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WV PSC EXEC SECY 01:18 PM MAY 01 2023

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May 1, 2023

Case No. EAPCR Appalachian 23-1

Via Electronic Filing System
Karen Buckley, Executive Secretary
Public Service Commission of West Virginia
201 Brooks Street
Charleston, WV 25301

Re: Appalachian Power Company and Wheeling Power Company
2023 Annual Reliability Report for Calendar Year 2022

Dear Ms. Buckley:

Please find enclosed for electronic filing on behalf of Appalachian Power Company and Wheeling Power Company, the 2023 Annual Reliability Report for Calendar Year 2022.

Thank you for your attention to this matter.

Very truly yours,

Anne C. Blankenship
(W.Va. State Bar #9044)

Counsel for Appalachian Power Company and Wheeling Power Company

cc: Service List
Enclosure

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2023 Annual Reliability Report for Calendar Year 2022

1. ***Rule Requirement (150 C.S.R. 3, 2.7.d.2.A): A narrative summary of the system's line miles, distribution system voltages, number of customers, number of circuits, and overall System Reliability based on SAIFI, CAIDI, SAIDI and, if applicable, MAIFI performance with Major Event Days excluded and included;***

Appalachian Power Company ("APCo") and Wheeling Power Company ("WPCo") (collectively, the "Companies") together serve approximately 461,976 customers in West Virginia (some 420,494 are served by APCo and some 41,482 by WPCo). The Companies' distribution system in West Virginia includes approximately 20,267 line miles for APCo and approximately 1,569 line miles for WPCo, operated at nominal voltages of 34.5 kilovolts ("kV") or less. Unless specifically indicated to the contrary, all of the references in this Report to APCo and its facilities are limited to APCo's West Virginia service territory. As suggested by the Commission Staff to enable a more consistent review, all data and indices in this report exclude Scheduled Outages. This exclusion was agreed upon by all parties in attendance at the meeting with Commission Staff on February 6, 2019 to review the Reliability Index Targets (Case No. 1 8-0588-E-PC).

In response to the order of the commission provided on March 18th, 2021, the engineering division of the Public Service Commission of West Virginia requested additional information to be added to the report. The following information is located in the following sections: 1) The addition of a list and count of circuits in excel format, which is provided to the Commission through a companion excel document; 2) The addition of a frequency indicator for circuits that are on the Worst- Performing Circuit (WPC) list over five years as requested in Section 7; 3) The addition of a category dedicated to the circuits that have repeatedly been on the WPC list for three or more of the past five years, shown in Section 7; and 4) the addition of a year-over-year change indicator for each circuit. Those additions are included throughout the document starting on page 31 as well as in the companion excel document.

For calendar year 2022, the Companies experienced the following system reliability in West Virginia:

2022 System Reliability						
Company	Including Major Event Days			Excluding Major Event Days		
	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI
APCo	2.867	406.75	1,166.34	2.381	287.86	685.32
WPCo	2.945	847.96	2497.41	2.117	401.51	849.95

2. *Rule Requirement (150 C.S.R. 3, 2.7.d.2.B): The number of Sustained Interruptions by cause with Major Event Days excluded;*

2022 Reliability by Cause - Excluding Major Event Days		
Company	**Sustained Interruption Cause**	**Sustained Interruptions**
APCO	ABNORMAL FEED	1
APCo	ANIMAL - BIRD	215
APCo	ANIMAL - NON BIRD	1,148
APCo	ANIMAL - OTHER	8
APCo	ANIMAL BUS	4
APCo	ANIMAL BUSHING XFMR	2
APCo	BLAST/EXPLOSION (NON AEP)	1
APCo	CONTAMINATION/FLASHOVER	4
APCo	CORROSION	85
APCo	CUST. EQUIPMENT > 1 CUSTOMER	23
APCo	EQUIPMENT FAILURE	4,836
APCo	ERROR - FIELD	141
APCo	ERROR - OPERATIONS	1
APCo	FACILITATION OF WORK	10
APCo	FIRE - AEP, OR AFFECTING > 1 CUSTOMER	74
APCo	FOREIGN OBJECT (NON ANIMAL)	30
APCo	OTHER	44
APCo	OTHER UTILITY	22

2022 Reliability by Cause - Excluding Major Event Days		
Company	**Sustained Interruption Cause**	**Sustained Interruptions**
APCo	OVERLOAD	43
APCo	RELAY MIS-OPERATION	3
APCo	TREE INSIDE ROW	409
APCo	TREE OUT OF ROW	6,052
APCo	TREE REMOVAL (NON AEP)	81
APCo	UG CONST. /DIG-INS (NON AEP)	38
APCo	UNKNOWN (NON WEATHER)	1,805
APCo	VANDALISM	81
APCo	VEHICLE ACCIDENT (NON AEP)	355
APCo	VINE	553
APCo	WEATHER - FLOOD/SLIDE	43
APCo	WEATHER - HIGH WINDS (EXCEEDING 60 MPH)	222
APCo	WEATHER - ICE (1/2 INCH OR > 6 " SNOW)	133
APCo	WEATHER - LIGHTNING	389
APCo	WEATHER - TORNADO	1
APCo	WEATHER - UNKNOWN	938
APCo	**TOTAL**	**17,796**

2022 Reliability by Cause - Excluding Major Event Days		
Company	Sustained Interruption Cause	Sustained Interruptions
WPCo	ANIMAL - BIRD	8
WPCo	ANIMAL - NON BIRD	91
WPCo	CORROSION	35
WPCo	CUST. EQUIPMENT > 1 CUSTOMER	4
WPCo	EQUIPMENT FAILURE	378
WPCo	ERROR - FIELD	4
WPCo	FACILITATION OF WORK	3
WPCo	FIRE - AEP, OR AFFECTING > 1 CUSTOMER	6
WPCo	FOREIGN OBJECT (NON ANIMAL)	3
WPCo	OTHER	3
WPCo	OTHER UTILITY	1
WPCo	OVERLOAD	1
WPCo	TREE INSIDE ROW	74
WPCo	TREE OUT OF ROW	708
WPCo	TREE REMOVAL (NON AEP)	5
WPCo	UG CONST. /DIG-INS (NON AEP)	1
WPCo	UNKNOWN (NON WEATHER)	137
WPCo	VANDALISM	2
WPCo	VEHICLE ACCIDENT (NON AEP)	25

2022 Reliability by Cause - Excluding Major Event Days		
Company	Sustained Interruption Cause	Sustained Interruptions
WPCo	VINE	21
WPCo	WEATHER - FLOOD/SLIDE	1
WPCo	WEATHER - HIGH WINDS (EXCEEDING 60 MPH)	70
WPCo	WEATHER - HURRICANE	1
WPCo	WEATHER - ICE (1/2 INCH OR > 6 " SNOW)	68
WPCo	WEATHER - LIGHTNING	70
WPCo	WEATHER - UNKNOWN	84
WPCo	**TOTAL**	**1,804**

3. ***Rule Requirement (150 C.S.R. 3, 2.7.d.2.C): A summary of distribution system capital and operation & maintenance expenditures;***

2022 Distribution System Capital and O&M Expenditures		
Company	Capital	O&M
APCo	$215,674,735	$104,327,354
WPCo	$27,593,183	$16,290,568

4. ***Rule Requirement (150 C.S.R. 3, 2.7.d.2.D): A summary of the number of customer reliability formal and informal complaints made with the Commission;***

APCo and WPCo 2022 Customer Complaints	
Company	Reliability Complaints to the Commission
APCo	94
WPCo	11

5. ***Rule Requirement (150 C.S.R. 3, 2.7.d.2.E): A listing of circuit performance by Service Area based on SAIFI, CAIDI, SAIDI, and, if applicable, MAIFI performance for the calendar year with Major Event Days excluded;***

See Attachment 1, which contains a list of circuit performance for both APCo and WPCo for calendar year 2022. MAIFI is not available as the Companies are unable to capture MAIFI at this time.

6. ***Rule Requirement (150 C.S.R. 3, 2.7.d.2.F): A narrative summary of the utility's program for analyzing its Worst-Performing Circuits throughout each year;***

The Companies' Worst-Performing Circuits ("WPCs") evaluation begins with annual circuit data, calculating SAIFI for each circuit; selecting the worst 20% of the circuits based on highest SAIFI; Ranking these circuits by the outage time in customer-minutes (SAIDI); selecting the required number of circuits by highest to lowest. From this sorting, the Companies' top five percent of WPCs are identified. This Determination of Worst Performing Circuits is consistent with the First Energy methodology, as requested by Commission Staff at the February 6, 2019 meeting.

As also suggested by the Commission Staff to enable a more consistent review, all data and indices in this report exclude Scheduled Outages. Consistent with the rules, Major Event Days ("MEDs") and Scheduled Outages are excluded from the computations. Also, to provide better alignment between the circuit sort and planned improvements on these WPCs, only outages on the distribution system are reviewed. A detailed review of both the cause and location of these distribution outages is then conducted. Based upon the findings of this analysis, planned improvements for each of the WPCs are developed.

The specific planned improvements discussed below may include work that has already been performed, work that is ongoing, and work that is planned for the future.

7. ***Rule Requirement (150 C.S.R. 3, 2.7.d.2.G): A list of the top five percent of the utility's Worst-Performing Circuits with a minimum of at least one circuit per Service Area; and***

Using the methodology for ranking the circuits as described in Section 6, provided below is the list of Worst-Performing Circuits meeting this criterion by service area:

Company	GIS	STATION	CIRCUIT	SAIDI	SAIFI	CAIDI	Frequency
APCo	2300702	BELVA STATION	VAUGHAN ROAD	11525.4	32.2	357.9	2
APCo	2343001	RENSFORD STATION	COLUMBIA GAS	6174.5	4.5	1372.1	1
APCo	2155101	BRIAR MOUNTAIN	BRIAR MOUNTAIN	5242.9	3	1747.6	1
APCo	2343002	RENSFORD STATION	CAMPBELLS CREEK	3821.8	4.825	792.1	1
APCo	2159201	PIGEON CREEK STA	HORSEPEN	3710.3	6.342	585	1
APCo	2347303	FLATWOOD STATION	QUICK	3585.3	9.185	390.3	3
APCo	2308202	HARTLAND STATION	CLAY	3480.4	9.71	358.4	3
APCo	2217701	MIDKIFF STATION	FOUR MILE CREEK	3365.3	7.112	473.2	4
APCo	2345901	CLENDENIN STATION	AMMA	3212.9	8.118	395.8	4
APCo	2217702	MIDKIFF STATION	RANGER	2835.9	6.506	435.9	4
APCo	2471802	MINNIXMOU STATION	JENKIN JONES	2752.5	3.16	871	1
APCo	2256302	LAKIN	HOSPITAL	2693.5	3.827	703.8	1
APCo	3202201	LOVELY	LOVELY	2462	5.055	487.1	3
APCo	2150103	SPRIGG	SPRIGG	2440.5	3.424	712.7	3
APCo	2937905	TAZEWELL STATION	THOMPSON VALLEY	2423.8	6.405	378.4	1
APCo	2103001	VAN STATION	VAN	2338.6	5.878	397.9	3
APCo	2345902	CLENDENIN STATION	ELK RIVER	2145.2	6.797	315.6	4
APCo	3202203	LOVELY	MT.STERLING	2142.5	5.786	370.3	1
APCo	2342801	CARBONDALE STATION	MT.OLIVE	2130.4	6.49	328.3	1
APCo	2331701	GUTHRIE STATION	GUTHRIE	1986.1	3.942	503.8	3
APCo	2333502	LOUDENDALE STA	DAVIS CREEK	1980.8	6.714	295	2
APCo	2153502	MIDDLE BURNING CRK	NAUGATUCK	1978.3	4.197	471.3	2
APCo	2378301	DAMERON STATION	DAMERON	1971.8	4.998	394.5	1
APCo	2150105	SPRIGG	MATEWAN	1916.1	5.322	360	1
APCo	2774703	AMBLER RIDGE	HARMONY	1915.5	3.538	541.4	2

APCo	2339901	TOMS FORK STA	DISTRIBUTION	1901	4.412	430.9	1
WPCo	6101314	LOUDENVILLE	CAMERONRI	5,596.10	7.556	740.6	5
WPCo	6102621	BIG GRAVE CREEK	LOUDENVILLE	2,326.90	5.376	432.8	4
WPCo	6100629	COUNTYLINE	BIGWHECRE	2,019.40	5.537	364.7	1

Top Five Percent of the Worst-Performing Circuits with Five-Year Frequency Indicator

APCo WPC 3 of 5 Years - Subset			
Circuit ID	**Station**	**Circuit**	**Total**
2217702	MIDKIFF STATION	RANGER	4
2217701	MIDKIFF STATION	FOUR MILE CREEK ROAD	4
2345901	CLENDENIN STATION	AMMA	4
2217301	HUBRDSTWN	FORT GAY	4
2345902	CLENDENIN STATION	ELK RIVER	4
2347303	FLATWOOD STATION	QUICK	3
2331701	GUTHRIE STATION	GUTHRIE	3
2103001	VAN STATION	VAN	3
2150103	SPRIGG	SPRIGG	3
2347301	FLATWOOD STATION	BIG CHIMNEY	3
2158901	DINGESS STATION	DINGESS	3
3202201	LOVELY	LOVELY	3
2300701	BELVA STATION	SWISS	3
2308202	HARTLAND STATION	CLAY	3
2104604	HOPKINS STATION	WOODVILLE	3

Circuits That Have Appeared on the WPC List for 3 or More of the Last 5 Years

WPCo WPC 3 of 5 Years - Subset			
Circuit ID	STATION	CIRCUIT	Total
6101314	LOUDENVILLE	CAMERON RIDGE	5
6102621	BIG GRAVE CREEK	LOUDENVILLE	4

Appalachian Power Company and Wheeling Power Company
2023 Annual Reliability Report for Calendar Year 2022

Appalachian Power and Wheeling Power – 2022 WPC Improvement Summary Table
Circuits Originally Identified in 2021 & Targeted for Improvement in 2022

2022 Rank (Calendar year 2021)	Station	Circuit	Improvement Plan	Activity	Results
1	MIDKIFF STATION	FOUR MILE CREEK ROAD	DACR project with Ranger Circuit New circuit into area from East Lynn Station VMP (2nd cycle)	Planned Planned Scheduled 2023	58% of outages due to Tree outside ROW.
2	MIDKIFF STATION	RANGER	DACR project with Four Mile Creek Circuit New express feeder into area from New Sheridan Station. Replace hydraulic recloser on Harless Fork with Viper Line Relocation on 9-Mile Road VMP (2nd cycle)	Planned Planned Scheduled 2023 Planned Scheduled 2023	72% of outages due to Tree outside of ROW.
3	PIGEON CREEK STA	MATE CREEK	DACR project with Sprigg and Matewan stations	Planning	Does not appear on 2022 WPC list.
4	HARTLAND STATION	CLAY	Line relocation project. Sectionalizing project with Black Diamond Power.	Complete 2021 Complete 2021	96% of outages due to Tree outside of ROW.

			VMP (2nd cycle)	Scheduled 2023	
5	**BELVA STATION**	**VAUGHAN ROAD**	Multiphase and reconductor 4.4 miles between Belva/Vaughan Rd and Hartland/Bickmore. New DA project with Belva/Swiss circuit. Transfer 176 customers to Belva/Swiss circuit. DACR project with Hartland/Bickmore VMP (2nd cycle)	Scheduled 2023 Planned Scheduled 2023 Completed 2022 Scheduled 2023	77% of outages due to Tree outside ROW.
6	**BALLS GAP**	**MUD RIVER ROAD**	Projects to add phases and convert to 34.5 kV. Additional tie line. DACR project with Grassy Fork Station and Sheridan Station. VMP (1st cycle)	In construction Planned Planned Completed 2020	Does not appear on 2022 WPC list.
7	**WAYNE STATION**	**EAST LYNN ROAD**	Add new circuit for the area from new East Lynn Station VMP (2nd cycle)	Planned Completed 2022	Does not appear on 2022 WPC list.
8	**AMBLER RIDGE**	**HARMONY**	VMP (2nd cycle)	Completed 2023	82% of outages due to Tree outside of ROW.
9	**BORDERLAND STA**	**NOLAN**	Work with Kentucky Power to improve sectionalizing coordination.	Planned	Does not appear on 2022 WPC list.

0014

			VMP (2nd cycle)	Completed 2022	
10	STONE BRANCH STA	CRAWLEY CREEK	DACR with three phase ties.	Planned	Does not appear on 2022 WPC list.
11	SPRIGG	SPRIGG	New electronic recloser protection. New fault indicators. Working with Kentucky Power to improve sectionalizing coordination. VMP (2nd cycle)	Planned Planned Planned Completed 2022	53% of outages due to Tree outside of ROW.
12	LAVALETTE STA	WILSON CREEK ROAD	Add DACR to protect the station zone VMP (2nd cycle)	Planned Completed 2022	Does not appear on 2022 WPC list.
13	BUSSEYVILLE	WALBRIDGE	VMP (2nd cycle)	Completed 2021	Does not appear on 2022 WPC list.
14	WAYNE STATION	ECHO	Future projects being evaluated. VMP (2nd cycle)	Planned Started 2022	Does not appear on 2022 WPC list.
15	HUBRDSTWN	FORT GAY	Cutout replacement projects for 1st and 2nd zones. New DACR project for Radnor-Dunlow area Line relocation/rebuild project Mill Creek Rd. VMP (2nd cycle)	Planned Initiated 2022 Planned Completed 2021	Does not appear on 2022 WPC list.

0015

16	**BOONE STATION**	**AREA DISTRIBUTION**	Line relocation Replace hydraulic reclosers with electronic	Planned Planned	Does not appear on 2022 WPC list.
17	**HARMON BRANCH**	**JOHNNY CAKE**	Continue to monitor outages.	Planned	Does not appear on 2022 WPC list.
18	**LOUDENDALE STA**	**DAVIS CREEK**	New DACR tie with Southridge circuits. VMP (2nd cycle)	Planned Completed 2022	77% of outages due to Tree outside of ROW.
19	**MAMMOTH STATION**	**POND GAP**	VMP (2nd cycle)	Completed 2021	Does not appear on 2022 WPC list.
20	**HARTLAND STATION**	**BICKMORE**	Multiphase and reconductor 4.4 miles between Belva/Vaughan Rd and Hartland/Bickmore. DACR project with Harland/Bickmore VMP (2nd cycle)	Planned Planned Completed 2020	Does not appear on 2022 WPC list.
21	**SHERIDAN STA**	**BRANCHLAND**	New 138kV Station Convert distribution circuits to 34.5kV New DACR Veg management on new sections	Completed 2022 Completed 2022 Initiated 2022 Completed 2022	Does not appear on 2022 WPC list.
22	**DINGESS STATION**	**DINGESS**	Reconductor section of DACR scheme Single phase tie line and voltage conversion	Planned Planned	Does not appear on 2022 WPC list.

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23	**MERRITTS CREEK**	**GREENBOTTOM**	Add switches and reclosers to reduce CMI VMP (2nd cycle)	Planned Completed 2022	Does not appear on 2022 WPC list.
24	**MIDDLE BURNING CRK**	**NAUGATUCK**	New fault indicators. Single phase tie line with Dingess circuit. Single phase tie line with Nolan circuit. Future DACR VMP (2nd cycle)	Planned Completed 2022 Completed 2022 Planning Completed 2021	80% of outages due to Tree outside of ROW.
25	**DEHUE STATION**	**YOUNGSTOWN**	Pole Inspection Storm Hardening VMP (2nd cycle) with danger tree removal	Planned Planned Completed 2021	Does not appear on 2022 WPC list.
26	**STONE BRANCH STA**	**BIG CREEK**	New tie line and DACR with Stone Branch/Harts	Planned	Does not appear on 2022 WPC list.
1	**LOUDENVILLE**	**CAMERON RIDGE**	Sectionalizing project to protect 200 customers. Area Planning evaluating new station Line relocation benefitting 196 customers. Add electronic reclosers to worst performing zones VMP (2nd cycle) Hazard Tree Removal	Planned Planning Planned Planned Scheduled 2023 Scheduled 2023	68% of outages due to Tree outside ROW.

0017

2	**NATRIUM**	**FISH CREEK**	Coordination study to improve sectionalizing VMP (2nd cycle)	Planned Scheduled 2023	Does not appear on 2022 WPC list.
3	**BIG GRAVE CREEK**	**LOUDENVILLE**	Relocate line section benefitting 600 customers. New DACR Hazard Tree Removal VMP (2nd cycle)	Planned Planned Initiated 2022 Scheduled 2023	50% of outages due to Tree outside of ROW.

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8. ***Rule Requirement (150 C.S.R. 3, 2.7.d.2.H): Planned improvements to Worst-Performing Circuits.***

As stated in Section 6 above, the outage report is reviewed for each WPC. From this report, planned improvements are identified for each WPC based upon the cause and the location of the outages. Planned improvements for WPCs generally fall into six categories:

A. Asset Programs - Among the suite of Asset Programs available for implementation, the most frequent options pursued are overhead and underground conductor replacement programs to address outage-prone segments, as well as overhead circuit inspection and repair to identify and then replace problematic equipment.

B. Cutout Replacement - If equipment failure is more prevalent on a circuit and the failed component is a cutout, then this program is pursued.

C. Sectionalizing Program - As needed, a coordination study will be conducted on a circuit. Depending upon the findings of this study, additional protective and isolation devices may be added to the circuit. These protective and isolation devices have the net effect of reducing the number of customers affected by each outage and reducing the duration of outages.

D. Targeted Reliability - On a case-by-case basis, planned improvements on a circuit may take the form of reconductoring, multiphasing, tie-line construction, and voltage conversion projects.

E. Vegetation Management - If the outage cause report reveals that vegetation is a significant cause of the poor performance, vegetation management may be recommended. The Commission's March 18, 2014 Order in Case No. 13-0557-E-P approved the Companies' proposal to implement a cycle-based vegetation management program ("VMP"). Any WPC that requires vegetation management as part of its planned improvements would receive prioritized treatment under the VMP.

F. Other Improvements - At times, other circuit-specific upgrades may be implemented which do not fall into one of the previous categories, for example the relocation of difficult-to-access lines to more accessible locations.

An individual WPC may receive any number or combination of the above improvements based upon the outage cause analysis.

Planned Improvements to the Top Five Percent of WPCs: APCo West Virginia

BELVA/VAUGHAN ROAD

Planned Improvements: Targeted Reliability, Vegetation Management

Circuit Information:
The Belva Station/Vaughan Road Circuit serves approximately 261 customers in the Lizemores area in Nicholas and Clay Counties. The circuit is approximately 28 miles long and traverses through sparsely populated, rural areas along Vaughan Road and Adonijah Creek Road areas.

Outage Analysis:
This circuit experienced 34 outages over the 12 months ended December 31, 2022. From a CMI perspective, 77% were due to tree-related causes (0.13% due to trees inside the right-of-way (ROW), 76.87% due to trees outside the ROW), 12% due to weather-related causes, 6% due to non-AEP tree removal, and 5% due to equipment failure.

Planned Improvements:
During 2022, approximately 176 customers, on the end of the circuit, were transferred over to the Belva / Swiss due to the outages experienced in the breaker zone. There is a Distributed Automation Circuit Reconfiguration (DACR) scheme planned for the approximately 176 customers, so they can be automatedly transferred between the Vaughan Road and Swiss Circuits.

A previously stated project planned for 2023, that will multiphase and reconductor 4.4 miles of circuitry between Belva/Vaughan Road and the Hartland/Bickmore Circuits, is progressing; the field design was started at the end of 2022 and is continuing. This project will include a DACR scheme, that will allow for the automatic transfer of customers between these two circuits.

Vegetation management scheduled for 2023.

RENSFORD/COLUMBIA GAS

Planned Improvements: Targeted Reliability, Vegetation Management

Circuit Information:
The Rensford Station/Columbia Gas Circuit serves 2 customers in the Point Lick area of Kanawha County. The entire length of the circuit is 2.9 miles long. The Primary Metered customer is located 0.5 miles from the station and the majority of this portion of the circuit is in a rural area. The other customer, a radio tower, is on a tap of this

circuit that is 2.4 miles long and traverses through a mountainous area that is very difficult to reach.

Outage Analysis:
This circuit experienced 7 outages over the 12 months ended December 31, 2022. From a CMI perspective, 100% of the outages were due to trees outside the ROW.

Planned Improvements:
The Company will look at relocating about half of the main section serving the primary metered customer to make it accessible and upgrade this section in the process. In addition, the Company will conduct a study to see what can be done to improve the accessibility of the 2.4 mile tap to the radio tower.

Vegetation management scheduled for 2023.

BRIAR MOUNTAIN/BRIAR MOUNTAIN

Planned Improvements: N/A

Circuit Information:
The Briar Mountain Station/Briar Mountain Circuit serves approximately 9 customers in the Alum Creek/Bens Creek areas of Mingo County. The circuit is approximately 4 miles long and traverses through rough and rigid terrain making it hard for line personnel to reach the area and quickly resolve the outage.

Outage Analysis:
This circuit experienced 5 outages over the 12 months ended December 31, 2022. From a CMI perspective, 95% were due to trees outside the ROW and 5 % were due to equipment failure.

Planned Improvements:
There are no planned improvements at this time.

RENSFORD/CAMPBELLS CREEK

Planned Improvements: Targeted Reliability

Circuit Information:
The Rensford Station/Campbells Creek Circuit serves approximately 1,257 customers in the Point Lick, Campbells Creek Drive, and Blount areas of Kanawha County. The circuit is approximately 33.3 miles long with two sections traversing through some mountainous terrain, that extends the assessment time.

Outage Analysis:
This circuit experienced 70 outages over the 12 months ended December 31, 2022. From a CMI perspective, 84% were due to tree-related outages (2% due to trees inside the Row, 82% due to trees outside the ROW), 13% due to flood/slide-related causes, 2 % due to equipment failure, and 1% due to various other causes.

Vegetation management was completed in 2022.

Planned Improvements:
An approved project to relocate one section of the circuit, that goes across mountainous terrain, down along the main road is progressing. The field design work is almost completed and right-of-way acquisition is underway; this will benefit approximately 436 customers on the circuit.

PIGEON CREEK/HORSEPEN

Planned Improvements: Sectionalizing, Targeted Reliability, Vegetation Management

Circuit Information:
The Pigeon Creek Station/Horsepen Circuit serves approximately 631 customers in the Logan areas of Logan and Mingo Counties. The circuit is approximately 30.2 miles long and traverses through some sparsely populated and forested areas. Much of the line is 34.5kV and 19.9kV, however there is a long section of 12.47kV fed from a bank of step-down transformers.

Outage Analysis:
This circuit experienced 45 outages over the 12 months ended December 31, 2022. From a CMI perspective, 84% were due to tree-related causes (8 % due trees inside the ROW, 76% due to trees outside the ROW), 13% due to weather-related causes, 2% due to equipment failure, and 1% due to various other causes.

Planned Improvements:
Planned improvements for 2023 include adding a DACR scheme to protect 446 customers, relocating and upgrading a Viper recloser for DACR to improve accessibility, installing several sets of switches and fault finders, and upgrading and relocating a portion of 3.1 kilofeet of small wire in a 12.47kV section that has been held up for a property owner easement for over five (5) years.

Vegetation management scheduled for 2023.

FLATWOOD STATION/QUICK

Planned Improvements: Vegetation Management, Targeted Reliability, Other

Circuit Information:
The Flatwood Station/Quick Circuit serves approximately 781 customers in the Quick, Sanderson, and Dutch Ridge areas of Kanawha County. The circuit is approximately 71 miles long and traverses through sparsely populated rural areas and along some ridge tops.

Outage Analysis:
This circuit experienced 115 outages over the 12 months ended December 31, 2022. From a CMI perspective, 76% were due to tree-related outages (6% due to trees inside the ROW, 70% due to trees outside the ROW), 17% due to weather-related causes, 6% due to equipment failure, and 1% due to various other causes.

Planned Improvements:
The construction of a couple of short tie lines have been completed that have resulted in a more reliable service to a few customers that have seen the longest outages.

A portion of this circuit has been moved off of a hard to access mountain crossing which has helped the customers in the Sanderson area from seeing extended outages.

Three projects have been approved to multiphase and tie the end of the Quick Circuit to the end of the Clendenin / Elk River Circuit, which is also on the WPC list.

- The first phase is to relocate a section of the main circuit off of an inaccessible mountain where it was constructed along the points of several ridges. This section has been mostly designed in the field but ran into a customer that will not grant right of way and thus a portion will have to be rescoped.
- The second phase is to multiphase along Dutch Ridge while moving the existing line to the roadway so it will be accessible. The field design is complete, but the work orders have been held up awaiting the acquisition of the final pieces of the necessary right of way.
- The third phase has been scoped out, but the field design has not started. This phase will finish the connection of the two WPC circuits and also multiphase a portion of the Clendenin/Ek River circuit to allow for the automatic transfer of customers that are located on the end of each of these circuit that have seen the most outages.

Vegetation management scheduled for 2023.

HARTLAND/CLAY

Planned Improvements: Vegetation Management

Circuit Information:
The Hartland Station/Clay Circuit now serves approximately 283 customers in the Hartland, Elkhurst, Procious, and toward Clay areas of Clay County. The circuit is approximately 52 miles long and traverses along State Rt. 16 and Elk River Road between the Elk River and the steep hillside. One portion of this circuit also extends across a hard to access mountain along Blue Knob Road and ends along State Rt. 4.

Outage Analysis:
This circuit experienced 43 outages over the 12 months ended December 31, 2022. From a CMI perspective, 96% were due to trees outside the ROW, 1% due to an unknown non-weather incident, 1% due to another utility, and 2% due to various other causes.

Planned Improvements:
With 96 % of the outages attributed to trees falling from outside of the right-of-way from a CMI perspective, when danger trees are identified they will have them removed.

Vegetation management scheduled for 2023.

MIDKIFF/FOUR MILE CREEK

Planned Improvements: Vegetation Management, Targeted Reliability

Circuit Information:
The Midkiff Station/Four Mile Creek Circuit serves approximately 1,244 customers in the Southeastern/Southwestern areas of Lincoln and Wayne Counties. The circuit is approximately 147 miles long and half of the circuit traverses through rugged terrain and is not easily accessed. The circuit serves customers in the East Lynn, Midkiff, Branchland, Kiahsville, and Cove Gap areas.

Outage Analysis:
This circuit experienced 118 outages over the 12 months ended December 31, 2022. From a CMI perspective, 59% were due to vegetation-related causes (1% due to trees inside the ROW and vines, 58% due to trees outside the ROW), 25% due to weather-related causes, 10% due to equipment failure, 2% due to a non-AEP vehicle accident, and 1% due to various other causes.

Planned Improvements:
For 2023, APCo plans to fully automate the existing load transfer scheme between Midkiff/Ranger and Midkiff/Four Mile, which should improve reliability. In addition, plans are to build a circuit out of the recently purchased East Lynn Station to split the load between the two stations, which will greatly improve reliability. This should be done by the end of 2024.

Vegetation management will be completed in 2023.

CLENDENIN/AMMA

Planned Improvements: Targeted Reliability

Circuit Information:
The Clendenin/Amma Circuit serves approximately 1,923 customers in the Clendenin, Amma, Grannies Creek, and Gabe Road areas of Kanawha, Roane, and Clay Counties. The circuit is approximately 176 miles long and traverses through some sparsely populated areas.

Outage Analysis:
This circuit experienced 219 outages over the 12 months ended December 31, 2022. From a CMI perspective, 67% are from vegetation-related outages (60% due to trees outside the ROW, 7% due to vines), 22% due to weather-related outages, 5% due to unknown non-weather causes, 2% due to equipment failure, 2% due to non-AEP vehicle accidents, and 2% due to various other causes.

Vegetation management completed 2021.

Planned Improvements:
A previously reported Plan to install a DACR scheme to protect approximately 1,200 customers has been completed. This scheme operated earlier this year to transfer these customers with only a very short outage. A tie line has been completed along Frame Road to connect to the Flatwood/Elkview Circuit to help the customers in that area.

MIDKIFF/RANGER

Planned Improvements: Vegetation Management, Targeted Reliability, Other

Circuit Information:
The Midkiff Station/Ranger Circuit serves approximately 2,185 customers in the Southeastern/Southwestern areas of Lincoln and Wayne Counties. The circuit is

approximately 231miles long and traverses through rugged terrain and is not easily accessed.

Outage Analysis:
This circuit experienced 233 outages over the 12 months ended December 31, 2022. From a CMI perspective, 77% were due to tree-related causes (5% due to trees inside the ROW, 72% due to trees outside the ROW), 9% due to weather-related causes, 7% due to equipment failure, 5% due to non-AEP vehicle accidents, and 2% due to various other causes.

Planned Improvements:
For 2023, APCo plans to fully automate the existing load transfer scheme between Midkiff/Ranger and Midkiff/Four Mile, and Mile and build an express tie feeder from the new Sheridan Station which should improve reliability. In addition, plans are to replace hydraulic reclosers with a Viper recloser on Harless Fork.

Vegetation management scheduled for 2023.

MINNIX MOUNTAIN/JENKIN JONES

Planned Improvements: Other

Circuit Information:
The Minnix Mountain Station/Jenkin Jones Circuit serves approximately 26 customers in the Flipping, Goodwill areas of Mercer County. The circuit is approximately 6.2 miles long and traverses through remote, difficult to access terrain.

Outage Analysis:
This circuit experienced 7 outages over the 12 months ended December 31, 2022. From a CMI perspective, 96% were due to trees outside the ROW, 3% due to weather-related causes, and 1% due to equipment failure.

Vegetation management last completed 2021.

Planned Improvements:
Due to the limited number of customers served on Minnix Mountain/ Jenkin Jones, they are planned to be transferred to nearby circuits, eliminating the need for the Jenkin Jones circuit. This will allow the Company to better effectively and more efficiently serve those customers.

LAKIN/HOSPITAL

Planned Improvements: Vegetation Management

Circuit Information:
The Lakin Station/Hospital Circuit serves approximately 250 customers in the Western areas of Mason Counties. The circuit is approximately 20.61 miles long and traverses through farmland.

Outage Analysis:
This circuit experienced 17 outages over the 12 months ended December 31, 2022. From a CMI perspective, 92% were due to non-AEP vehicle accidents, 5% were due to unknown non-weather-related cause, 2% due to trees outside the ROW, and 1% due to various other causes.

Planned Improvements:
Vegetation management scheduled for 2023.

LOVELY/LOVELY

Planned Improvements: Vegetation Management, Targeted Reliability, Sectionalizing

Circuit Information:
The Lovely Station/Lovely Circuit serves approximately 2,118 customers in the Kermit/Marrowbone/Jennies Creek/Crum/Stepptown/StoneCoal/WebbRd/Tolsia Highway areas of Mingo and Wayne Counties and also Martin County in Kentucky Power. The circuit is approximately 145 miles long and traverses through very rough and difficult terrain with several sections being NTA and multiple river crossings.

Outage Analysis:
This circuit experienced 153 outages over the 12 months ended December 31, 2022. From a CMI perspective, 76% were due to vegetation-related outages (1% due to trees inside the ROW and vines, 76% due to trees outside the ROW), 14% due to unknown non-weather-related causes, 8% due to equipment failure, and 2% due to various other causes.

Planned Improvements:
There have been new electronic protective devices installed on the Lovely circuit to better sectionalize and isolate faulted zones to help reduce CMI. A project will start in 2023 to multiphase approximately 11 miles of line to build a stronger 3 phase tie. A single-phase DA scheme involving 3 Vipers is scheduled to be put in service to tie with the Dingess/Dingess circuit.

Vegetation management began 2022 and will be completed 2023.

SPRIGG/SPRIGG

Planned Improvements: Sectionalizing

Circuit Information:
The Sprigg Station/Sprigg Circuit serves approximately 286 customers in the Sprigg/Aflex/Merrimac areas of Mingo County WV and Pike County KY. The circuit is approximately 13 miles long and traverses through very rough and steep terrain and multiple river crossings into Kentucky Power territory making it hard for line personnel to locate the damaged areas.

Outage Analysis:
This circuit experienced 47 outages over the 12 months ended December 31, 2022. From a CMI perspective, 79% were due to vegetation-related causes (16% due to trees inside the ROW, 53% due to trees outside the ROW, and 10% due to vines), 16% due to weather-related causes, 2% due to unknown non-weather causes, 2% due to equipment failure, and 1% due to various other causes.

Planned Improvements:
Selective vegetation management has been requested. In addition, there are plans to install newer electronic reclosers to help locate damage. Finally, there are plans to install fault indicators in various locations to help line personnel locate damage.

Vegetation management completed 2022.

TAZWELL/THOMPSON VALLEY

Planned Improvements: N/A

Circuit Information:
The Tazwell Station/Thompson Valley Circuit serves approximately 42 West Virginia customers in the Brewsterdale and Gary Road areas of McDowell County. The circuit is approximately 12 miles long and traverses through rough rural steep inaccessible terrain.

Outage Analysis:
This circuit experienced 10 outages over the 12 months ended December 31, 2022. From a CMI perspective, 93% were due to tree-related causes (7% due to trees inside the ROW, 86% due to trees outside the ROW), 6% due to weather-related causes, and 1% due to various other causes.

Vegetation management last completed 2020.

Planned Improvements:
Continue to monitor outages and look for outage or equipment trends.

VAN/VAN

Planned Improvements: Targeted Reliability

Circuit Information:
The Van Station/Van Circuit serves approximately 866 customers in the Van, Bob White, Bim, Gordon, Williams Mtn, Bandytown, Twilight and Pond Fork areas of Boone County. The circuit is approximately 40 miles long and traverses through various mountainous territories and coal mined areas.

Outage Analysis:
This circuit experienced 37 outages over the 12 months ended December 31, 2022. From a CMI perspective, 49% were due to equipment failures, 41% were due to trees outside the ROW, 4% were due to field errors, 3% were due to weather-related causes, and 3% were due to various other causes.
A single equipment failure outage accounted for 43% of all CMI, which was a result of a broken inaccessible pole on a hillside behind the substation.

Planned Improvements:
The Company is planning a multiphasing and reconductoring project to create a three-phase tie to another circuit.

CLENDENIN/ELK RIVER

Planned Improvements: Targeted Reliability, Other

Circuit Information:
The Clendenin Station/Elk River Circuit serves approximately 1923 customers in the Clendenin, Falling Rock, Jordan Creek, Bomont, Glen, and Procious areas of Kanawha and Clay Counties. The circuit is approximately 160 miles long with portions traversing through some sparsely populated rural areas that are hard to reach.

Outage Analysis:
This circuit experienced 205 outages over the 12 months ended December 31, 2022. From a CMI perspective, 76% were due to tree-related outages (6% due to trees inside the ROW, 70% due to trees outside the ROW), 8% due to equipment failure, 7% due to non-AEP tree removal, 5% due to due to unknown non-weather causes, 4% due to weather-related outages, and 1% due to various other causes.

Vegetation management completed 2022.

Planned Improvements:
A tie line has been constructed to connect to the Flatwood/Elkview Circuit so customers around the areas of Falling Rock and Jordan Creek can be transferred if needed.

A new substation is being constructed to replace Clendenin Station and is expected to be in service before the end of 2023. This new substation, Jarrett Station, will break the Elk River Circuit in to two new circuits and thus reduce the exposure of the customers as a whole.

Three projects have been approved to multiphase and tie the end of the Elk River Circuit, in the Bomont and Glen areas, to the end of the Flatwood/Quick Circuit, which is also on the WPC list.

- The first phase is to relocate a section of the Quick Circuit off of an inaccessible mountain where it was constructed along the points of several ridges. This phase has been mostly designed in the field but ran into a customer that will not grant a right of way, thus a new plan will have to be developed for that portion.
- The second phase is too multiphase along Dutch Ridge while moving the existing line to the roadway so it will be accessible. The field design is complete, but the work orders have been held up awaiting the acquisition of the final pieces of the necessary right of way.
- The third phase has been developed but the field design has not started. This phase will finish the connection of these two WPC circuits and also multiphase a portion of the Clendenin/Ek River Circuit to allow for the automatic transfer of customers that are located on the end of each of these circuit that have seen the most outages.

LOVELY/MOUNT STERLING

Planned Improvements: N/A

Circuit Information:
The Lovely Station/Mount Sterling Circuit serves approximately 26 customers in the Naugatuck/Maher areas of Mingo County. The circuit is approximately 1.2 miles long and traverses through river crossings and rough terrain making it difficult for APCO and KY Power to find the issue and work together to resolve. Lovely MT Sterling is primarily a Kentucky Power circuit with only 26 customers on the APCO-WV side near the end of the circuit.

Outage Analysis:
This circuit experienced 13 outages over the 12 months ended December 31, 2022. From a CMI perspective, 84% were due to vegetation-related causes (83% due to trees

outside ethe Row, 1% due to vines), 8% due to unknown weather causes, 7% due to equipment failures, and 1% due to various other causes.

Vegetation management completed 2022.

Planned Improvements:
There are no planned improvements at this time.

CARBONDALE/MOUNT OLIVE

Planned Improvements: Vegetation Management

Circuit Information:
The Carbondale Station/Mount Olive Circuit serves approximately 147 customers in the Cannelton Hollow area of Kanawha County. The circuit is approximately 12 miles long and mostly travels along Cannelton Hollow, where parts of it has steep hill sides on both sides of the road.

Outage Analysis:
This circuit experienced 14 outages over the 12 months ended December 31, 2022. From a CMI perspective, 99% were due to vegetation-related causes (68% due to trees outside the ROW, 31% due to vines, and 1% due to various other causes.

Planned Improvements:
With 99% of the outages attributed to Trees (68% from trees falling from outside the right-of-way and 31% due to vines on a pole) from a CMI perspective; the two outages that were attributed to vines were in two different areas and were corrected during each outage. When danger trees are identified they will be removed.

Vegetation management scheduled for 2023.

GUTHRIE/GUTHRIE

Planned Improvements: Asset Programs, Targeted Reliability

Circuit Information:
The Guthrie Station/Guthrie Circuit serves approximately 1054 customers in the Eden's Fork and Sissonville Dr. areas of Kanawha County. The circuit is approximately 57 miles long.

Outage Analysis:
This circuit experienced 91 outages over the 12 months ended December 31, 2022. From a CMI perspective, 64% were due to trees outside the ROW, 26% have been due

to non-AEP vehicle accidents, 5% due to weather-related causes, 3% due to equipment failure, and 2% due to various other causes.

Planned Improvements:
A tie line was constructed, and a portion of the circuit was transferred in 2022 to an alternate circuit with better reliability. In addition, an overhead conductor is planned as part of the overhead conductor replacement program.

LOUDENDALE/DAVIS CREEK

Planned Improvements: Targeted Reliability

Circuit Information:
The Loudendale Station/Davis Creek Circuit serves approximately 339 customers in the Davis Creek area of Kanawha County. The circuit is approximately 24.26 miles long and traverses through hilly and very wooded terrain.

Outage Analysis:
This circuit experienced 27 outages over the 12 months ended December 31, 2022. From a CMI perspective, 97% were due to vegetation-related outages (19% due to trees inside the Row, 77% due to trees outside the ROW, 1% due to vines), 2% due to weather-related outages, and 1% due to various other causes.

Vegetation management completed in 2022.

Planned Improvements:
There is a planned DACR scheme to be expanded to Southridge feeders in 2025.

MIDDLE BURNING CREEK/NAUGATUCK

Planned Improvements: Other

Circuit Information:
The Middle Burning Creek Station/Naugatuck Circuit serves approximately 428 customers in the East Kermit/Naugatuck areas of Mingo County. The circuit is approximately 25 miles long and traverses through steep and rough right of rows. The majority of the 3-phase line on Middle Burning Naugatuck is NTA.

Outage Analysis:
This circuit experienced 25 outages over the 12 months ended December 31, 2022. From a CMI perspective, 80% were due to trees outside the ROW, 19% due to weather-related causes, and 1% due to various other causes.

Vegetation management completed 2021.

Planned Improvements:
Fault indicators are being installed at multiple locations to better help line crews locate the faulted zone. Single-phase ties to Dingess/Dingess and Borderland Nolan have been restored and were used numerous times near the end of 2022. This will be a possible single phase DACR scheme in the future.

DAMERON/DAMERON

Planned Improvements: Targeted Reliability, Other

Circuit Information:
The Dameron Station/Dameron Circuit serves approximately 1257 customers in the western area of Raleigh County. The circuit is approximately 86 miles long and traverses through roads along Route 3 and Route 1.

Outage Analysis:
This circuit experienced 82 outages over the 12 months ended December 31, 2022. From a CMI perspective, 78% were due to trees outside the Row, 19% due to equipment failures, 2% due to non-AEP vehicle accidents, and 1% due to various other causes.

Vegetation management was completed 2022.

Planned Improvements:
Planned improvements for 2023 include the Trap Hill/ Dameron DACR that is scheduled to be placed into service by the end of 2023. This will provide automatic transfer capability to an alternate source and communication to protective devices throughout the Dameron circuit. The Company will have the ability and opportunity to transfer the entire Dameron circuit to Trap Hill automatically with the DACR scheme. A project will also be submitted for the 2025 work plan to eliminate approximately 7,200 ft of inaccessible line and move it closer to the road. This project will also entail upgrading an overcurrent device as well as installing a new line device to break up the circuit and help isolate faults at a more precise location.

SPRIGG/MATEWAN

Planned Improvements: Targeted Reliability

Circuit Information:
The Sprigg Station/Matewan Circuit serves approximately 1300 customers in the Matewan areas of Mingo County. The circuit is approximately 36 miles long and

traverses through rough and NTA terrain with several river crossings going back and forth to Kentucky Power side of the river. This makes it more difficult for line personnel to find the fault as there is only 1 bridge for vehicles to cross the river.

Outage Analysis:
This circuit experienced 77 outages over the 12 months ended December 31, 2022. From a CMI perspective, 49% were due to equipment failures, 26% due to vegetation-related causes (23% due to trees outside the Row, 3% due to vines), 19% due to weather-related causes, 3% due to non-AEP vehicle accidents, and 3% due to various other causes.

Vegetation management completed 2022.

Planned Improvements:
Some older electronic reclosers will be replaced with newer ones, and a future DACR scheme is being proposed to tie with Ragland Varney. Also, a possible single phase DACR scheme to tie with Ragland Delbarton.

AMBLER RIDGE/HARMONY

Planned Improvements: Other

Circuit Information:
The Ambler Ridge Station/Harmony Circuit serves approximately 580 customers in the Ambler Ridge, Harmony, Jones Ridge, and Coxes Fork areas of Roane County. The circuit is approximately 99 miles long and traverses through sparsely populated areas and across inaccessible mountainous locations.

Outage Analysis:
This circuit experienced 108 outages over the 12 months ended December 31, 2022. From a CMI perspective, 82% were due to trees outside the ROW, 7% due to weather-related causes, 6% due to equipment failures, 3% due to unknown non-weather events, and 2% due to various other causes.

Vegetation management completed in early 2023.

Planned Improvements:
Work orders for maintenance repairs, that were identified earlier, will continue to be completed.

TOMS FORK/DISTRIBUTION

Planned Improvements: Vegetation Management

Circuit Information:
The Toms Fork Station/Area Distribution Circuit serves approximately 328 customers in the Leewood and Decota areas of Kanawha County. The circuit is approximately 19 miles long and travels through sparsely populated areas.

Outage Analysis:
This circuit experienced 21 outages over the 12 months ended December 31, 2022. From a CMI perspective, 82% were due to tree-related causes (18% due to trees inside the ROW, 64% due to trees outside the ROW), 7% due to corrosion, 7% due to equipment failure, 3% due to vandalism, and 1% due to various other causes.

Planned Improvements:
Vegetation management scheduled for 2023.

Planned Improvements to the Top Five Percent of WPCs: WPCo West Virginia

LOUDENVILLE/CAMERON RIDGE

Planned Improvements: Vegetation Management, Sectionalizing

Circuit Information:
The Loudenville Station/Cameron Ridge Circuit serves approximately 1548 customers in the Southern areas of Marshall County. The circuit is approximately 170 miles long and traverses through very hilly and wooded terrain.

Outage Analysis:
This circuit experienced 228 outages over the 12 months ended December 31, 2022. From a CMI perspective, 74% due to tree-related causes (6% due to trees inside the ROW, 68% due to trees outside the ROW), 12% due to weather-related causes, 8% due to equipment failures, 5% due to unknown non-weather-related causes, and 1% due to various other causes.

Planned Improvements:
There is a sectionalizing project to add a recloser to protect an additional 200 customers scheduled for completion in 2023. In addition, there is a project to relocate a section of line to benefit 196 customers.

Vegetation Management started in 2022 and scheduled to be completed in 2023.

BIG GRAVE CREEK/LOUDENVILLE

Planned Improvements: Vegetation Management, Other

Circuit Information:
The Big Grave Creek Station/Loudenville Circuit serves approximately 2021 customers in the Eastern areas of Marshall County near Moundsville. The circuit is approximately 195 miles long and traverses through hilly and very wooded terrain.

Outage Analysis:
This circuit experienced 186 outages over the 12 months ended December 31, 2022. From a CMI perspective, 53% were due to tree-related causes (3% due to trees inside the ROW, 50% due to trees outside the ROW), 23% due to weather-related causes, 17% due to equipment failures, 6% dude to unknown non-weather-related causes, 1% due to various other causes.

Planned Improvements:
There is a project planned to relocate a section of line to benefit 600 customers scheduled for 2023.

Vegetation management scheduled to begin in 2023.

COUNTYLINE/BIG WHEELING CREEK

Planned Improvements: Vegetation Management, Targeted Reliability

Circuit Information:
The Countyline Station/Big Wheeling Creek Circuit serves approximately 1661 customers in the Southeastern area of Ohio County into the Northeastern area of Marshall County. The circuit is approximately 62 miles long and traverses through very hilly and wooded terrain.

Outage Analysis:
This circuit experienced 104 outages over the 12 months ended December 31, 2022. From a CMI perspective, 53% were due to weather-related causes, 37% due to trees outside the ROW, 9% due to equipment failures, and 1% due to various other causes.

Planned Improvements:
There is a planned DACR Scheme that will benefit 210 customers.

Vegetation management scheduled for 2023.

9. *Additional Information.*

Emerald Ash Borer (EAB) Update –

In their 2014 annual reliability report, the Companies informed the Commission about the EAB and the problems this invasive insect species has been causing. The EAB is a wood-boring beetle that aggressively infests and ultimately kills otherwise healthy ash trees. In 2009, West Virginia was placed under a federal EAB quarantine, restricting the movement of such items as ash lumber, logs, stumps, roots, branches, and chips out of the state without Federal certification. Movement of ash wood products between quarantined and non-quarantined counties is also restricted. As of the filing of this report, West Virginia remains under a federal EAB quarantine.

The Companies note that the EAB continues to be an ongoing issue and will continue to have negative impacts on the Companies. In response to the EAB, the Companies' vegetation management contractors had to implement an EAB infested ash tree protocol, which precludes climbers from ascending dead ash trees. To mitigate any electrical hazards and therefore allow these trees to be removed safely, service will need to be interrupted and conductors will need to be temporarily removed from the poles in affected areas. It may not be possible to safely address infested trees without extended outages.

Additional Factors –

In addition to the EAB infestation, there are a number of factors that contributed to the increase in the number of trees falling into our facilities from outside the rights-of-way. The slope of the terrain affects trees outside of the rights-of-way as a great number of the Companies' rights-of-way are on hillsides. Clay soils also affect the rooting depth of trees, increasing the likelihood of wind throw. Due to the lack of air space in these soils, tree roots do not penetrate deeply. Additionally, the competition for growing space in the dense stands of vegetation prevalent along many of the Companies' rights-of-way results in small root plates, further contributing to the likelihood of wind throw.

Excessive amounts of rainfall causes saturated soils and slips, slumps, and landslides. Trees that have not been previously exposed to wind forces may bend, break, or uproot when exposed by the Companies reclearing, tree removal, or widening efforts. After a few growing seasons the edges of the rights-of-way typically "harden" as the trees adjust to the new growing conditions. Finally, the Companies might typically expect a natural stand mortality rate of approximately 1%, or 44,000 new danger trees outside the rights-of-way in the West Virginia service territory every year.

Failure to Meet Minimum Targets –

a. Introduction

As defined in Electric Rule 5.8.3, when a Service Area fails to meet one or more of the minimum Targets, the utility shall include in its annual reliability report to the Commission a description of the problem, patterns and trends; a history of the operation and maintenance activities within the Service Area; and the corrective action(s) the utility is taking to improve reliability to the Service Area in question.

Figure 1 shows APCo's and WPCo's 2021 System Reliability as compared to the Companies' Reliability Index Targets. As can be seen from this Figure, APCo met SAIFI and failed to meet the minimum Targets for CAIDI and SAIDI. WPCo met CAIDI and failed to meet the minimum Targets for SAIFI and SAIDI.

Figure 1

2022 System Reliability and Reliability Index Targets						
Company	SAIFI Performance	SAIFI Target*	CAIDI Performance	CAIDI Target*	SAIDI Performance	SAIDI Target*
APCo	2.381	2.39	287.86	219.83	685.32	526.27
WPCo	2.117	1.76	401.51	212.34	849.95	373.19

*Established in Case No. 12-0014-E-PC

b. Description of the problem, patterns and trends

Figures 2 and 3 summarize the outage trends for the prior five-year period (2018-2022) for APCo and WPCo. Specifically, these figures show the causes of customer outages as they contribute to SAIDI. As can be seen from this information, vegetation-caused outages are the largest contributors to customer minutes of interruption for both APCo and WPCo. For APCo, vegetation-caused outages, both inside the ROW and outside the ROW, account for 53.5% (4.9% Veg Inside ROW and 48.6% Veg Outside ROW) of SAIDI over the 5-year period. For WPCo, vegetation-caused outages, both inside the ROW and outside the ROW, account for 54.2% (8.5% Veg Inside ROW and 45.7% Veg Outside ROW) of SAIDI over the same 5-year period.

Figure 2

APCO - Outage Causes as a portion of SAIDI (2018-2022)											
	Outages Causes										
Year	Veg Outside ROW	Veg Inside ROW	Equipment	Remaining	Vehicle Accident	Unknowns	G&T	Station - Distribution	Lightning	Animal	Grand Total
2018	288.83	55.20	97.91	39.91	43.60	33.00	51.51	9.80	5.79	5.45	631.00
2019	258.98	40.19	79.78	36.00	39.87	24.69	50.93	30.87	11.43	6.33	579.07
2020	303.56	21.67	82.23	29.90	34.46	36.18	33.22	5.92	4.60	8.92	560.67
2021	225.51	12.19	81.95	90.56	28.37	30.63	24.91	10.07	5.58	7.49	517.28
2022	368.02	15.97	96.01	43.86	44.66	42.26	47.98	16.93	5.77	3.84	685.32
5 YR Average	288.98	29.04	87.58	48.05	38.19	33.35	41.71	14.72	6.63	6.41	594.67
% of 5 YR Average	48.6%	4.9%	14.7%	8.1%	6.4%	5.6%	7.0%	2.5%	1.1%	1.1%	100.0%
	53.5%										

Figure 3

WPCO - Outage Causes as a portion of SAIDI (2018-2022)											
	Outage Causes										
Year	Veg Outside ROW	Veg Inside ROW	Equipment	Remaining	Vehicle Accident	Unknowns	G&T	Station - Distribution	Lightning	Animal	Grand Total
2018	246.40	77.06	86.97	38.21	68.17	31.21	22.61	29.66	21.72	5.12	627.13
2019	165.58	64.40	75.35	66.65	40.52	32.92	20.44	0.00	8.10	1.39	475.35
2020	242.58	37.09	109.15	49.22	25.66	32.64	0.79	25.32	6.75	5.42	534.61
2021	431.27	56.96	72.67	72.72	64.03	29.52	21.88	58.65	21.80	1.40	830.91
2022	430.09	48.00	91.03	127.01	13.82	100.36	0.23	18.85	18.15	2.40	849.95
5 YR Average	303.18	56.70	87.03	70.76	42.44	45.33	13.19	26.50	15.30	3.15	663.59
% of 5 YR Average	45.7%	8.5%	13.1%	10.7%	6.4%	6.8%	2.0%	4.0%	2.3%	0.5%	100.0%
	54.2%										

c. History of the operation and maintenance activities within the Service Area

Exhibit 1 and 2 summarizes APCo's and WPCo's operation and maintenance ("O&M") activities for the prior 5-year period. Specifically, Exhibit 1 shows the reliability activities as well as the associated O&M expenses for these activities. These activities are described in more detail in Section 8 of this report. In the context of Section 8, although these reliability activities are used to address Worst Performing Circuits, these same activities also apply to all other circuits. The Reliability Programs, as shown in Exhibit 1, also have an associated capital component. As a result, and to give the full view of APCo's and WPCo's reliability activities, Exhibit 1 shows the O&M, capital, and total amounts expended for the Reliability Programs. Additionally, since the major contributors to outage causes for the past several years have been vegetation-related, APCo and WPCo are also showing vegetation management expenditures for both Distribution and Transmission.

d. Corrective actions(s) the utility is taking to improve reliability to the Service Area in question

APCo and WPCo are implementing their VMPs to improve reliability in their West Virginia service areas. As noted, implementation of the VMP began part-way through 2014, after the Commission issued its final Order in Case No. 13-0557-E-P on March 18, 2014.

The Companies anticipate that continuation of the VMP should help the Companies reach the level of performance where they will be able to better achieve the applicable Reliability Index Targets. The connection between the VMP and achievement of reliability targets was explained by Company witness Wright in his testimony in Case No. 12-0014-E-PC and Case No. 13-0557-E-P.

Appalachian Power Company and Wheeling Power Company
2023 Annual Reliability Report for Calendar Year 2022

Exhibit 1

APCo Reliability Program (Including Forestry) Total Spend (O&M and Capital) 2018-2022									
	2018			2019			2020		
Reliability Program	O&M	Capital		O&M	Capital		O&M	Capital	
140 Appalachian Power Co - Dist	$38,080,145	$32,924,290	$71,004,435	$47,637,977	$42,114,145	$89,752,122	$39,179,537	$14,431,071	$53,610,608
AICCB Asset Imp Circuit Insp/Rep	$496,512	$4,066,921	$4,563,433	$662,831	$5,087,978	$5,750,809	$726,640	$3,683,171	$4,409,811
AINCB Asset Imp Network Maintenance	$205,137	$979,239	$1,184,376	$312,486	$872,958	$1,185,444	$179,546	$229,915	$409,460
AIPCB Asset Imp Pole Replacement	$330,830	$2,917,017	$3,247,847	$284,093	$3,102,144	$3,386,237	$142,128	$1,986,381	$2,128,508
AIRCB Asset Imp Pole Reinforcement	$1,688	$46,883	$48,571	$353	$1,068	$1,421	$2,112	$31,160	$33,271
AISCB Asset Imp Sectionalizing Prog.	$11,467	$1,298,121	$1,309,589	$71,521	$2,495,132	$2,566,653	$102,900	$1,244,615	$1,347,515
AIUCB Asset Imp URD	$69,777	$121,211	$190,989	$50,284	$74,237	$124,521	$7,433	$60,831	$68,264
ARCCB Asset Imp Line Reclosers	$16,974	$1,812,657	$1,829,630	$14,747	$2,172,521	$2,187,268	$5,747	$156,453	$162,201
CRPCB Asset Imp Circuit Arrest Prgm	$508	$215,629	$216,137	$283	$175,586	$175,869	$54	$58,062	$58,116
POLNC Pole Inspection	$278,295		$278,296	$485,241		$485,241	$16,822		$16,822
RWMPR R/W Maintenance	$36,177,278		$36,177,278	$44,791,225		$44,791,225	$37,426,118		$37,426,118
RWWCS Forestry ROW Widening Cap Std	$382,479	$19,252,406	$19,634,885	$397,503	$22,082,160	$22,479,663	$372,923	$215,744	$588,667
SWOCB Asset Imp Small Wire OH	$21,704	$385,719	$407,422	$216,202	$1,361,057	$1,577,259	$32,403	$995,231	$1,027,633
SWUCB Asset Imp Small Wire UG	$7,505	$567,774	$575,279	$7,342	$479,998	$487,340	$1,020	$213,502	$214,522
TCRCB Targeted Circuit Reliability	$79,988	$1,260,713	$1,340,702	$343,866	$4,209,306	$4,553,173	$163,692	$5,556,006	$5,719,698
150 Appalachian Power Co - Trans	$6,093,523	$728,815	$6,822,338	$7,679,497	$7,446,944	$15,126,441	$4,939,534	$7,171,952	$12,111,486
RWWCB Forestry ROW Widen Cap Blanket									
RWWCS Forestry ROW Widening Cap Std	$6,093,523	$728,815	$6,822,338	$7,679,497	$7,446,944	$15,126,441	$4,939,534	$7,171,952	$12,111,486
Grand Total	$44,173,668	$33,653,106	$77,826,773	$55,317,474	$49,561,089	$104,878,563	$44,119,071	$21,603,022	$65,722,093

APCo Reliability Program (Including Forestry) Total Spend (O&M and Capital) 2018-2022									
	2021			2022			Grand Total		
Reliability Program	O&M	Capital		O&M	Capital		O&M	Capital	
140 Appalachian Power Co - Dist	$34,767,188	$58,546,943	$93,314,131	$62,420,602	$43,122,300	$105,542,902	$222,085,448	$191,138,750	$413,224,198
AICCB Asset Imp Circuit Insp/Rep	$178,390	$1,975,970	$2,154,360	$648,951	$4,794,557	$5,643,509	$2,913,324	$19,608,598	$22,521,922
AINCB Asset Imp Network Maintenance	$178,863	$232,490	$411,352	$255,588	$159,611	$415,199	$1,131,619	$2,474,213	$3,605,832
AIPCB Asset Imp Pole Replacement	$68,917	$721,644	$790,561	$191,998	$3,177,784	$3,369,782	$1,017,966	$11,904,970	$12,922,936
AIRCB Asset Imp Pole Reinforcement				$208	$2,163	$2,371	$4,361	$81,273	$85,634
AISCB Asset Imp Sectionalizing Prog.	$1,649	$323,233	$324,882	$12,193	$448,714	$460,907	$199,729	$5,809,816	$6,009,545
AIUCB Asset Imp URD	$5,303	$52,259	$57,562	$65,364	$38,511	$103,895	$196,182	$347,049	$543,231
ARCCB Asset Imp Line Reclosers	$2,301	$2,177,465	$2,179,765	$36,337	$25,817	$62,155	$76,107	$6,344,913	$6,421,020
CRPCB Asset Imp Circuit Arrest Prgm	$5,060	$425,615	$430,675	$4,393	$968,174	$973,567	$10,298	$1,844,067	$1,854,364
POLNC Pole Inspection	$99		$99	$1,410,750		$1,410,750	$2,191,209	$0	$2,191,209
RWMPR R/W Maintenance	$33,768,661		$33,768,661	$58,917,638		$58,917,638	$211,101,120	$0	$211,101,120
RWWCS Forestry ROW Widening Cap Std	$317,302	$44,229,166	$44,546,468	$309,137	$25,025,678	$25,334,816	$1,779,345	$110,605,153	$112,584,498
SWOCB Asset Imp Small Wire OH	$14,432	$550,516	$564,949	$2,784	$49,770	$52,554	$287,525	$3,342,293	$3,629,818
SWUCB Asset Imp Small Wire UG	$5,664	$150,936	$156,601	$155	$77,526	$77,682	$21,686	$1,489,737	$1,511,424
TCRCB Targeted Circuit Reliability	$200,346	$7,707,648	$7,907,994	$365,085	$8,352,995	$8,718,080	$1,152,977	$27,086,669	$28,239,647
150 Appalachian Power Co - Trans	$7,931,523	$25,989,590	$33,921,113	$7,943,460	$36,509,736	$44,453,197	$34,587,537	$77,847,037	$112,434,575
RWWCB Forestry ROW Widen Cap Blanket	$5,604,588	$24,203,754	$29,808,342	$7,843,554	$36,506,807	$44,350,361	$13,448,142	$60,710,561	$74,158,703
RWWCS Forestry ROW Widening Cap Std	$2,326,935	$1,785,837	$4,112,771	$99,906	$2,929	$102,835	$21,139,395	$17,136,477	$38,275,872
Grand Total	$42,698,711	$84,536,534	$127,235,244	$70,364,063	$79,632,037	$149,996,099	$256,672,985	$268,985,788	$525,658,773

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Exhibit 2

WPCo Reliability Program (Including Forestry) Total Spend (O&M and Capital) 2018-2022									
	2018			2019			2020		
Reliability Program	O&M	Capital		O&M	Capital		O&M	Capital	
210 Wheeling Power Co - Dist	$2,434,645	$3,074,343	$5,508,988	$3,267,904	$5,443,164	$8,711,068	$2,660,746	$1,729,490	$4,390,236
AICCB Asset Imp Circuit Insp/Rep	$23,103	$360,922	$384,025	$147,159	$1,558,293	$1,705,452	$39,152	$582,346	$621,508
AINCB Asset Imp Network Maintenance	$198,537	$652,564	$851,101	$220,650	$434,323	$655,173	$167,690	$52,968	$220,659
AIPCB Asset Imp Pole Replacement	$77,762	$1,137,808	$1,215,570	$37,639	$1,087,112	$1,124,751	$935	$7,246	$8,181
AIRCB Asset Imp Pole Reinforcement		$1,225	$1,225	$99	$13,386	$13,485			
AISCB Asset Imp Sectionalizing Prog.		$50,520	$50,520	$394	$264,412	$264,805	-$2,576	$185,286	$182,712
AIUCB Asset Imp URD				$22,470	$3,588	$26,058	$19,503	$34,199	$53,701
ARCCB Asset Imp Line Reclosers	$42	$70,922	$70,964	$1,651	$332,042	$333,893	$248	$82,312	$82,560
CRPCB Asset Imp Cutout Arrest Prgm		$845	$845		$7,934	$7,934		$139	$139
POLNC Pole Inspection				$27,070		$27,070			
RWMPR R/W Maintenance	$2,086,036		$2,086,036	$2,649,800		$2,649,800	$2,233,128		$2,233,128
RWWCS Forestry ROW Widening Cap Std	$40,799	$707,644	$748,443	$152,220	$1,499,826	$1,652,045	$76,639	$2,731	$79,370
RWWFB Forestry ROW Widening BaseType	$8		$8						
SWOCB Asset Imp Small Wire OH	$5,406	$72,158	$77,564	$5,139	$89,511	$94,650	$29,362	$247,790	$277,153
SWUCB Asset Imp Small Wire UG		$959	$959		$35,265	$35,265		-$772	-$772
TCRCB Targeted Circuit Reliability	$2,950	$18,776	$21,726	$3,214	$117,472	$120,686	$96,454	$535,243	$631,697
200 Wheeling Power Co - Trans	$396,846	$15,553	$412,400	$414,227	$175,667	$589,894	$440,327	$592,076	$1,032,403
RWWCS Forestry ROW Widening Cap Std	$396,846	$15,553	$412,400	$414,227	$175,667	$589,894	$440,327	$592,076	$1,032,403
Grand Total	$2,831,491	$3,089,897	$5,921,387	$3,682,131	$5,618,831	$9,300,962	$3,101,073	$2,321,566	$5,422,639

WPCo Reliability Program (Including Forestry) Total Spend (O&M and Capital) 2018-2022									
	2021			2022			Grand Total		
Reliability Program	O&M	Capital		O&M	Capital		O&M	Capital	
210 Wheeling Power Co - Dist	$2,642,184	$3,488,158	$6,130,342	$4,282,548	$4,910,434	$9,192,983	$15,288,027	$18,645,589	$33,933,617
AICCB Asset Imp Circuit Insp/Rep	$8,621	$63,991	$72,612	$20,229	$439,079	$509,308	$288,273	$3,004,631	$3,292,904
AINCB Asset Imp Network Maintenance	$167,860	$196,890	$364,750	$192,643	$169,442	$362,085	$947,580	$1,506,189	$2,453,768
AIPCB Asset Imp Pole Replacement	$656	$20,028	$20,684	$11,521	$51,373	$62,894	$128,513	$2,303,567	$2,432,080
AIRCB Asset Imp Pole Reinforcement							$99	$14,611	$14,710
AISCB Asset Imp Sectionalizing Prog.		$920	$920		$6,235	$6,235	-$2,182	$507,375	$505,193
AIUCB Asset Imp URD	$29,463	$2,565	$32,027	$1,354	$781	$2,134	$72,789	$41,132	$113,921
ARCCB Asset Imp Line Reclosers		-$1,010	-$1,010		$13	$13	$2,141	$484,279	$486,420
CRPCB Asset Imp Cutout Arrest Prgm		$648	$648		$136	$136	$0	$9,703	$9,703
POLNC Pole Inspection				$106,350		$106,350	$133,421	$0	$133,421
RWMPR R/W Maintenance	$2,336,044		$2,336,044	$3,794,756		$3,794,756	$13,099,765	$0	$13,099,765
RWWCS Forestry ROW Widening Cap Std	$70,940	$2,256,172	$2,327,112	$63,437	$3,021,275	$3,084,712	$404,235	$7,487,647	$7,891,883
RWWFB Forestry ROW Widening BaseType							$8	$0	$8
SWOCB Asset Imp Small Wire OH		$40	$40		-$3,350	-$3,350	$39,907	$406,150	$446,057
SWUCB Asset Imp Small Wire UG		$84	$84		$301	$301	$0	$35,837	$35,837
TCRCB Targeted Circuit Reliability	$28,600	$947,830	$976,430	$42,258	$1,225,150	$1,267,408	$173,477	$2,844,470	$3,017,947
200 Wheeling Power Co - Trans	$450,965	$3,849,098	$4,300,064	$473,423	$108,521	$581,944	$2,175,789	$4,740,916	$6,916,705
RWWCB Forestry ROW Widen Cap Blanket	$69,789	$1,205,514	$1,275,304	$473,423	$106,863	$580,286	$543,213	$1,312,377	$1,855,590
RWWCS Forestry ROW Widening Cap Std	$381,176	$2,643,584	$3,024,760		$1,658	$1,658	$1,632,576	$3,428,539	$5,061,115
Grand Total	$3,093,150	$7,337,256	$10,430,406	$4,755,972	$5,018,955	$9,774,927	$17,463,816	$23,386,505	$40,850,321

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2022 Performance of APCo-WV Circuits: Distribution Causes Excluding MEDs and Scheduled Outages with Year-Over-Year Change Indicator

2022 Performance of APCo-WV Circuits: Distribution Causes, Excluding MEDs, and Scheduled Outages						
Circuit ID	Station Name	Circuit Name	2022 SAIDI	2022 SAIFI	2022 CAIDI	2022 vs. 2021 (SAIDI)
2045401	PATRICK STREET	PATRICK PLAZA	323.159	1.32	244.57	218%
2045402	PATRICK STREET	FLORIDA STREET	142.894	1.00	142.71	-50%
2045403	PATRICK STREET	FORT HILL	596.209	3.59	166.18	14%
2072101	KANAWHA CITY STA	R J RECYCLING	0.000	0.00	#DIV/0!	-100%
2075101	SPORN STATION	NEWHAVEN	170.767	0.49	348.94	-86%
2075102	SPORN STATION	CENTRAL	210.554	1.00	210.55	79%
2075103	SPORN STATION	LETART	966.482	3.18	303.60	128%
2075104	SPORN STATION	PRECIPITATOR	0.000	0.00	#DIV/0!	#DIV/0!
2078201	GLEN LYN	GLEN LYNN	910.367	4.01	227.00	84%
2078202	GLEN LYN	PETERSTOWN	518.472	2.13	242.86	235%
2100101	STONE BRANCH STA	BIG CREEK	974.615	1.72	567.49	-32%
2100102	STONE BRANCH STA	CHAPMANVILLE	122.612	0.46	266.92	214%
2100103	STONE BRANCH STA	CRAWLEY CREEK	1030.846	4.49	229.79	-51%
2100104	STONE BRANCH STA	HARTS CREEK	1030.039	2.96	348.04	-23%
2100301	NORTH POINT STA	PECKS MILL	403.241	2.57	156.66	-33%
2100801	NUTTALL	DANESE	434.511	2.72	159.58	51%
2100802	NUTTALL	MT NEBO	696.973	3.35	207.94	52%
2100803	NUTTALL	HICO	725.061	2.25	322.36	79%
2101102	ELK CREEK STATION	CHRISTIAN	458.557	1.36	336.06	28%
2101301	CHAUNCEY STATION	CHAUNCEY	717.682	2.55	281.45	-13%
2101601	DEHUE STATION	DEHUE	480.589	1.94	247.67	1259%
2101603	DEHUE STATION	YOUNGSTOWN	1244.767	4.48	277.88	-16%
2102202	LOGAN STATION	ARACOMA	63.694	0.28	225.28	-28%
2102204	LOGAN STATION	HOSPITAL	366.164	2.06	177.52	682%
2102205	LOGAN STATION	ISLAND CREEEK	324.876	1.05	310.06	2532%
2102206	LOGAN STATION	MAINS TREET	4.539	0.02	246.25	9%
2103001	VAN STATION	VAN	2338.587	5.88	397.88	154%
2103101	BECCO STATION	ROBINETTE	951.307	1.28	741.95	628%
2103102	BECCO STATION	ACCOVILLE	279.633	1.88	148.51	-4%
2104601	HOPKINS STATION	MADISON	839.832	2.54	330.92	76%
2104603	HOPKINS STATION	DANVILLE	81.944	0.71	114.70	-51%
2104604	HOPKINS STATION	WOODVILLE	1003.052	3.81	263.23	2%
2104605	HOPKINS STATION	TURTLE CREEK	1265.440	2.85	444.63	441%

2104901	RICH CREEK STATION	RICH CREEK	317.627	0.67	476.44	-36%
2105001	PINE GAP STATION	WHITMAN	345.950	1.41	244.56	-72%
2105402	BALD KNOB STA.	BALD KNOB	87.681	0.44	198.39	-38%
2106301	HAMPTON STATION	HAMPTON	0.000	0.00	#DIV/0!	#DIV/0!
2106401	GILBERT STATION	GILBERT	1205.209	2.91	414.09	127%
2106402	GILBERT STATION	JUSTICE	1273.602	2.57	494.93	270%
2106702	ROBINSON STATION	ROBINSON DIST.	621.070	1.06	586.86	29%
2106801	SKIN FORK STATION	SKIN FORK	0.000	0.00	#DIV/0!	#DIV/0!
2107601	PAD FORK STATION	RED ASH	1593.429	4.27	372.99	743%
2108501	PINE CREEK	WOOD PARK	446.828	1.66	269.96	-44%
2108601	TONEY FORK	CIRCUIT #1	123.284	0.47	259.94	-84%
2108901	HEWETT STATION	LAKE	856.813	3.50	245.12	-31%
2108902	HEWETT STATION	SPRUCE FORK	1361.348	4.13	329.23	127%
2109401	LATROBE STATION	CRANECO	1878.028	2.65	708.46	143%
2116601	HUFF CREEK	MALLORY	307.530	1.22	251.77	263%
2116602	HUFF CREEK	POWELLTON	33.671	0.14	242.43	-81%
2116701	SHARPLES STA	BLAIR	452.142	1.66	272.31	-5%
2117601	MUD FORK STATION	HOLDEN	337.006	1.48	228.26	91%
2117602	MUD FORK STATION	MUD FORK	172.508	0.77	225.33	43%
2117603	MUD FORK STATION	FOUNTAIN PLACE	37.189	0.10	371.89	44%
2150103	SPRIGG	SPRIGG	2440.482	3.42	712.66	20%
2150104	SPRIGG STA.	RAWLSALES	268.000	1.00	268.00	#DIV/0!
2150105	SPRIGG	MATEWAN	1916.093	5.32	360.01	348%
2150501	BORDERLAND STA	NOLAN	725.810	1.26	575.17	-67%
2150502	BORDERLAND STA	CHATTAROY	1308.359	3.39	385.49	159%
2150901	PANTHER STATION	PANTHER	1570.811	4.35	361.45	139%
2152801	BENS CREEK STA	BENSCREEK	1443.990	3.40	425.06	4%
2153501	MIDDLE BURNING CRK	KERMIT	615.556	1.17	527.62	-61%
2153502	MIDDLE BURNING CRK	NAUGATUCK	1978.298	4.20	471.35	33%
2153701	GRAPEVINE STA	GRAPEVINE	314.625	1.50	209.75	#DIV/0!
2154201	CINDERELLA	EAST WILLIAMSON	125.640	1.24	101.30	146%
2154202	CINDERELLA STATION	VINSON ST	185.591	1.32	140.76	11%
2154301	HARDY	AREA DIST.	1331.202	1.18	1132.51	999%
2155101	BRIAR MOUNTAIN	BRIARMOUN	5242.875	3.00	1747.63	515%
2157801	RAGLAND	DELBARTON	1586.017	4.05	391.93	62%
2157802	RAGLAND	VARNEY	1226.043	3.42	358.79	18%
2158901	DINGESS STATION	DINGESS	1497.589	4.18	358.57	-6%
2159201	PIGEON CREEK STA	HORSEPEN	3710.282	6.34	585.03	407%
2159202	PIGEON CREEK STA	MINGO LOGAN	381.000	1.00	381.00	-60%
2159203	PIGEON CREEK STA	CONSOLIDATED	716.000	1.00	716.00	#DIV/0!

2159204	PIGEON CREEK STA	TAYLORVILLE	735.684	2.94	250.56	622%
2159205	PIGEON CREEK STA	MATECREEK	1468.732	4.09	359.18	-46%
2200101	KENOVA STATION	BEECH STREET	109.663	1.36	80.45	-68%
2200164	KENOVA STATION	PINE STREET	28.418	0.08	336.60	4219%
2200168	KENOVA STATION	SPRNGBROOK	44.825	0.12	383.25	203%
2200170	KENOVA STATION	TRI-ST AIRPORT	173.518	0.70	248.39	-70%
2200171	KENOVA STATION	CATTLESBURG	0.000	0.00	#DIV/0!	#DIV/0!
2200312	JOHNSON LANE STA.	SOUTH	249.795	1.37	182.25	93%
2200314	JOHNSON LANE STA.	VIRGINIA AV ARM	62.807	0.39	161.63	469%
2200611	EAST HUNTINGTON	CAM HENDERSON	17.813	0.19	95.00	-99%
2200612	EAST HUNTINGTON	5th AVENUE	200.450	1.05	190.96	-22%
2200613	EAST HUNTINGTON	HIGHLAWN	28.045	0.13	211.36	-93%
2200614	EAST HUNTINGTON	18th STREET	108.973	1.18	92.38	1122%
2200904	MILTON STATION	MALCOM SPRINGS	369.093	1.49	248.15	13%
2200905	MILTON STATION	JAMES RIVER TPK	557.530	2.34	238.08	-26%
2200950	MILTON STATION	BARKER RIDGE	440.381	1.59	277.10	-67%
2200951	MILTON STATION	JOHNS CREEK RD	923.575	2.03	454.50	-26%
2201040	WAYNE STATION	WAYNE	92.039	1.35	68.34	-45%
2201041	WAYNE STATION	TOMS CREEK	614.646	1.14	539.29	171%
2201042	WAYNE STATION	EAST LYNN	610.626	2.40	254.95	-74%
2201043	WAYNE STATION	ECHO	1290.623	3.84	336.29	-34%
2203401	CEREDO STATION	RIVER TERMINAL	0.000	0.00	#DIV/0!	#DIV/0!
2203402	CEREDO STATION	CEREDO	17.438	0.51	34.40	-14%
2203601	DARRAH STATION	ARLINGTON PARK	18.960	0.09	213.40	-66%
2203602	DARRAH STATION	28TH STREET	349.489	2.28	153.41	44%
2203603	DARRAH STATION	ROBY ROAD	642.830	2.08	308.76	74%
2203610	DARRAH STATION	GUYANDOTT	28.854	0.18	158.02	-71%
2203611	DARRAH STATION	ALTIZER	184.091	1.44	127.71	-33%
2203612	DARRAH STATION	31TH STREET	24.343	0.19	131.42	-55%
2203801	FULKS STATION	CIRCUIT#1	21.500	0.17	129.00	#DIV/0!
2203803	FULKS STATION	CIRCUIT#3	0.000	0.00	#DIV/0!	#DIV/0!
2203805	FULKS STATION	CIRCUIT#5	146.396	0.34	426.46	492%
2203810	FULKS STATION	CIRCUIT#10	0.339	0.00	95.00	#DIV/0!
2203811	FULKS STATION	CIRCUIT#11	0.000	0.00	#DIV/0!	#DIV/0!
2203812	FULKS STATION	CIRCUIT#12	6.889	0.02	310.00	#DIV/0!
2203813	FULKS STATION	CIRCUIT#13	340.000	1.00	340.00	#DIV/0!
2204101	SHERIDAN STA	WEST HAMLIN	484.408	0.96	506.82	-64%
2205301	WEST HUNTINGTON	MEMORIAL BLVD	631.143	3.34	188.95	24%
2205302	WEST HUNTINGTON	SPRING VALLEY	352.052	1.62	217.41	33%
2205303	WEST HUNTINGTON	WEST 15TH STREE	464.656	3.19	145.82	592%
2206401	SOUTH NEAL STATION	ARISTECH	0.000	0.00	#DIV/0!	#DIV/0!

2206403	SOUTH NEAL STATION	WHITES CREEK RD	695.677	2.65	262.51	0%
2207401	PARK HILLS STATION	MILLER ROAD	64.322	0.50	128.43	-78%
2207402	PARK HILLS STATION	CRESTMONT DRIVE	597.035	1.98	301.89	6%
2207403	PARK HILLS STATION	WOODVILLE ROAD	963.650	2.98	323.89	65%
2210101	BULLITT STREET	WASHINGTON	16.957	0.06	273.92	-90%
2210102	BULLITT STREET	SOUTH HILLS	11.234	0.09	126.22	28%
2210103	BULLITT STREET	QUARRIER ST	0.267	0.00	160.00	-99%
2210104	BULLITT STREET	MARGARET ST	1641.138	1.37	1194.44	214%
2211701	HURRICANE STA	COW CREEK RD	55.166	0.16	341.53	81%
2211702	HURRICANE STA	HURRICANE CREEK	907.593	1.24	732.86	2%
2211703	HURRICANE STA	EAST RT 34	697.084	1.11	630.48	882%
2213301	CABELL STATION	EAST PEA RIDGE	328.262	1.97	166.40	340%
2213302	CABELL STATION	FARMDALE ROAD	167.504	0.59	285.54	-28%
2213303	CABELL STATION	DOSS HILL	325.397	1.36	239.81	-76%
2213304	CABELL STATION	PEYTON	30.444	0.11	279.44	732%
2213305	CABELL STATION	WEST PEARIDGE	317.920	0.80	399.32	191%
2215001	HASHRIDGE STA	BBVILMALL	160.946	0.37	440.82	31%
2215002	HASHRIDGE STA	LITTLE 7 MILE	238.585	1.32	181.10	1077%
2215003	HASHRIDGE STA	CYRUS CREEK RD	397.225	1.79	221.61	24%
2215701	CURRY STATION	LAKE WASHINGTON	564.565	0.98	574.56	-9%
2215702	CURRY STATION	MIDLANDTRAIL	474.724	2.71	175.35	57%
2215703	CURRY STATION	HARBOUR LANE	37.055	0.23	163.92	180%
2215704	CURRY STATION	CULLODEN	447.964	0.97	462.72	-23%
2215705	CURRY STATION	HAMLIN ROAD	787.157	2.03	387.76	-18%
2216101	LAVALETTE STA	LAVALETTE	210.441	0.40	525.59	-2%
2216102	LAVALETTE STA	WILSON CREEK RD	792.373	2.92	271.58	-61%
2217301	HUBRDSTWN	FORT GAY	1588.182	6.57	241.65	-12%
2217302	HUBRDSTWN	PRICHARD	256.587	0.81	318.28	-82%
2217401	BARNETT	8TH AVE	287.473	2.88	99.78	-24%
2217402	BARNETT	HOSPITAL	186.380	0.39	475.07	49%
2217403	BARNETT	NORWOOD	105.633	0.43	246.02	-65%
2217404	BARNETT	FAIRFIELD	616.150	3.00	205.11	196%
2217701	MIDKIFF STATION	FOUR MILE CREEK	3365.323	7.11	473.21	-15%
2217702	MIDKIFF STATION	RANGER	2835.850	6.51	435.86	-25%
2255001	COTTAGEVILLE STA	COTTAGEVILLE	312.909	1.58	198.38	27%
2255601	POINT PLEASANT STA	NORTH	172.743	0.99	175.06	-72%
2255602	POINT PLEASANT STA	MAIN	329.807	1.78	185.24	590%
2255603	POINT PLEASANT STA	INDUSTRIAL	1031.605	2.62	393.70	116%

2256301	LAKIN	MASON	837.710	4.50	186.10	1944%
2256302	LAKIN	HOSPITAL	2693.470	3.83	703.75	5231%
2256901	BEALE	GALLIPOLI	295.269	1.79	164.50	-22%
2256902	BEALE	AKZO	0.000	0.00	#DIV/0!	#DIV/0!
2257001	LEON STATION	ELMWOOD	726.775	1.17	619.14	59%
2257101	RAVENSWOOD STATION	RAVENSWOO	178.741	0.82	218.82	882%
2257102	RAVENSWOOD STATION	COTTAGEVILLE	331.352	1.29	256.70	-69%
2257103	RAVENSWOOD STATION	WASHINGTON AVE	189.964	1.24	152.97	501%
2257201	RIPLEY STATION	RT21 NORTH	300.293	1.75	172.03	49%
2257202	RIPLEY STATION	RIPLEY	35.678	0.50	71.72	-75%
2257203	RIPLEY STATION	KENNASOUT	894.772	4.08	219.42	275%
2257204	RIPLEY STATION	EVANS	843.227	2.66	317.19	311%
2257401	APPLEGROVE	APPLEGROVE	353.655	1.54	230.35	12%
2257402	APPLEGROVE	ASHTON	474.806	1.65	288.48	-69%
2261801	LOCK LANE STATION	POINT	329.427	2.32	142.00	4251%
2261802	LOCK LANE STATION	LAKIN	1.153	0.02	61.50	-83%
2266701	MILL RUN STATION	INDUSTRIAL	0.000	0.00	#DIV/0!	-100%
2300601	BROWNSVILLE STA.	AREA DISTRIBUTI	243.063	0.74	328.00	-12%
2300701	BELVA STATION	SWISS	1669.766	3.66	456.09	89%
2300702	BELVA STATION	VAUGHAN ROAD	11525.435	32.20	357.93	341%
2301101	LOUP CREEK STATION	AREA DISTRIBUTI	1192.234	4.18	285.25	4%
2301301	SISSON	SISSONVIL	659.921	1.54	427.49	125%
2301302	SISSON STATION	GOLDTOWN	1679.513	4.66	360.40	73%
2301401	POPLAR FORK STA	POPLAR FORK	113.399	1.18	96.04	-23%
2301402	POPLAR FORK STA	SCOTT LANE	380.129	1.10	346.43	175%
2301403	POPLAR FORK STA	TEAYSLANE	59.542	0.60	99.03	-78%
2302901	DALEWOOD STA	ROCKY FORK	379.929	1.29	294.24	95%
2302902	DALEWOOD STA	RIDGE CROSS	57.308	0.27	208.63	-67%
2302903	DALEWOOD	DOC BAILEY	926.856	2.99	310.43	203%
2303501	RUTH STATION	RUTHDALE	229.868	0.68	337.48	-58%
2303502	RUTH STATION	ALUM CREEK	1046.534	2.84	368.07	62%
2303503	RUTH STATION	BUSINESS PARK	1.612	0.02	79.00	#DIV/0!
2304201	SOUTH BUFFALO	TOYATO	0.000	0.00	#DIV/0!	#DIV/0!
2304202	SOUTH BUFFALO	BUFFALO	465.685	1.63	285.67	-54%
2304203	SOUTH BUFFALO	ELEANOR	287.637	1.47	196.30	27%
2305001	ALLOY STATION	DISTRIBUTION	296.741	1.19	250.10	132%
2305102	ALUM CREEK STATION	SUMERCO	882.213	2.41	366.52	8%
2305301	BANCROFT STATION	POCA	710.485	1.47	483.00	53%
2305302	BANCROFT STATION	RED HOUSE	1631.248	2.27	718.74	502%

2305303	BANCROFT STATION	WINFIELD	238.855	0.58	410.66	78%
2305305	BANCROFT STATION	FRAZIERS BOTTOM	745.454	4.14	179.89	-14%
2305802	MINK SHOALS STA	KNOLLWOOD	760.570	2.46	308.84	171%
2305803	MINK SHOALS STA	COONSKIN	1362.456	3.85	354.34	120%
2306401	CEDAR GROVE STA	DISTRIBUTION	243.598	1.19	205.10	-72%
2306501	CENTRAL AVE STA	EDGEWOOD	151.882	0.67	226.20	84%
2306502	CENTRAL AVE STA	CENTRAL AVENUE	4.666	0.04	128.68	-92%
2306503	CENTRAL AVE STA	GRANT STREET	90.089	0.29	307.76	134%
2308001	GALLAGHER STATION	AREA DISTRIBUTI	1192.489	2.91	410.34	55%
2308201	HARTLAND STATION	BICKMORE	1702.624	5.83	291.88	4%
2308202	HARTLAND STATION	CLAY	3480.428	9.71	358.43	31%
2308601	HOPKINS FORK STA	DISTRIBUTION	842.206	2.11	398.39	131%
2308701	HUGHESTON STATION	DISTRIBUTION	183.761	1.63	112.43	127%
2309001	KANAWHA CITY STA	NOYES AVENUE	16.986	0.17	100.84	-42%
2309002	KANAWHA CITY STA	SOUTH MACCORKLE	449.411	2.11	212.67	127%
2309003	KANAWHA CITY STA	DRY BRANCH	14.827	0.09	169.77	-88%
2309901	MAMMOTH STATION	MAMMOTH	435.205	1.36	319.01	-56%
2309902	MAMMOTH STATION	POND GAP	1453.040	3.07	473.40	-14%
2311101	NITRO STATION	NITRO	288.363	1.48	195.37	144%
2311102	NITRO STATION	CHEMICAL	458.313	2.02	226.62	-31%
2311103	NITRO STATION	ST ALBANS	139.063	1.27	109.26	144%
2312503	RONDA STATION	DISTRIBUTION	313.142	1.59	197.23	35%
2313201	SOUTH CHARLESTON	JEFFERSON ROAD	393.552	1.39	282.94	351%
2313202	SOUTH CHARLESTON	MONTROSE	994.746	2.38	417.34	74%
2313203	SOUTH CHARLESTON	BUSINESS	210.096	1.19	177.07	106%
2313501	TEAYS STATION	HURRICANE	42.108	1.17	36.05	-10%
2313503	TEAYS STATION	ROUTE 34	35.654	0.14	255.95	-45%
2313504	TEAYS STATION	MT VERNON	10.482	0.08	129.46	-85%
2314301	TURNER	WEST DUNBAR	0.000	0.00	#DIV/0!	-100%
2314302	TURNER	DUNBAR	178.017	0.37	475.26	788%
2314303	TURNER	SAINTALB3	254.322	1.79	142.19	590%
2314304	TURNER	SPRING HILL	1467.078	2.82	519.55	262%
2314305	TURNER	SAINTALB4	67.224	0.36	184.74	134%
2314701	CABIN CREEK STA	EAST BANK	1552.770	3.90	398.47	19211%
2314702	CABIN CREEK STA	CHELYAN	129.694	0.23	570.58	-48%
2314703	CABIN CREEK STA	QUINCY	80.736	0.16	520.30	-60%
2317201	WASHINGTON ST. 2	WATTS STREET	235.336	1.00	236.39	-48%
2317202	WASHINGTON ST. 2	VIRGINIA STREET	49.810	1.00	49.81	#DIV/0!
2317203	WASHINGTON ST. 2	WN-1	0.000	0.00	#DIV/0!	#DIV/0!
2317207	WASHINGTON ST. 2	TOWN CENTER A	292.667	0.44	658.50	#DIV/0!

2317208	WASHINGTON ST. 2	TOWN CENTER B	0.000	0.00	#DIV/0!	#DIV/0!
2317209	WASHINGTON ST. 2	DONNALY STREET	252.626	1.54	163.54	#DIV/0!
2317210	WASHINGTON ST. 2	WN-5	0.000	0.00	#DIV/0!	#DIV/0!
2317211	WASHINGTON ST. 2	WN-6	0.000	0.00	#DIV/0!	#DIV/0!
2317212	WASHINGTON ST. 2	WN-2	0.000	0.00	#DIV/0!	#DIV/0!
2317213	WASHINGTON ST. 2	WN-3	0.000	0.00	#DIV/0!	#DIV/0!
2317214	WASHINGTON ST. 2	WN-4	0.000	0.00	#DIV/0!	#DIV/0!
2317301	BRIDGE STATION	ROUTE 60 EAST	613.018	1.80	339.85	73%
2317302	BRIDGE STATION	MEMORIAL HOSP.	4.951	0.17	29.00	#DIV/0!
2317303	BRIDGE STATION	STAUNTON	148.867	0.38	387.05	125%
2317304	BRIDGE STATION	VENABLE AVE	291.406	2.13	136.91	27%
2317305	BRIDGE STATION	SOUTH PARK	852.133	1.68	507.89	185%
2319001	PEYTONA STATION	DRAWDY CREEK	817.850	3.95	207.20	24%
2319002	PEYTONA STATION	RACINE	564.381	1.53	368.15	40%
2320001	CAPITOL HILL STA	AIRPORT ROAD	279.169	1.01	275.59	46%
2320002	CAPITOL HILL STA	BIGLEY AVE	868.406	2.93	296.80	-19%
2320003	CAPITOL HILL STA	PIEDMONT ROAD	280.460	2.28	123.27	224%
2320101	CHEMICAL STATION	TYLER MOUNTAIN	377.657	2.78	135.66	-28%
2320102	CHEMICAL STATION	N. CHARLESTON	29.262	0.13	223.58	-74%
2320103	CHEMICAL STATION	WEST WASHINGTON	823.249	3.34	246.76	243%
2320501	BELLE STA	DIAMOND	219.185	0.72	304.91	143%
2320503	BELLE STA	RAND	638.058	3.64	175.33	33%
2326901	MARMET STATION	MARMET	17.458	0.09	197.33	-91%
2326902	MARMET STATION	LENS CREEK	1542.000	4.54	339.53	154%
2328801	CHESTERFIELD STA	LOUDEN HEIGHTS	377.942	1.42	265.52	151%
2328802	CHESTERFIELD STA	SOUTHSIDE EXPRE	84.957	0.97	87.64	-74%
2328803	CHESTERFIELD STA	CHAPPEL ROAD	211.922	0.81	261.04	264%
2328804	CHESTERFIELD STA	MEDICAL CENTER	288.403	0.73	394.35	377%
2329401	MONTGOMERY STA	FAYETTE PIKE	625.935	2.55	245.26	15%
2329402	MONTGOMERY STA	4TH AVENUE	275.648	0.75	367.65	-64%
2330701	PLANTROAD	PLANT ROAD	169.804	0.57	296.99	147%
2330702	PLANTROAD	MONSANTO	0.000	0.00	#DIV/0!	#DIV/0!
2331701	GUTHRIE STATION	GUTHRIE	1986.109	3.94	503.82	41%
2331703	GUTHRIE STATION	POCATALICO	1726.530	4.29	402.92	222%
2333501	LOUDENDALE STA	CONNELL ROAD	587.698	1.22	482.26	-49%
2333502	LOUDENDALE STA	DAVIS CREEK	1980.828	6.71	295.04	15%
2333601	CROSSLANE	CROSS LANES	158.246	0.61	260.02	150%
2333603	CROSSLANE	GOFF MTN.	93.978	0.46	206.17	-45%
2333604	CROSSLANE	LITTLE TYLER	395.853	1.25	316.18	99%
2334901	POWELLTON STATION	DISTRIBUTION	700.276	2.32	301.40	-48%

2335901	GREENBRIER STATION	ELK	1740.197	3.77	461.00	50%
2335902	GREENBRIER STATION	GREENBRIAR ST.	658.580	1.20	549.35	275%
2335903	GREENBRIER STATION	CAPITOL	0.000	0.00	#DIV/0!	#DIV/0!
2335904	GREENBRIER STATION	OAKRIDGE	449.502	1.28	352.47	149%
2339501	DUNBAR #1	ROUTE 25	55.354	0.26	209.91	-31%
2339502	DUNBAR #1	MYERS AVENUE	43.204	0.18	240.86	57%
2339503	DUNBAR #1	EAST MACCORKLE	195.460	1.72	113.75	1520%
2339504	DUNBAR #1	WEST MACCORKLE	332.229	1.73	192.45	94%
2339505	DUNBAR #1	ROXALANA	195.579	2.42	80.80	181%
2339901	TOMS FORK STA	DISTRIBUTION	1901.018	4.41	430.91	115%
2341902	BOONE STATION	AREA DISTRIBUTI	658.236	1.53	430.52	-63%
2342701	ST. ALBANS	KANAWHA TERRACE	383.678	1.19	323.29	43%
2342702	ST. ALBANS	RIVERBEND	221.785	0.80	277.38	44%
2342703	ST. ALBANS	TORNADO	605.224	2.52	240.23	69%
2342705	ST. ALBANS	HILLCREST	541.568	2.41	224.40	167%
2342706	ST. ALBANS	DRY RIDGE	983.546	2.32	424.84	9%
2342801	CARBONDALE STATION	MT.OLIVE	2130.401	6.49	328.27	19765%
2342802	CARBONDALE STATION	SMITHERS	344.577	1.09	315.78	3288%
2343001	RENSFORD STATION	COLUMBIA GAS	6174.500	4.50	1372.11	46%
2343002	RENSFORD STATION	CAMPBELLS CREEK	3821.783	4.83	792.06	540%
2344601	MIKES RUN STATION	AREA DISTR	1048.287	2.11	497.63	-61%
2345901	CLENDENIN STATION	AMMA	3212.875	8.12	395.79	163%
2345902	CLENDENIN STATION	ELK RIVER	2145.239	6.80	315.61	65%
2346701	ORTIN STATION	RACETRACK	252.426	1.30	193.83	685%
2346702	ORTIN STATION	PTHARMONY	159.270	1.07	148.75	70%
2346703	ORTIN STATION	ROCK BRANCH	191.553	1.17	164.30	-42%
2347101	SOUTH HILLS STA	SHERWOOD FOREST	400.489	1.87	214.22	33%
2347102	SOUTH HILLS STA	SMITH ROAD	517.559	1.69	306.09	421%
2347103	SOUTH HILLS STA	OAKWOOD ROAD	308.199	1.05	292.27	-62%
2347104	SOUTH HILLS STA	PRESIDENTIAL ES	115.411	0.43	267.02	21%
2347301	FLATWOOD STATION	BIG CHIMNEY	1352.366	5.86	230.76	130%
2347302	FLATWOOD STATION	ELKVIEW	663.786	2.78	239.08	26%
2347303	FLATWOOD STATION	QUICK	3585.324	9.19	390.33	253%
2347304	FLATWOOD STATION	INDIAN CREEK	310.586	1.95	159.19	1018%
2348501	GRASSYFRK	YAWKEY	1576.957	4.96	317.66	14%
2349401	TACKETTCR	COAL RIVER	625.208	2.45	255.20	-12%

2349402	TACKETTCR	COAL MNTN	763.716	2.73	279.77	12%
2349403	TACKETTCR	SCARY CREEK	727.131	2.14	340.35	527%
2354501	BECKLEY STATION	MCCREERY	5.911	0.05	108.55	-48%
2354504	BECKLEY STATION	SCOTT AVENUE	23.900	0.18	130.58	-14%
2354505	BECKLEY STATION	MABSCOTT	191.510	2.44	78.36	581%
2354506	BECKLEY STATION	PARK AVENUE	163.209	1.50	108.76	157%
2354507	BECKLEY STATION	SOUTH KANAWHA	57.062	1.16	49.11	379%
2354508	BECKLEY STATION	BEAVER	112.714	1.75	64.38	724%
2354509	BECKLEY STATION	RALEIGH	101.713	0.53	191.97	-14%
2356101	ELMO STATION	ELMO	70.115	0.33	209.83	6%
2356501	GLEN WHITE STA	GLENWHITE	126.883	0.44	291.11	286%
2357001	LAYLAND STATION	LAYLAND-r	218.201	0.62	351.45	213%
2357002	LAYLAND STATION	WSWPTV	1001.796	3.35	299.09	35%
2357601	MCCLUNG STATION	QUINWOOD	0.000	0.00	#DIV/0!	#DIV/0!
2358301	OAK HILL STATION	MAIN STREET	98.648	0.46	214.91	-64%
2358302	OAK HILL STATION	GATEWOOD	187.534	1.39	134.88	-30%
2358303	OAK HILL STATION	LOCHGELLY	63.893	0.73	87.47	-36%
2358701	PRINCE STATION	PRINCEDIS	118.921	0.51	235.20	65%
2358702	PRINCE STATION	GRANDVIEW	1560.302	10.92	142.83	1552%
2359401	SCARBRO STATION	GLEN JEAN	61.668	1.30	47.40	-79%
2359402	SCARBRO STATION	WHIPPLE	868.407	5.31	163.60	73%
2359403	SCARBRO STATION	OAKHILL12	1222.677	3.72	328.29	495%
2359601	SLAB FORK STATION	SLABFORK	161.791	0.93	173.93	#DIV/0!
2361301	MILBURN STATION	MILBURN	0.000	0.00	#DIV/0!	#DIV/0!
2362002	CRAB ORCHARD STA	ORCHARD WOODS	261.042	0.47	557.72	945%
2363301	GAULEY MOUNTAIN ST	GAULEYMOU	314.376	0.92	340.21	-32%
2364401	LEIVASY STATION	WESTMORELAND C	0.000	0.00	#DIV/0!	-100%
2364402	LEIVASY STATION	HOMINY CREEK	720.326	1.21	595.65	-14%
2365101	WHITESTICK STATION	CRANBERRY DISTR	42.133	0.18	239.84	-84%
2365102	WHITESTICK STATION	PINEY VIEW	66.861	0.34	198.70	108%
2365103	WHITESTICK STATION	RALEIGH MALL	82.957	1.16	71.72	-16%
2365201	MOUNT HOPE STATION	MOUNT HOPE	0.000	0.00	#DIV/0!	-100%
2365901	CHERRY CREEK STA	WHITE OAK	254.807	0.99	257.33	37%
2365902	CHERRY CREEK STA	FLAT TOP	693.130	2.24	309.93	90%
2365903	CHERRY CREEK STA	DANIELS	134.562	0.49	272.75	126%
2365904	CHERRY CREEK STA	COOL RIDGE	481.063	2.13	226.00	112%
2365905	CHERRY CREEK STA	SHADY SPRINGS	46.250	0.20	233.41	-27%
2366001	POPLAR GAP STATION	POPLAR GAP-MILA	974.707	3.22	302.61	85%

2366301	EDWIGHT STATION	EDWIGHT	21.435	0.13	160.76	-93%
2366801	DOROTHY STATION	DOROTHY	473.430	2.37	200.01	157%
2367001	AMEAGLE STATION	COLCORD-AMEAGLE	407.742	1.47	277.96	-47%
2370701	BRADLEY STATION	BRADLEY	113.285	0.73	154.84	10%
2370801	HINTON STATION	NEW RIVER	376.652	1.47	256.44	-20%
2371201	NORTH BECKLEY STA	HARPER ROAD	367.485	1.39	264.05	491%
2371202	NORTH BECKLEY STA	MAXWELL HILL	11.796	0.12	96.33	-72%
2371203	NORTH BECKLEY STA	EWART AVENUE	155.795	0.53	291.48	377%
2371204	NORTH BECKLEY STA	NORTH KANAWHA	253.310	2.42	104.64	-50%
2371205	NORTH BECKLEY STA	PIKEVIEW DRIVE	142.247	1.21	117.85	27%
2376501	STOTESBURY STATION	HOTCOAL	1388.079	4.42	313.73	86%
2376503	STOTESBURY STATION	BLACK DIAMOND	0.000	0.00	#DIV/0!	#DIV/0!
2377001	MCROSS STATION	RUPERT	369.583	1.24	298.04	-35%
2377002	MCROSS STATION	RAINELLE	313.721	1.48	211.29	57%
2377003	MCROSS STATION	ANJEAN	1528.961	3.11	491.11	533%
2377401	MEADOW BRIDGE STA	MEADOW BRIDGE	704.435	2.02	348.95	80%
2378001	FAYETTVILLE STA.	BECKWITH	394.992	1.26	313.61	-28%
2378002	FAYETTVILLE STA.	GARTEN	144.197	0.69	209.52	82%
2378003	FAYETTVILLE STA.	FAYETTEVILLE	410.394	1.71	240.50	321%
2378301	DAMERON STATION	DAMERON	1971.757	5.00	394.48	650%
2378601	CLAREMONT STATION	THURMOND	1167.288	2.87	407.38	-1%
2378901	BRACKENS CREEK STA	MOUNT NEBO	0.000	0.00	#DIV/0!	#DIV/0!
2380401	PEMBERTON STATION	PEMBERTON	535.160	2.24	239.44	507%
2383801	CLIFFTOP STATION	AIRPORT	46.944	0.15	316.88	-68%
2383802	CLIFFTOP STATION	CLIFFTOP	20.058	0.16	123.56	-94%
2383803	CLIFFTOP STATION	SCOTTRIDGE	166.235	0.93	177.80	60%
2383804	CLIFFTOP STATION	RITTER DR	255.872	1.36	188.02	-12%
2384701	SUN STATION	ARMORY	623.504	2.63	237.43	224%
2384702	SUN STATION	MT HOPE	215.797	0.68	316.12	206%
2415504	COALWOOD STATION	WAR	0.000	0.00	#DIV/0!	#DIV/0!
2419002	SWITCHBACK	JENKIN JONES	1733.809	3.95	439.14	40%
2419004	SWITCHBACK	NORTHFORK	1564.445	3.31	472.30	89%
2419006	SWITCHBACK	BRAMWELL	1526.048	5.31	287.24	549%
2419007	SWITCHBACK	CRUMPLER	147.247	0.56	261.42	223%
2423001	WELCH STATION	RODERFIELD	221.616	0.82	271.11	-66%
2423002	WELCH STATION	BROWNS CREEK	767.859	2.19	350.60	8033%
2423006	WELCH STATION	MAITLAND	27.062	0.14	193.94	29%
2423007	WELCH STATION	DAVEY	1597.876	3.36	474.92	1236%
2425301	GARY	GARY	454.844	1.71	266.48	-64%
2425302	GARY	WILCOE	188.222	1.17	161.22	300%

2425305	GARY	FILBERT IND	0.000	0.00	#DIV/0!	-100%
2427801	CARSWELL STATION	EASTERN	0.000	0.00	#DIV/0!	#DIV/0!
2427803	CARSWELL STATION	KEYSTONE	13.955	0.04	328.72	-82%
2428701	BAILEYSVILLE STA	BAILEYSVILLE	999.585	3.96	252.22	129%
2429001	MARIANNA STATION	PINEVILLE	0.000	0.00	#DIV/0!	-100%
2429002	MARIANNA STATION	BRENTON	0.000	0.00	#DIV/0!	-100%
2429301	OCEANA STATION	OCEANA12	268.933	0.26	1020.16	4240%
2429302	OCEANA STATION	LYNCO	301.692	1.11	272.20	454%
2431306	ITMANN STATION	PINEVILLE	3869.967	2.75	1409.77	1534%
2431307	ITMANN STATION	MULLENS	114.200	0.44	257.87	#DIV/0!
2439901	KILLARNEY STATION	KILLARNEY	700.007	1.67	419.43	17%
2440413	MULLEN	WENONAH	1544.952	6.05	255.34	120%
2440417	MULLEN	CORRINE34	284.989	1.38	205.80	-11%
2440601	BOWYER STATION	BOWYER DISTR	375.079	0.91	412.02	41%
2440804	URY STATION	HELEN	515.651	1.76	292.29	-17%
2446501	COALMOUNT	COALMOUNT	1252.193	2.93	427.30	-26%
2447201	KOPPERSTON STA	KOPPERS COAL CO	387.000	1.00	387.00	#DIV/0!
2447202	KOPPERSTON STA	KOPPERSTONE	76.947	1.06	72.74	-84%
2447901	MULLENS TOWN	MULLENS TOWN	486.000	1.00	486.00	76%
2448101	PINNACLE CREEK	PINNACLE MINING	0.000	0.00	#DIV/0!	#DIV/0!
2448301	BELCHER MTN.	MAITLAND	305.155	1.10	276.55	-40%
2448701	SOURWOOD STATION	ROCK RIDGE	395.257	0.92	430.39	-32%
2448703	SOURWOOD STATION	JOLO	207.768	0.49	428.19	-40%
2449701	JIM BRANCH	COALWOOD	89.878	0.29	305.28	-64%
2449901	MARSH FORK STA	ROCKVIEW	556.831	1.93	288.25	47%
2449902	MARSH FORK STA	MATHENEY	395.677	2.62	151.15	54%
2451001	BLUEFIELD AVE.	CIRCUIT #1	0.000	0.00	#DIV/0!	-100%
2451002	BLUEFIELD AVE.	Stadium Drive	14.933	0.10	147.67	#DIV/0!
2451004	BLUEFIELD AVE.	CIRCUIT #4	51.894	0.45	115.25	-79%
2451005	BLUEFIELD AVE.	CIRCUIT #5	259.317	2.26	114.92	-37%
2451006	BLUEFIELD AVE.	CIRCUIT #6	8.312	0.07	118.08	-98%
2451007	BLUEFIELD AVE.	CIRCUIT #7	58.001	0.22	265.59	-77%
2451008	BLUEFIELD AVE.	CIRCUIT #8	83.049	1.10	75.35	-75%
2454701	PRINCETON	THORN STREET	68.075	0.42	160.59	-53%
2454702	PRINCETON	EAST TOWN	46.925	0.16	291.37	54%
2454704	PRINCETON	ATHENS ROAD	898.534	2.28	394.54	2316%
2461801	SOUTH BLUEFIELD	COLLEGE AVE EAS	248.954	0.74	337.65	1258%
2461802	SOUTH BLUEFIELD	COLLEGE AVE WES	23.830	0.20	117.41	-5%
2461803	SOUTH BLUEFIELD	Cumberland Rd W	41.448	0.50	82.90	-90%
2461804	SOUTH BLUEFIELD	Cumberland Rd E	19.865	0.16	122.50	-81%
2468901	SOUTH PRINCETON	GLENWOOD	29.108	0.14	204.03	-33%

2468903	SOUTH PRINCETON	PRINCETON	267.771	0.85	315.14	80%
2468904	SOUTH PRINCETON	OAKVALE	219.605	1.02	214.68	295%
2470501	FARADAY	CONSOL COAL	0.000	0.00	#DIV/0!	#DIV/0!
2470701	BERWIND STATION	NEWHALL	495.205	1.33	372.60	-42%
2470702	BERWIND STATION	BERWIND	269.593	0.80	334.95	865%
2471101	MCDOWELL STATION	BISHOPCAM	0.571	0.03	20.00	-100%
2471102	MCDOWELL STATION	JACOBS FORK	0.000	0.00	#DIV/0!	#DIV/0!
2471201	HICKORY GAP STA	HICKORY GAP	16.000	0.11	144.00	-97%
2471301	AMONATE LIGHTS STA	AMONATA LIGHTS	0.000	0.00	#DIV/0!	#DIV/0!
2471801	MINNIXMOU STATION	MONTCALM	966.956	2.95	328.29	215%
2471802	MINNIXMOU STATION	JENKIN JONES	2752.480	3.16	871.04	14541%
2471803	MINNIXMOU STATION	WENONAH	737.228	2.97	248.26	353%
2472201	SPEEDWAY	ATHENS	553.992	1.75	316.54	21%
2472202	SPEEDWAY	PIPESTEM	297.828	1.18	251.73	145%
2472901	NEW HOPE	GREENTREE	716.174	1.11	647.88	22%
2472902	NEW HOPE	BLUEFIELD ROAD	231.298	0.57	409.15	15%
2472903	NEW HOPE	PRINCETON	72.376	0.25	287.46	-1%
2472904	NEW HOPE	BRUSH CREEK	133.020	0.95	140.45	-70%
2472905	NEW HOPE	BLACK OAK	386.274	0.89	434.02	28%
2473202	EAST RIVER MTN.	ADA DAM	424.329	1.28	331.62	26%
2475801	UPPER BRANCH STA	DISTRIBUTION	0.000	0.00	#DIV/0!	-100%
2476402	TRAIL FORK STA	INDIAN CKEEK	911.164	3.38	269.37	33%
2510101	QUINWOOD	QUINWOOD	359.991	1.25	289.04	895%
2627002	PETERS MOUNTAIN	LINDSIDE	649.566	3.40	191.29	4%
2719405	VINTON STATION	HORSEPEN	0.000	0.00	#DIV/0!	#DIV/0!
2732301	PENHOOK STATION	PENHOOK	0.000	0.00	#DIV/0!	#DIV/0!
2763401	SOUTHRIDGE	SOUTHRIDGE	0.000	0.00	#DIV/0!	#DIV/0!
2763402	SOUTHRIDGE	TRACE FORK	57.235	0.29	197.42	-26%
2763501	JARROLD	WHITESVILLE	1174.934	3.21	365.61	118%
2764601	MCGRAWS	RAVENCLIFF	817.460	3.73	219.02	147%
2764801	HALLS RIDGE	AMBROSE ROAD	1096.147	4.78	229.17	226%
2764802	HALLS RIDGE	PISGAH ROAD	686.269	2.42	284.13	299%
2765001	TRAP HILL	FAIRDALE	311.003	0.89	349.25	82%
2765002	TRAP HILL	SURVEYOR	446.857	0.82	542.82	-60%
2766001	POLEYARD	PROSPERITY	197.006	0.74	267.32	-40%
2766002	POLEYARD	SKELTON	16.283	0.04	441.44	-54%
2766701	CROOKED CREEK	CROOKED CREEK	201.207	0.62	324.34	1100%
2766702	CROOKED CREEK	HEDRICK ROAD	118.770	0.22	534.46	147%
2766703	CROOKED CREEK	ROCKY STEP	493.108	1.16	425.73	14%
2766901	PUTNAM VILLAGE	HIGHLANDS	430.280	1.68	255.79	-69%
2766902	PUTNAM VILLAGE	CRYSTAL SPRINGS	178.256	2.15	82.96	-55%

2766903	PUTNAM VILLAGE	LIBERTY SQUARE	365.365	1.03	353.08	885%
2768301	BALLS GAP	MUD RIVER ROAD	1326.285	3.77	352.08	-49%
2768302	BALLS GAP	BALLS GAP ROAD	1052.066	3.50	300.85	127%
2768303	BALLS GAP	TRACE CREEK	1305.160	3.13	417.25	33%
2770101	LAKEVIEW	CASINO	0.000	0.00	#DIV/0!	#DIV/0!
2770102	LAKEVIEW	LAKEVIEW	42.382	0.21	202.70	1106%
2770103	LAKEVIEW	VALLEYVIEW	75.378	0.95	79.65	334%
2770201	MERRITTS CREEK	KYLE LANE	237.372	1.70	139.41	40%
2770202	MERRITTS CREEK	GREENBOTTOM	1767.123	3.83	461.42	11%
2771101	GUYANDOTTE	PINEVILLE	365.906	2.27	161.07	302188%
2771102	GUYANDOTTE	BRENTON	194.363	0.88	220.44	#DIV/0!
2771401	POLYMER	INDUSTIAL PARK	234.673	2.05	114.26	899%
2771701	HARMON BRANCH	WILMORE	286.045	1.56	183.52	31%
2771702	HARMON BR	JOHNNY CAKE	2462.000	2.13	1158.71	42%
2771703	HARMON BRANCH	IAEGER	584.419	2.07	281.69	13%
2771901	SHOALS	NEWCOMB CREEK	523.674	0.99	527.31	-25%
2771902	SHOALS	WALKERS BRANCH	405.690	1.971	205.80	-61%
2772201	PAX BRANCH	Lively	213.515	0.96	221.93	-70%
2772501	YUKON	CARETTA	32.647	0.12	272.06	-82%
2772502	YUKON	WAR	81.427	0.30	271.57	-27%
2772503	YUKON	BRADSHAW	116.429	0.26	452.78	-37%
2774701	AMBLER RIDGE	COTTON TREE	584.899	1.45	403.47	-18%
2774702	AMBLER RIDGE	WALTON	1674.008	3.78	442.44	843%
2774703	AMBLER RIDGE	HARMONY	1915.548	3.54	541.43	-12%
2774901	MABSCOTT	MACARTHUR	92.807	0.85	109.13	77%
2774902	MABSCOTT	OLD MILL ROAD	434.026	1.65	263.64	#DIV/0!
2774903	MABSCOTT	WICKMAN ROAD	129.130	1.44	89.67	42%
2937905	TAZEWELL STATION	THOMPSON VALLEY	2423.810	6.40	378.44	98%
2939902	JEWELL RIDGE STA	WHITEWOOD	0.000	0.00	#DIV/0!	#DIV/0!
2952402	LONESOME PINE	BLUEFIELD	172.708	1.08	159.42	-95%
2952403	LONESOME PINE	DOUBLE GATE	0.000	0.00	#DIV/0!	-100%
2973202	HALES BRANCH	SLATE CREEK	0.000	0.00	#DIV/0!	#DIV/0!
2973203	HALES BRANCH STA	COMPTON MTN	0.000	0.00	#DIV/0!	#DIV/0!
3007906	BUSSEYVILLE	WALBRIDGE	1791.006	9.96	179.85	-23%
3200202	BARRENSHE	VULCAN	674.458	1.69	397.93	-53%
3200204	BARRENSHE	POUNDING	1237.526	3.77	328.09	182%
3201001	TOMWATKIN	DISTRIBUTION	0.000	0.00	#DIV/0!	#DIV/0!
3202201	LOVELY	LOVELY	2461.977	5.05	487.07	160%
3202203	LOVELY	MT.STERLING	2142.500	5.79	370.31	2063%
3417601	NEW CAMP	S. SIDE	97.250	1.75	55.57	-95%

3417602	NEW CAMP	APP REG HOSP	169.403	0.95	178.04	-33%

2022 Performance of WPCo-WV Circuits: Distribution Causes Excluding MEDs and Scheduled Outages with Year-Over-Year Change Indicator

2022 Performance of WPCo-WV Circuits: Distribution Causes, Excluding MEDs, and Scheduled Outages						
Circuit ID	Station Name	Circuit Name	2022 SAIDI	2022 SAIFI	2022 CAIDI	2022 vs. 2021 (SAIDI)
6100108	WARWOOD	SOUTH	207.529	1.29	161.20	-46%
6100109	WARWOOD	NORTH	39.244	0.12	326.47	-34%
6100208	TABLEROCK	TABROCKN.	857.817	2.96	290.12	129%
6100209	TABLEROCK	TABROCKS.	1216.838	3.84	317.19	-18%
6100310	FULTON	PIKE WALK	124.142	0.94	132.65	-30%
6100311	FULTON	PIKE ROAD	221.856	0.63	354.40	-9%
6100312	FULTON	MTDECHANT	82.941	0.29	284.60	-73%
6100418	GARDEN	NETWORK5	0.000	0.00	#DIV/0!	#DIV/0!
6100419	GARDEN	NETWORK1	0.000	0.00	#DIV/0!	-100%
6100420	GARDEN	NETWORK2	0.000	0.00	#DIV/0!	-100%
6100421	GARDEN	NETWORK3	0.000	0.00	#DIV/0!	#DIV/0!
6100422	GARDEN	NETWORK4	0.000	0.00	#DIV/0!	#DIV/0!
6100450	GARDEN	RIVER RD	140.905	0.45	310.18	0%
6100451	GARDEN	15TH ST	272.055	1.69	161.42	1028%
6100452	GARDEN	17TH ST	170.072	0.16	1066.82	501%
6100523	BRUES	CENTERWHE	131.136	1.07	122.79	941%
6100524	BRUES	29TH STR.	0.000	0.00	#DIV/0!	-100%
6100525	BRUES	MAINSTREE	0.000	0.00	#DIV/0!	-100%
6100526	BRUES	SER.BLDG.	47.672	0.44	108.85	-11%
6100527	BRUES	BENWOOD	556.970	2.60	214.43	40%
6100537	BRUES	20TH STR.	176.671	0.77	229.88	2700%
6100541	BRUES	MOZART	429.467	1.78	240.85	232%
6100629	COUNTYLINE	BIGWHECRE	2019.385	5.54	364.73	177%
6100630	COUNTYLINE	TRIADELPH	1226.765	1.60	768.03	-2%
6100633	COUNTYLINE	ELGRO12KV	575.827	1.91	301.14	109%
6100643	COUNTYLINE	CALVARY	310.832	0.55	562.08	832%
6100644	COUNTYLINE	ELM TERR.	390.790	1.02	383.54	-59%
6100734	BENWOOD	STRAUSS	0.000	0.00	#DIV/0!	#DIV/0!
6100805	MOUNDSVILLE	JEFFERSON	425.831	0.75	570.49	87%
6100806	MOUNDSVILLE	T.CONDUIT	36.527	0.16	227.28	477%
6100807	MOUNDSVILLE	CHEROKEEH	1249.455	2.51	498.78	789%

6100808	MOUNDSVILLE	DOWNTOWN	7.613	0.08	93.68	-90%
6100908	GEOWASHIN	MCKEEFREY	541.516	2.31	234.80	350%
6101009	CRESAPS	MOUCARBON	1981.520	3.48	569.00	116%
6101110	NATRIUM	FISHCREEK	1654.653	3.20	517.02	-50%
6101314	LOUDENVILLE	CAMERONRI	5596.137	7.56	740.63	-3%
6101415	GLENDAHEI	GLENDALE	383.720	1.80	212.78	634%
6101416	GLENDAHEI	MCMECHEN	183.381	1.23	148.73	-70%
6101539	SHORTCREEK	N.FORK	1097.438	2.93	374.88	93%
6101642	WEST LIBERTY	W.LIBERTY	683.461	1.82	375.40	-66%
6101718	LOCKWOOD	7STREET	101.333	0.33	304.56	60%
6101719	LOCKWOOD	LAFAYETTE	1344.748	2.92	460.81	391%
6102145	VALLEY GR	DALL.PIKE	123.500	1.00	123.50	-89%
6102146	VALLEY GR	BATTLERUN	963.840	2.22	433.73	-57%
6102147	VALLEY GR	POINT RUN	326.014	1.27	257.32	-34%
6102621	BIG GRAVE CREEK	LOUDENVILLE	2326.876	5.38	432.84	-3%
6104902	FORT HENRY	STATE LINE	1007.622	2.31	436.11	20%
6104903	FORT HENRY	FORT HENRY	1.903	0.04	46.00	#DIV/0!
6105201	BETHLEHEM	BETHLEHEM	376.023	1.20	313.01	118%
6105202	BETHLEHEM	MOUNT OLIVET	286.702	3.00	95.46	-49%
6105301	CONNER RUN	CONNER RUN	0.000	0.00	#DIV/0!	-100%
6450001	COLUMBIAN	COLUMBIAN	1910.097	5.16	370.16	104%
7510002	BRIDGEPORT	WHEEL.ISL	226.566	0.59	384.62	74%
7515501	SOUTH MARTINS FERRY	AETNA ST	1983.429	5.50	360.62	215%