Cause of Outages	Scheduled	
5th Major Cause of Outages	Veg Outside RoW	
OUTAGES (Excluding Major Storms):	**10/1/17 - 9/30/18**	
Number of Outage Events (excl. major storms)	2,107	
Average Number of Hours For Full Restoration (last customer on) Per Event (excl. major storms)	3.1	
Total Customer Hours Out (excl. major storms)	228,037	
Customer Hours Out – UG Mat'l (ex. major storms)	Included in OH material	
Customer Hours Out – Trees (ex. major storms)	110,039	
Customer Hours Out – Weather (ex. major storms)	6,263	
Customer Hours Out – OH Mat'l (ex. major storms)	41,754	
Customer Hours Out – Misc. (ex. major storms)	13,677	
Customer Hours Out – Public (ex. major storms)	27,924	
Customer Hours Out – Bulk Pwr. (ex. major storms)	0	
Customer Hours Out – Company (ex. major storms)	28,379	
Number of Customers with greater than 10 outages	50	[vii]

Number of Customers with 7-10 Outages	557	[vii]
Number of Customers with 4-6 Outages	5,962	[vii]
Number of Customers with 1-3 Outages	31,509	[vii]
Number of Customers with 0 Outages	10,008	[vii]
1st Major Cause of Outages	Veg Inside RoW	
2nd Major Cause of Outages	Equipment	
3rd Major Cause of Outages	Animal	
4th Major Cause of Outages	Scheduled	
5th Major Cause of Outages	Veg Outside RoW	
INDICES EXCLUDING MAJOR STORMS: (Distribution only)	**10/1/17 - 9/30/18**	
SAIDI Goal (minutes, excl. major storms)	Not Applicable	[viii]
SAIDI Actual (minutes, excl. major storms)	280.2	
SAIFI Actual (interruptions, excl. major storms)	1.7	
CAIDI Actual (minutes, excl. major storms)	164.6	
CTAIDI Actual (minutes, excl. major storms)	353.8	
Service Availability Goal (%, excl. major storms)	Not Applicable	[viii]
Actual Service Availability (%, excl. major storms)	99.95%	
INDICES WITH NO EXCLUSIONS: (Distribution only)	**10/1/17 - 9/30/18**	
SAIDI Actual (minutes, incl. major storms)	534	
SAIFI Actual (interruptions, incl. major storms)	1.97	
CAIDI Actual (minutes, incl. major storms)	271.4	
CTAIDI Actual (minutes, incl. major storms)	651.9	
Actual Service Availability (%, incl. major storms)	99.90%	
INDICES EXCLUDING MAJOR STORMS: (Total Distribution and Bulk Power)	**10/1/17 - 9/30/18**	
SAIDI Goal (minutes, excl. major storms)	Not Applicable	[ix]
SAIDI Actual (minutes, excl. major storms)	284.5	
SAIFI Actual (interruptions, excl. major storms)	1.770	
CAIDI Actual (minutes, excl. major storms)	160.9	
CTAIDI Actual (minutes, excl. major storms)	359.3	
Service Availability Goal (%, excl. major storms)	Not Applicable	[ix]
Actual Service Availability (%, excl. major storms)	99.95%	
INDICES WITH NO EXCLUSIONS: (Total Distribution and Bulk Power)	**10/1/17 - 9/30/18**	
SAIDI Actual (minutes, incl. major storms)	542.7	
SAIFI Actual (interruptions, incl. major storms)	2.07	
CAIDI Actual (minutes, incl. major storms)	262	
CTAIDI Actual (minutes, incl. major storms)	662.4	
Actual Service Availability (%, incl. major storms)	99.90%	
TREE-RELATED DATA	**10/1/17 - 9/30/18**	
Routine Tree Trimming Expense	$2,771,801	[x]
Tree Removal Program Expense	$2,003,603	[xi]
Hot Spot Trimming Expense	$38,759	[xii]

Tree Trimming Cycle (urban and rural, years)	4	[xiii]
Distribution R-O-W Miles Maintained	179.0	
Spot Inspections Conducted	59	
Total Distribution Foresters	1	
Degreed Distribution Foresters	1	
Contract Tree Trimmers (approx.)	72	[xiv]
Tree Outage Events (excl. major storms)	885	
Average Number of Hours For Full Restoration (last customer on) Per Tree Event (excl. major storms)	3.84	
Range for Full Restoration (shortest, longest)	0.1 to 44.4	
Tree SAIFI Actual (excl. major storms)	0.66	
Tree SAIFI Goal* (excl. major storms)	Not Applicable	[xv]
Tree SAIDI Actual (minutes, excl. major storms)	137.3	
Total Tree Trimming Complaints (Trimming Report to TPUC)	1	

2017-2018 Footnotes

[i] Total Customer Accounts per MACSS (Marketing and Customer Services System) Page 9-1 report for December, 2017. The Residential Customer Accounts are a subset of the total number from the same report.

[ii] Total premise counts (end of year actual) used in the calculation of reliability indices.

[iii] The number of OH Residential Services is determined from GIS Small World and MACSS classification of accounts (residential).

[iv] The count of vehicles reflects the number of distribution vehicles involved in restoration throughout the Kingsport service territory. In the event of a more severe storm, additional vehicles would be brought in from neighboring states and ultimately from across the AEP system.

[v] The 2017-2018 inventory numbers came from Ventyx Asset Suite (Materials Management System).

[vi] Records are not kept on specific devices and CEI customers targeted.

[vii] There are processes that are not yet perfected in tying actual premises to outages. As the processes improve, the estimates of the number of customers with a particular number of outages will tend to increase.

[viii]The Company does not set goals for "Distribution Only."

[ix] Kingsport does not set explicit goals for SAIDI or ASAI.

[x] O&M expenses from the VMP representing accounts 5930000 and 5930001.

[xi] Capital expenses from the VMP representing account 1070001.

[xii] O&M for material and outside service only. All O&M expenditures are also included in the 'Routine Tree Trimming Expense'.

[xiii] The Company switched to a 4 year cycle beginning 1/1/18.

[xiv] Distribution-Only

[xv] Kingsport does not have a tree SAIFI goal.