

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Investigation of the)	
Service, Rates and Facilities of)	Case No. 2021-00370
Kentucky Power Company)	

DIRECT TESTIMONY OF
TIMOTHY C. KERNS
ON BEHALF OF KENTUCKY POWER COMPANY

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EXHIBITS

<u>EXHIBIT</u>	<u>DESCRIPTION</u>
Exhibit TCK-1	Written Consent Action of the Mitchell Operating Committee dated September 1, 2022
Exhibit TCK-2	Kentucky Power Generating Unit Performance Data - Winter Storm Elliott Period (12/23/2022-12/27/2022)

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I. INTRODUCTION

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

2 A. My name is Timothy C. Kerns. My business address is 200 Association Drive,
3 Charleston, WV, 25311. In March 2023, I accepted the position of Vice President
4 of Generating Assets for Appalachian Power Company (“Appalachian Power”) and
5 Wheeling Power Company (“Wheeling Power”) effective April 2023. Appalachian
6 Power and Wheeling Power are wholly owned subsidiaries of American Electric
7 Power Company, Inc. (“AEP”). Immediately prior to my current role, I was Vice
8 President of Generating Assets for Kentucky Power Company (“Kentucky Power”
9 or “the Company”) and Indiana Michigan Power Company (“I&M”). I served in
10 this role from 2020 to 2023.

II. BACKGROUND

11 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND**
12 **AND BUSINESS EXPERIENCE.**

13 A. I earned a Bachelor of Science in Mechanical Engineering Degree from West
14 Virginia Institute of Technology and have been employed by AEP system
15 companies for 34 years. I have worked at various power plants across the AEP
16 System since 1989 in various positions including as a Performance Engineer, a

1 Maintenance Engineer, and a Plant Manager where, among other things, I
2 performed, directed, and managed outage and non-outage maintenance and capital
3 work. Specifically, from 1989 to 1996 I was a Performance, Maintenance and
4 Environmental Engineer at the Philip Sporn Plant; from 1996-1998 I was an
5 Equipment Troubleshooting Specialist for the Regional Services Organization
6 (“RSO”); from 1998-1999 I was a Zone Superintendent for the RSO; from 1999-
7 2000 I was a Regional Engineer Manager; from 2001 to 2006 I was the RSO
8 Manager; from 2006-2011 I was the Plant Manager at the Tanners Creek and
9 Lawrenceburg Plants; from 2011 to 2017 I was the Plant Manager at the Rockport
10 Plant; from 2017 to 2020 I was the Managing Director of Generating Assets for
11 I&M; and from 2020 to 2023 I was the Vice President of Generating Assets for
12 Kentucky Power, Wheeling Power and I&M.

13 **Q. PLEASE BRIEFLY DESCRIBE YOUR DUTIES AND RESPONSIBILITIES**
14 **AS VICE PRESIDENT GENERATING ASSETS FOR APPALACHIAN**
15 **POWER AND WHEELING POWER.**

16 A. In my current role, I am responsible for the safe, reliable, and economic operation
17 of the fossil-fueled generating assets owned and operated by the Companies. This
18 includes the Amos, Mitchell, and Mountaineer coal-fired power plants, as well as
19 the gas-fired Ceredo (simple-cycle combustion turbines), Clinch River (gas-fired
20 boiler), and Dresden (combined-cycle) power plants, and Appalachian Power’s
21 hydro facilities. Specifically, I plan, organize, coordinate, direct, and control plant
22 activities, including the operations, maintenance, engineering, and construction of
23 the plant facilities. I also oversee plant budgets and interface with other AEP
24 functional groups such as Accounting, Regulatory, and Commercial Operations to

1 ensure the needs of the generating plants are met. Additionally, I am responsible
2 for any decommissioning, demolition, and disposition of generating assets owned
3 or operated by the Companies.

4 **Q. PLEASE EXPLAIN YOUR FAMILIARITY WITH KENTUCKY POWER**
5 **GENERATING ASSETS.**

6 A. In my former role as Kentucky Power's Vice President of Generating Assets, I was
7 responsible for the safe and reliable operation of Big Sandy Unit 1 and Mitchell
8 Units 1 and 2 for over three years. Relevant to this testimony, I was in the role
9 throughout 2022, including during Winter Storm Elliott in December 2022.

10 Kentucky Power was Mitchell Plant's operator until September 1, 2022
11 when the Mitchell Operating Committee adopted the resolutions identified in the
12 Written Consent Action of the Mitchell Operating Committee. On September 1,
13 2022, Kentucky Power filed with this Commission notice of the adoption and a
14 copy of the Written Consent Action. A copy of the September 1, 2022 Written
15 Consent Action is provided as Exhibit TCK-1. Until that time, I had overall
16 responsibility for the operation and maintenance of the Mitchell Plant as the
17 Company's Vice President of Generating Assets, and I continue to have these
18 responsibilities in my current role on behalf of Wheeling Power now that Wheeling
19 Power is the operator for the Mitchell Plant.

20 I am familiar with the day to-day operation of the Mitchell Plant as a result
21 of my responsibility for the oversight of Plant personnel in connection with the safe,
22 reliable, and economic operation of the Plant. In this regard, my responsibilities
23 include interacting on a regular basis with the Mitchell Plant manager, who reports
24 directly to me, as well as with other Plant personnel in connection with both day-

1 to-day and longer-term Plant activities. In addition, I regularly review budgets,
2 review investments, and help plan the safe and reliable operation of that facility. I
3 also continue to participate as a non-voting member of the Mitchell Plant Operating
4 Committee. The Mitchell Operating Committee consists of leadership from both
5 Kentucky Power and Wheeling Power including each Company's President and
6 Chief Operating Officer. As defined in the Mitchell Operating Agreement, the
7 Mitchell Operating Committee reviews annually, and other times as necessary, the
8 Mitchell Plant's operating plan that includes, but is not limited to, outage plans and
9 schedules, operating and maintenance ("O&M") expenditures and capital
10 investment budgets and plant safety, environmental and operational performance.

11 Lastly, as part of Wheeling Power's management team, I work closely with
12 the Kentucky Power leadership team, the Managing Director of Generating Assets
13 and the American Electric Power Service Corporation ("AEPSC") to ensure the
14 Mitchell Plant is safe, reliable and provides benefit to customers through effective
15 management of O&M expenditures and capital investments. An example of my
16 interaction is obtaining approval from each of the Committee's voting members
17 prior to executing unplanned work that emerges on the Mitchell units.

18 **Q. HAVE YOU PREVIOUSLY TESTIFIED IN ANY REGULATORY**
19 **PROCEEDINGS?**

20 A. Yes. I have submitted testimony and testified on behalf of Kentucky Power before
21 this Commission in Case Nos. 2020-00174 (2020 base rate case), 2021-00421
22 (seeking approval of updated Mitchell Plant operating agreements), and 2023-
23 00159 (2023 base rate case). I have also submitted testimony on behalf of Wheeling
24 Power before the West Virginia Public Service Commission ("WVPSC") in Case

1 No. 21-0810-E-PC. In addition, I have submitted testimony and testified on behalf
 2 of I&M before the Indiana Utility Regulatory Commission in Cause Nos. 44967,
 3 44511, and 45235, and the Michigan Public Service Commission in Cause Nos. U-
 4 18370, U-20070, and U-20359. Finally, I submitted testimony at the Federal
 5 Energy Regulatory Commission in AEP Generating Company’s depreciation rate
 6 cases.

III. PURPOSE OF TESTIMONY

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

9 A. The purpose of my testimony is to:

- 10 • Describe Kentucky Power’s generation assets; and
- 11 • Describe the preparation and performance of the Company’s generation fleet
- 12 during Winter Storm Elliott.

13 **Q. ARE YOU SPONSORING ANY EXHIBITS AS PART OF YOUR**
 14 **TESTIMONY?**

15 A. Yes. I am sponsoring the following exhibits attached to my testimony:

<u>EXHIBIT</u>	<u>DESCRIPTION</u>
17 Exhibit TCK-1	Written Consent Action of the Mitchell Operating
18	Committee dated September 1, 2022
19 Exhibit TCK-2	Kentucky Power Generating Unit Performance Data
20	-Winter Storm Elliott Period (12/23/2022-
21	12/27/2022)

IV. KENTUCKY POWER'S GENERATING ASSETS

1 **Q. PLEASE BRIEFLY DESCRIBE KENTUCKY POWER'S OWNED**
2 **GENERATION.**

3 A. Kentucky Power's owned generation assets consist of a total of 1,075 MW of
4 capacity from two generating plants, Big Sandy and Mitchell. The Company's
5 owned assets and their characteristics are listed in Figure TCK-1.

Figure TCK-1: Kentucky Power Generation Assets

Plant	Kentucky Power-Owned Capacity (MW)	No. of Units	Location	Fuel	Expected Retirement Date
Big Sandy	295	1	Louisa, KY	Natural Gas	2031
Mitchell	780	2	Moundsville, WV	Coal	2040

6 Kentucky Power owns and operates the Big Sandy Plant located near
7 Louisa, Kentucky. The plant currently has a single operating unit with a generating
8 capacity of 295 MW. Big Sandy Unit 1 was originally placed in service in 1963
9 and operated as a 278 MW sub-critical coal-fired generating unit through mid-
10 November 2015. As approved by the Commission in Case No. 2013-00430, Big
11 Sandy Unit 1 was converted to a natural gas-fired unit and returned to service May
12 31, 2016. The Unit is equipped with low nitrogen oxide ("NO_x") burners and
13 overfire air for the reduction of NO_x emissions.

14 The Mitchell Plant is located approximately 12 miles south of Moundsville,
15 West Virginia on the Ohio River. Kentucky Power owns an undivided 50% interest
16 in the Mitchell Plant; the other 50% interest is owned, and operated, by Wheeling
17 Power. The plant comprises two super-critical pulverized coal-fired baseload
18 generating units. Mitchell Unit 1 has a capacity of 770 MW and Mitchell Unit 2

1 has a capacity of 790 MW for a total capacity of 1,560 MW. Both Units were
2 placed in service in 1971.

3 **Q. HAVE THE RETIREMENT DATES FOR BIG SANDY UNIT 1 OR**
4 **MITCHELL GENERATING UNITS CHANGED?**

5 A. There have been no changes to the expected retirement dates of either Big Sandy
6 Unit 1 or the Mitchell Plant. With continued investment and maintenance, Big
7 Sandy Unit 1 is expected to reach its current retirement date of 2031 and the
8 Mitchell plant is expected to reach its retirement date of 2040. However, it is my
9 understanding that, based on its recently filed Integrated Resource Plan, the
10 Company is proposing to operate Big Sandy Unit 1 through 2041. Additionally, as
11 a result of the Commission's Order in Case No. 2021-00004 denying a Certificate
12 for Public Convenience and Necessity ("CPCN") for Effluent Limitation
13 Guidelines ("ELG") projects at Mitchell Plant, Kentucky Power's interest in
14 Mitchell will terminate in 2028.

15 **Q. PLEASE GENERALLY DESCRIBE KENTUCKY POWER'S PRACTICES**
16 **WITH RESPECT TO OPERATING AND MAINTAINING ITS**
17 **GENERATION ASSETS?**

18 A. Kentucky Power's generating assets must provide safe, economical, and reliable
19 generation output to serve load and accommodate fluctuating customer needs. Each
20 generating unit's maintenance needs vary based on its type, design, age, condition,
21 and operational characteristics. All units are maintained to operate the units in a
22 safe manner in compliance with all local, state, and federal regulations.

23 The Company utilizes a robust Circular Letter Program, established and
24 maintained by AEP's Corporate Engineering Group, to define, among other things,

1 the inspection and repair schedules for critical equipment and systems. The
2 Circular Letters' requirements and recommendations are based on industry
3 standards, Original Equipment Manufacturer's recommendations, and past
4 experience and expertise. Each generating plant strongly adheres to the Circular
5 Letter requirements and recommendations, enabling the generating plants' staff to
6 establish high level Planned Outage work scopes to maintain or improve generating
7 unit availability several years in advance.

8 The Company's inspection and maintenance practices allow known
9 liabilities to be addressed and resolved as well as the discovery of previously
10 unknown liabilities. The nature of the operation of generating units brings
11 occasional mechanical issues and the sooner the issues are discovered the better the
12 Company can efficiently resolve them. In addition, the Company's maintenance
13 and operation practices provide for the safety of its employees and assets.

14 **Q. PLEASE DESCRIBE GENERATING ASSETS LEADERSHIP**
15 **INTERACTIONS WITH KENTUCKY POWER LEADERSHIP**
16 **REGARDING THE OPERATIONS AND OUTAGE STATUS OF THE**
17 **MITCHELL AND BIG SANDY PLANTS.**

18 A. Planned Outages are scheduled months to years in advance and are a part of the
19 overall operating plan that is presented and discussed at the annual Mitchell
20 Operating Committee meetings. Budget forecasts are put into the financial system
21 and these budgets are approved by the Kentucky Power leadership team. Unless
22 there are significant changes to the scope of work to be executed in that Planned
23 Outage, communications with Kentucky Power leadership are primarily periodic

1 updates to outage progress and any major scope or schedule changes that occur
2 while the outage is in progress.

3 Unit derates are also communicated to Kentucky Power leadership by
4 Generating Assets leadership. This includes the resulting plant generation output,
5 the actions taken by the plant to resolve the issue causing the derate, and the
6 potential risk imposed in the event the issue cannot be resolved. Kentucky Power
7 leadership is also informed when a Maintenance Outage may be required for those
8 issues resulting in a unit derate that cannot be resolved while the unit is operational.

9 **Q. DO OTHER LEADERS PARTICIPATE IN OUTAGE PLANNING FOR**
10 **THE MITCHELL AND BIG SANDY PLANTS AND KEPT INFORMED OF**
11 **THE OPERATIONAL STATUS OF THE PLANTS?**

12 A. Yes. As discussed earlier in my testimony, the Mitchell Operating Committee
13 consists of leadership from both Kentucky Power and Wheeling Power including
14 each Company's President and Chief Operating Officer. As defined in the Mitchell
15 Operating Agreement, the Mitchell Operating Committee reviews annually, and
16 other times as necessary, the Mitchell Plant's operating plan that includes, but is
17 not limited to, outage plans and schedules, O&M expenditures and capital
18 investment budgets and plant safety, environmental and operational performance.

19 As part of Wheeling Power's management team, I work closely with the
20 Kentucky Power leadership team, the Managing Director of Generating Assets and
21 AEPSC to ensure the Mitchell Plant is safe, reliable and provides benefit to
22 customers through effective management of O&M expenditures and capital
23 investments. An example of my interaction is obtaining approval from each of the

1 Committee's voting members prior to executing unplanned work that emerges on
2 the Mitchell units.

3 The Managing Director of Generating Assets performs the same roles and
4 responsibilities described above for Big Sandy Plant. However, the engagement is
5 limited to Kentucky Power leadership and AEPSC.

6 **Q. PLEASE GIVE AN EXAMPLE OF PLANT STATUS UPDATES**
7 **PROVIDED TO KENTUCKY POWER LEADERSHIP BY GENERATING**
8 **ASSETS LEADERSHIP.**

9 A. During Winter Storm Elliott, as Kentucky Power's Vice President of Generating
10 Assets, I communicated the Planned Outage status for Big Sandy plant and the
11 derate status for Mitchell Units 1 and 2. For example, on December 24, 2022, I
12 informed leadership of the derates on Mitchell Units 1 and 2 due to frozen level
13 indicators on the FGD reagent slurry feed tanks and the associated risk in the event
14 the issue could not be resolved. I also provided an update on the repair to the Big
15 Sandy hydrogen seal housing at the exciter during its Planned Outage. Lastly, on
16 December 27, 2022, I updated leadership on the status of the Big Sandy Planned
17 Outage and its expected in-service date of January 5, 2023, along with the derates
18 at the Mitchell Plant due to environmental non-compliant opacity levels and the
19 associated source of the issues. I also informed leadership that both Mitchell Units
20 1 and 2 would eventually require a Maintenance Outage to address the causes of
21 the opacity issues.

22 These communications to Kentucky Power and Wheeling Power leadership
23 occurred throughout the duration of the Winter Storm Elliott Period, as necessary.

1 **Q. PLEASE DESCRIBE OTHER PRACTICES THAT CONTRIBUTE TO THE**
2 **SAFE, ECONOMICAL, AND RELIABLE OUTPUT FOR KENTUCKY**
3 **POWER'S GENERATING ASSETS.**

4 A. Kentucky Power relies on a system of maintenance and operations management
5 programs to ensure optimal performance of the generating assets. These
6 maintenance programs are:

- 7 • Predictive Maintenance: monitoring, inspections, and/or data analyses
8 conducted to diagnose potential maintenance issues early and usually
9 while the equipment is running to minimize downtime.
- 10 • Preventive Maintenance: protocols, testing, and physical work
11 conducted on equipment to address anticipated or diagnosed
12 vulnerabilities.
- 13 • Outages: Planned Outages and Maintenance Outages are required to
14 maintain generating units to ensure the units operate safely, efficiently
15 and prevent issues from causing forced outages or derates during times
16 when the units are economic.

17 In addition, process improvements are incorporated into the operations and
18 maintenance of the generating units to eliminate waste and increase process
19 efficiencies. Together, these maintenance and operations management programs
20 help to optimize operation of the assets and offset operations and maintenance cost
21 escalations.

V. **GENERATION PREPARATION AND PERFORMANCE DURING**
WINTER STORM ELLIOTT

22 **Q. PLEASE DESCRIBE WINTER STORM ELLIOTT.**

23 A. As explained further by Company Witness Vaughan, Winter Storm Elliott was a
24 bomb cyclone¹ that impacted the PJM region from December 23, 2022, through

¹ A bomb cyclone is a large, intense storm that rapidly intensifies and is defined by a sudden and significant drop in atmospheric pressure.

1 December 27, 2022 (the “Winter Storm Elliott Period”), causing extreme cold
2 weather, including blizzards, high winds, and snow.

3 **Q. WERE THE COMPANY’S GENERATION ASSETS AVAILABLE AND**
4 **OPERATING DURING THE WINTER STORM ELLIOTT PERIOD?**

5 A. Both Mitchell Unit 1 and Unit 2 (collectively, the “Mitchell Units”) were available
6 and operating throughout the Winter Storm Elliott Period. As shown in Exhibit
7 TCK-2, Mitchell Unit 1 had a Net Capacity Factor² (“NCF”) of 80.3% and Mitchell
8 Unit 2 had an NCF of 74.1% during the Winter Storm Elliott Period. Big Sandy
9 Unit 1 was in a Planned Outage and was unavailable as discussed later in my
10 testimony.

11 **Q. HOW DOES THE MITCHELL PLANT PREPARE FOR WINTER?**

12 A. The Mitchell Plant undertakes significant winter preparedness measures each year.
13 In preparation for winter, the Mitchell Plant implements a “Winter Preparedness
14 Plan.” In 2022, the plant implemented the “Winter Preparedness Plan” starting on
15 October 3, 2022. The standard plan included employee training, completing
16 preventative maintenance work orders, performing equipment checks, replenishing
17 supplies, and other winter preparedness activities. Plant personnel completed a cold
18 weather site specific plan review on October 19, 2022, and completed training on
19 the North American Electric Reliability Council’s cold weather reliability standards
20 by October 31, 2022. Cold Weather Preparedness and Winterization checks

² Net Capacity Factor is defined as the ratio of the generating unit’s ((net actual generation) to its net maximum capacity for the number of hours in the period being reported that the unit was in the active state) x 100%.

1 conducted as preventative maintenance activities were completed by November 2,
2 2022.

3 **Q. DID THE MITCHELL PLANT TAKE ANY ADDITIONAL**
4 **PREPARATORY STEPS IN ADVANCE OF WINTER STORM ELLIOTT?**

5 A. Yes. In anticipation of Winter Storm Elliott, Mitchell Plant staffing was increased
6 to at least one on-site member from the plant leadership team and additional plant
7 operations personnel and contractor support were brought on site.

8 **Q. HOW DID THE MITCHELL UNITS PERFORM DURING WINTER**
9 **STORM ELLIOTT?**

10 A. Both Mitchell Units performed well during the Winter Storm Elliott Period. Both
11 Units had a 0% Forced Outage Factor (FOF)³ and 0% Maintenance Outage Factor
12 (MOF)⁴, meaning both units were available and operating throughout the Winter
13 Storm Elliott period.

14 **Q. WAS EITHER UNIT'S OUTPUT REDUCED (OR DERATED) DURING**
15 **WINTER STORM ELLIOTT?**

16 A. Yes, at times, both Mitchell Units experienced derates due to operational issues. A
17 “derate” is defined as a decrease in the available capacity of an electric generating
18 unit, commonly due to a system or equipment malfunction or environmental,
19 operational, or reliability considerations. As demonstrated in Exhibit TCK-2, a
20 significant portion of the derates experienced at both Mitchell Units were required
21 to comply with particulate matter emission limits and the state of West Virginia’s

³ Forced Outage Factor is the ratio of ((All hours experienced during forced outages) to the number of hours in the period being reported that the unit was in the active state) x 100%.

⁴ Maintenance Outage Factor is the ratio of ((All hours experienced during maintenance outages) to the number of hours in the period being reported that the unit was in the active state) x 100%.

1 10% opacity limit. The opacity-related derates were not caused by Winter Storm
2 Elliott's extreme temperatures. Mitchell Unit 1 also had a small, 35 MW derate
3 related to a slag buildup in the secondary superheater section of the steam generator
4 for the duration of the Winter Storm Elliott Period.

5 The remaining derates were caused by frozen coal causing the coal
6 conveyor to trip out, freezing of the level indicators for the reagent slurry feed
7 tanks, and a pulverizer damper operation issue. This group of derates lasted 7.61
8 hours for Mitchell Unit 1 and 12.77 hours for Mitchell Unit 2, a combined total of
9 only 20.38 hours out of the 120 hours of operation during the five-day Winter Storm
10 Elliott Period. The most significant of the weather-related derates occurred when
11 the extreme cold temperatures caused the level indicators on the FGD reagent slurry
12 feed tanks to freeze. Mitchell Plant operators quickly recognized that there was an
13 issue and dispatched plant personnel to visually verify the reagent levels in the
14 tanks. The observed levels were lower than what was being indicated, so in order
15 to preserve enough reagent to keep the units in service, the team made the prudent
16 decision to temporarily derate each unit to its reliable minimum output until the
17 level indications were thawed and more reagent was processed.

18 As demonstrated in Figure TCK-2, the Mitchell Units' derates did not
19 materially affect the Mitchell Plant's availability during the Winter Storm Elliott
20 Period. During Winter Storm Elliott, Unit 1 had an equivalent availability factor⁵
21 ("EAF") of 86.3%, and Unit 2 had an EAF of 78.4%.

⁵ Equivalent Availability factor is the ratio of ((Available hours – equivalent planned derated hours – equivalent unplanned derated hours – equivalent seasonal derated hours) to the number of hours in the period being reported that the unit was in the active state) x 100%.

1 **Q. HOW DOES THE MITCHELL PLANT'S PERFORMANCE DURING**
 2 **WINTER STORM ELLIOTT COMPARE TO ITS HISTORICAL**
 3 **PERFORMANCE?**

4 A. Both Mitchell Units performed favorably during Winter Storm Elliott as compared
 5 to their historic performance, as Figure TCK-2 demonstrates. Figure TCK-2
 6 compares each Mitchell Unit's performance during the Winter Storm Elliott Period
 7 to their average and highest annual NCF and EAF over the period 2016 through
 8 2021.

**Figure TCK-2: Mitchell Unit Performance:
 Winter Storm Elliott Period Compared to 2016-2021**

Mitchell Unit	Winter Storm Elliott Period Net Capacity Factor ("NCF")	Average NCF (2016-2021)	Highest NCF (2016-2021)	Winter Storm Elliott Period Average Availability Factor ("EAF")	Average EAF (2016-2021)	Highest EAF (2016-2021)
Unit 1	80.3%	36.9%	52.0%	86.3%	57.1%	68.1%
Unit 2	74.1%	46.6%	65.8%	78.4%	69.3%	84.8%

9 As demonstrated above, Unit 1's NCF and EAF and Unit 2's NCF during the
 10 Winter Storm Elliott Period were higher during Winter Storm Elliott than their 6-
 11 year highest annual levels. Both Units' NCF and EAF during the storm period far
 12 exceeded their 6-year averages.

13 **Q. HOW DID THE MITCHELL UNITS PERFORM COMPARED TO ITS PJM**
 14 **PEERS DURING WINTER STORM ELLIOTT?**

15 A. According to the 2022 State of the Market Report for PJM, extreme cold weather
 16 on December 23 and 24, 2022, resulted in a very high number of forced outages in
 17 PJM. The highest levels occurred on December 24, 2022. A 192 percent increase
 18 in outage MWs occurred during the storm event. Coal units failed to perform

1 mainly due to equipment-related forced outages.⁶ In either case, the Mitchell units,
2 as discussed above, were available throughout the Winter Storm Elliott period and
3 the units' NCF and EAF far exceeded their 6-year averages.

4 **Q. COULD THE COMPANY REASONABLY HAVE DONE ANYTHING**
5 **DURING THE WINTER STORM ELLIOTT PERIOD TO INCREASE THE**
6 **OUTPUT OF THE MITCHELL GENERATING FACILITIES?**

7 A. No. Again, it is important to reiterate that, although the Mitchell Units were at times
8 derated during Winter Storm Elliott, at no point was either Mitchell unit unavailable
9 to serve customers. Furthermore, the Company cannot legally operate the Mitchell
10 Units in a manner that would violate the particulate matter emission limits and the
11 state of West Virginia's 10% opacity limit. The remaining non-opacity related
12 derates were short in duration but were required to allow for the necessary repairs
13 to be made while keeping the units available. As such, when both Mitchell Units
14 were needed during this extreme event, they were available and performed well, to
15 the benefit of Kentucky Power customers.

16 **Q. WHAT IS A PLANNED OUTAGE?**

17 A. A Planned Outage is a generating unit outage designed to allow for planned work
18 that requires the unit to be shut down to be completed. Planned outages are
19 scheduled for a predetermined duration determined by the scope of work to be
20 performed during the outage. Typically, Planned Outages only occur once or twice
21 a year.

⁶ 2022 State of the Market Report for PJM; Volume 2: Detailed Analysis; Monitoring Analytics, LLC – Independent Market Monitor for PJM; dated 3.9.2023. Section 3, page 210-211.
https://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2022.shtml

1 **Q. HOW ARE PLANNED OUTAGES SCHEDULED?**

2 A. Planned Outages are scheduled well in advance (months and sometimes even years)
3 due to significant scope, equipment lead-time, engineering, and time out of
4 operation. Such outages are planned in conjunction with PJM and with PJM's
5 approval. The Company schedules Planned Outages during the shoulder months
6 when the Company's peak demands are lower and attempts to avoid, to the extent
7 practical, multiple units simultaneously in a Planned Outage.

8 **Q. WHEN A UNIT IS IN A PLANNED OUTAGE, IS IT POSSIBLE TO**
9 **QUICKLY RETURN THE UNIT TO SERVICE IF MARKET CONDITIONS**
10 **CHANGE?**

11 A. Generally, it is not. During a Planned Outage, a generating unit is often at least
12 partly dismantled, often with pressure parts (parts that contain steam at very high
13 pressures and temperatures when operating, such as boilers, turbines, etc.) taken
14 apart to be inspected, maintained, and/or replaced. It is very difficult if not
15 impossible to safely and quickly return a unit to service or deviate from the work
16 plan for the outage, particularly when major equipment is disconnected or
17 dismantled for repair at that time.

18 **Q. PLEASE DESCRIBE THE SCOPE OF THE PLANNED OUTAGE TO BE**
19 **COMPLETED AT BIG SANDY DURING WINTER STORM ELLIOTT.**

20 A. Kentucky Power requested approval from PJM on March 19, 2021, for a planned
21 outage for Big Sandy Unit 1 to occur during the period from September 10, 2022,
22 through December 4, 2022. PJM approved the proposed planned outage on March
23 30, 2021. Kentucky Power originally planned to conduct this planned outage in the
24 Spring of 2022; however, the Company changed the outage dates to take advantage

1 of company resources that would be available in the fall to complete the turbine
2 and generator related scope. Big Sandy Unit 1 began its Planned Outage on
3 September 10, 2022.

4 The purpose of this Planned Outage was primarily the routine inspection
5 and repair of plant components including the boiler, turbine valves, and cooling
6 tower. As originally scoped, the fall 2022 Planned Outage at Big Sandy Unit 1 also
7 included a generator field (rotor) out inspection and a possible re-wedge of the
8 Unit's stator. Generator field out inspections are major routine maintenance
9 inspections that may include, but are not limited to:

- 10 • stator core tightening to correct core looseness,
- 11 • alternating current high potential testing for stress-testing generator
12 insulation,
- 13 • electromagnetic imperfection testing to detect stator core interlamination
14 imperfections that can lead to overheating and damage to the stator core,
15 and
- 16 • stator re-wedge.

17 The need to re-wedge the stator could not be determined until after the removal of
18 the generator rotor.

19 The generator field out inspection and testing were planned for this outage
20 in accordance with Circular Letter EL-M-CL-027 – Generator Testing and
21 Evaluation. The last inspection of this type on Big Sandy Unit 1 occurred in 2008.

22 While the outage was originally scheduled to be completed on December 4,
23 2022, it had to be extended several times through January 14, 2023, for a number
24 of reasons including additional time required to repair the generator due to hot spots
25 in the core identified during testing after removal of the rotor, replacement of the
26 generator rotor collector end retaining ring due to a crack discovered during the

1 outage, the repair of the hydrogen seal housing at the exciter due to a leak identified
2 during testing as the generator was being reassembled, and the need to repair an
3 unexpected condenser leak identified at start-up. The extensions to the outage were
4 necessary to repair and/or replace generator components to prevent the risk of a
5 catastrophic failure of the generator as well repair the condenser to allow the Unit
6 to restart and avoid future forced outages. In addition, the repairs were necessary
7 to prevent dangerous conditions, including the possible catastrophic failure of the
8 unit, to ensure the safe operation of Big Sandy Unit 1 and to protect Kentucky
9 Power's employees. Each extension for the Big Sandy fall 2022 outage was
10 approved by PJM.

11 **Q. PLEASE DESCRIBE THE TIMELINE FOR BIG SANDY'S OUTAGE**
12 **EXTENSIONS BEYOND ITS PLANNED OUTAGE END DATE?**

13 A. In November 2022, the Company extended the Planned Outage at Big Sandy Unit 1
14 from December 4, 2022, to December 12, 2022, to complete a full re-wedge of the
15 generator stator. A partial re-wedge of the generator stator was part of the original
16 scope of work, and the need for a full generator re-wedge was identified during
17 loop testing of the stator core during the outage. The extension was requested on
18 November 7, 2022, and was approved by PJM that same day.

19 On November 13, 2022, the Company discovered a crack on the generator
20 rotor collection end retaining ring and determined that the retaining ring required
21 replacement prior to returning the Unit to service. In order to complete that repair,
22 on December 2, 2022, the Company requested the Planned Outage at Big Sandy be
23 extended through December 30, 2022. PJM approved the extension on December
24 2, 2022.

1 During the reassembly of the generator on December 18, 2022, the
2 hydrogen seal housing on the exciter end was leaking at a level beyond the
3 manufacturer's (Westinghouse) acceptable level. The hydrogen seal leak was
4 identified during the required air leakage test and after several unsuccessful
5 attempts to repair the leak on site, the hydrogen seal was removed and shipped to
6 AEP's Central Machine Shop (CMS) for repair. As a result, an extension to Planned
7 Outage from December 30, 2022, to January 5, 2023, was requested on December
8 22, 2022, and approved by PJM on December 28, 2022.

9 During unit startup on January 5, 2023, Big Sandy Unit 1 was removed from
10 service due to water chemistry exceeding quality limitations. Exceeding water
11 chemistry limitations risk failures of the boiler, turbine, and condensate/feedwater
12 components. A corresponding condenser leak that contributed to exceeding the
13 water chemistry limitations was located on January 10, 2023. The extension of the
14 Planned Outage from January 5, 2023, to January 14, 2023, was requested by
15 Kentucky Power on January 10, 2023. PJM approved the extension on January 11,
16 2023, as inspection/repairs to the condensers were part of the original Planned
17 Outage work scope.

18 Following repair of the main condenser leak, an additional Planned Outage
19 occurred between January 14, 2023, to January 16, 2023, to return the boiler water
20 chemistry to acceptable levels. This additional outage, from January 14, 2023, to
21 January 16, 2023, was requested on January 12, 2023, and approved by PJM on
22 January 14, 2023.

1 During each of the outages, the Company modified manpower schedules to
2 include weekends and nights, where applicable, and utilized AEP Engineering,
3 AEP Regional Services personnel and CMS services as part of its efforts to place
4 Big Sandy Unit 1 back in service as quickly as safely possible.

5 **Q. COULD THE COMPANY HAVE PLACED BIG SANDY UNIT 1 IN**
6 **SERVICE WITHOUT ADDRESSING THE ITEMS THAT CAUSED THE**
7 **PLANNED OUTAGE TO BE EXTENDED THROUGH THE WINTER**
8 **STORM ELLIOTT PERIOD?**

9 A. Absolutely not. First, as explained further above, extending the outage to replace
10 the retaining ring extended the Planned Outage through what became the Winter
11 Storm Elliott Period. If the Company had not replaced that retaining ring, Big
12 Sandy Unit 1 would have been at an increased risk of catastrophic failure.
13 Therefore, the Company could not have safely placed the Unit back in service and
14 operated it without replacing the retaining ring. It likewise could not have put the
15 Unit safely back in service without fixing the hydrogen seal and condenser leaks.

16 **Q. WAS THERE ANY WAY FOR THE COMPANY TO HAVE KNOWN**
17 **ABOUT THE WINTER STORM ELLIOTT EVENT WHEN IT**
18 **REQUESTED THE PLANNED OUTAGE EXTENSION ON DECEMBER 2,**
19 **2022.**

20 A. No.

21 **Q. WERE THE COMPANY'S ACTIONS RELATED TO EXTENDING THE**
22 **BIG SANDY UNIT 1 OUTAGE REASONABLE?**

23 A. Yes. Not only were the Company's actions reasonable, they were required to ensure
24 the safe and continued operation the unit. The Company could not have brought

1 Big Sandy Unit 1 back online during Winter Storm Elliott without risking a
2 catastrophic failure of the Unit as all the repairs described above were required to
3 be completed to safely operate the Plant. Therefore, it was reasonable to extend the
4 planned outage to ensure the Unit would be in good working order to service
5 customers into the future.

VI. CONCLUSION

6 **Q. WHAT CONCLUSIONS SHOULD THE COMMISSION DRAW FROM**
7 **YOUR TESTIMONY?**

8 **A.** The Commission should conclude that Kentucky Power prudently manages the
9 maintenance of its owned-generation portfolio to maximize the long-term benefits
10 of the assets for its customers. The Company's management of its generation fleet
11 during the Winter Storm Elliott Period was reasonable and prudent and consistent
12 with the safe operation of its generating assets.

13 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

14 **A.** Yes, it does.

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Investigation Of The Service, Rates And)
Facilities Of Kentucky Power Company) Case No. 2021-00370

Kentucky Power Company's Update Of West Virginia Proceedings
For The Period August 22, 2022-September 1, 2022

Kentucky Power Company ("Kentucky Power" or the "Company") provides the following update in conformity with the Orders of the Public Service Commission of Kentucky ("Commission"):

Kentucky Power informed the Commission in its July 11, 2022 update that the conflicting regulatory requirements of the Public Service Commission of West Virginia ("West Virginia Commission") and this Commission with respect to the proposed operating and ownership agreements for the jointly-owned Mitchell generating station necessitated keeping the current Mitchell Plant Operating Agreement in place. The Company further indicated that the near term actions for the continued operation of the Mitchell generating station and for implementing the ELG investments at the Mitchell generating station in conformity with the orders of this Commission and the West Virginia Commission would be implemented through resolutions of the Mitchell Operating Committee. The Company further stated it would advise the Commission and provide copies in future updates when those resolutions had been adopted by the Mitchell Operating Committee.

The Owners' Operating Representatives of the Mitchell Operating Committee, on September 1, 2022, adopted the resolutions in the attached as **Exhibit 1** Written Consent Action ("Resolution"). The Resolution: (1) authorizes Wheeling Power to act as the operator of the

Mitchell Plant and approves the steps needed to further implement that change; (2) authorizes and ratifies the transfer of ELG and other essential permits from Kentucky Power to Wheeling Power to facilitate timely ELG and other work; (3) provides that the ELG upgrades at the Mitchell Plant will be performed by Wheeling Power and that cost of those ELG investments, which enable Mitchell to operate beyond 2028, will be assigned exclusively to Wheeling Power and not Kentucky Power customers; (4) implements appropriate accounting procedures to ensure that Kentucky Power and Wheeling Power share in the investments and expenditures needed to operate Mitchell through 2028, including the CCR work; and (5) provides for the allocation between Kentucky Power and Wheeling Power, in accordance with the orders of their respective commissions, of capital expenditures with a depreciable life that extends beyond or that will not be placed in service until after 2028.

In addition, Wheeling Power filed a letter with the West Virginia Commission in in Case No. 21-0810-E-PC attaching a copy of the Resolutions. A copy of the letter is attached as **Exhibit 2**. There were no other documents filed during the reporting period by either Wheeling Power or the West Virginia Commission in Case No. 21-0810-E-PC.

Subsequent updates will be filed at ten-day intervals or more frequently as circumstances require.

Respectfully submitted,



Mark R. Overstreet
Katie M. Glass
STITES & HARBISON PLLC
421 West Main Street
P.O. Box 634
Frankfort, Kentucky 40602-0634

Telephone: (502) 223-3477
Facsimile: (502) 779-8349
moverstreet@stites.com
kglass@stites.com

COUNSEL FOR
KENTUCKY POWER COMPANY

EXHIBIT 1

**WRITTEN CONSENT ACTION
OF THE MITCHELL OPERATING COMMITTEE**

September 1, 2022

The undersigned, being all of the Owners' Operating Representatives of the Operating Committee (the "Committee") of the Mitchell Plant Operating Agreement (the "Agreement"), do hereby consent to the adoption of the following resolutions, which resolutions shall be deemed to be adopted as of the date hereof ("Effective Date") and to have the same force and effect as if such resolutions had been adopted at a meeting duly called therefor:

1. Waiver of Notice.

RESOLVED, that any and all notice to take any action in adopting the following resolutions be, and it hereby is, waived by the undersigned.

2. Approval of Resolutions To Implement the Agreement

WHEREAS, Wheeling Power Company ("Wheeling Power") and Kentucky Power Company ("Kentucky Power") recognize that the Public Service Commission of West Virginia ("WVPSC") and the Kentucky Public Service Commission ("KPSC") approved different investments in response to federal environmental rules at the Mitchell Plant and different approaches to operating and owning the Mitchell Plant after December 31, 2028;

WHEREAS, the WVPSC in its orders authorized Wheeling Power to make any improvements or upgrades to the Mitchell Plant to enable compliance with the Effluent Limitations Guidelines ("ELG Rule"), and agreed exclusively to fund all of the capital expenditures associated with implementation of the ELG Rule ("ELG Upgrades"), and to make other necessary improvements or upgrades to the Mitchell Plant, to preserve the option to operate the plant past 2028;

WHEREAS, the KPSC in its orders authorized Kentucky Power to make only the improvements and upgrades to the Mitchell Plant to enable compliance with the Coal Combustion Residuals Rule ("CCR Rule"), and agreed to fund only its ownership share of the capital expenditures associated with the CCR Rule ("CCR Upgrades"), but not the ELG Rule, and acknowledged that because the ELG Upgrades are needed to operate the Mitchell Plant after 2028, approving the CCR and not the ELG Upgrades results in Kentucky Power being permitted only to operate the Mitchell Plant until the end of 2028;

WHEREAS, on November 19, 2021, each Owner filed with its Commission a proposed Mitchell Plant Operations and Maintenance Agreement and a proposed Mitchell Plant Ownership Agreement ("Proposed Mitchell Agreements") to replace the Agreement to facilitate compliance with the KPSC's and WVPSC's respective orders regarding compliance with the CCR and ELG Rules at the Mitchell Plant;

WHEREAS, the Committee believed that replacement of the Agreement with the New Mitchell Agreements at the soonest practical date was advisable and in the best interests of

Kentucky Power Company, Wheeling Power Company, and their respective customers;

WHEREAS, the KPSC and WVPSC issued orders adopting versions of the Mitchell Agreements on May 3, 2022 and July 1, 2022, respectively, that differ in material respects, such that the Owners are unable to enter into new agreements at the current time;

WHEREAS, the Agreement remains in full force and effect in accordance with its terms pending future negotiation of longer term arrangements by the Owners that replace the Agreement, subject to state and other applicable regulatory approvals;

WHEREAS, in light of the foregoing developments, the Operating Committee believes it is now in the best interests of the Mitchell Plant and their respective customers to continue operating under the Agreement in the short term to accomplish the operational objectives necessitated by the KPSC and WVPSC in their orders and prevent any delays in constructing the ELG Upgrades, which could have a negative effect on future plant outages and unit availability;

WHEREAS, the Committee must establish certain operating principles pursuant to its authority under the Agreement to appoint Wheeling Power as the operator of the Mitchell Plant, to enable the ELG Upgrades to be performed by Wheeling Power, and to adopt the procedures necessary to properly allocate costs between the two Owners such that Wheeling Power will pay for all of the costs of the ELG Upgrades, in accordance with the authority of the Committee under the Agreement;

WHEREAS, the Committee must also appropriately allocate costs between the two Owners such that Wheeling Power will pay for the cost of capital investments to the extent they have a depreciable life after December 31, 2028;

WHEREAS, the Committee is vested with certain enumerated rights and duties under the Agreement, as well as other duties as agreed by the Owners (Section 7.2(j));

WHEREAS, the rights and responsibilities of the Committee include, but are not limited to, (1) review and approval of an annual budget and operating plan (Section 7.2(a)); (2) decisions on capital expenditures (Section 7.2(d)); establishment and modification of billing procedures (Section 7.2(f)); (3) establishment of, termination of, and approval of any change or amendment to the operating arrangements between Kentucky Power and Agent pertaining to the Mitchell Plant (Section 7.2(h)); and (4) review and approval of plans and procedures designed to ensure compliance with any environmental law, regulation ordinance or permit (Section 7.2(i));

WHEREAS, pursuant to Section 7.9 of the Agreement, capital repairs and improvements to the Mitchell Plant will be determined by the Committee pursuant to the annual budgeting process which shall, pursuant to Section 7.10 of the Agreement, remain in effect throughout the applicable operating year subject to such changes, revisions, amendments and updating as the Committee may determine; and

WHEREAS, further pursuant to Section 7.9, the expenditures that the Committee determines have been or will be incurred exclusively for one Owner shall be assigned exclusively

to that owner, and, pursuant to Section 7.2(d), decisions on capital expenditures are among the responsibilities of the Committee.

NOW, THEREFORE, BE IT RESOLVED, that Kentucky Power's rights and obligations to operate and maintain the Mitchell Plant are delegated to Wheeling Power, and Wheeling Power accepts and consents to such delegation, effective as of the Effective Date, including, but not limited to, Kentucky Power's rights and obligations under Sections 1.1 (Appointment of Operator), 1.2 (Maintenance of Books and Records), 1.4 (Monthly Statements), 1.5 (Daily Operations), 3.1 (Capital Work), 5.1 (Coal Procurement), 6.3 (Accounting - Operating Expenses), 6.4 (Accounting – Maintenance Expenses), and 7.10 (Budgeting) of the Agreement, including the following which shall occur on or after the Effective Date:

- a. Kentucky Power's employees who work at the Mitchell Plant shall become employees of Wheeling Power;
- b. All open and active contracts on the Effective Date for the purchase of fuel, transportation, goods and services for the operation, maintenance and improvement of the Mitchell Plant and all collective bargaining agreements for labor at Mitchell Plant shall be assigned by Kentucky Power to Wheeling Power and assumed by Wheeling Power;
- c. All leased property used in support of the Mitchell Plant, including but not limited to vehicles and computer equipment, shall be transferred on the books of the lessor from the leased assets account of Kentucky Power to the leased assets account of Wheeling Power; and
- d. Ownership or other beneficial interest of the tugboat used at Mitchell Plant shall be transferred to Wheeling Power.

RESOLVED, that Wheeling Power will have the power and obligation as the operator of the Mitchell Plant to enter into and hold permits in its name on behalf of both Owners or on its own behalf, as the circumstances require, including the ELG permits, and all existing permits not held by Wheeling Power will be transferred to it in an orderly manner.

RESOLVED, that pursuant to Sections 7.2(d) and 7.9 of the Agreement, the Owners jointly recognize Wheeling Power's right to carry out and pay for the ELG Upgrades under the Agreement and approve the following procedures to facilitate that work consistent with the orders of the WVPSC and KPSC, and to protect Kentucky ratepayers from the associated costs and risks:

- a. The permits related to the ELG Upgrades at the Mitchell Plant will be transferred to Wheeling Power to the extent not held by Wheeling Power, and all prior action taken by the Owners in furtherance of the foregoing is ratified and approved;
- b. All construction and other contracts related to the ELG Upgrades will be in the name of Wheeling Power such that Wheeling Power (and not Kentucky Power) is contractually responsible for those contracts;

- c. The appropriate work orders and supporting accounting will be implemented to assign to Wheeling Power all costs associated with the ELG Upgrades;
- d. The appropriate work orders and supporting accounting will be implemented to assign to Wheeling Power and Kentucky Power equally all costs associated with the CCR Upgrades;
- e. The expenditures associated with the CCR Upgrades, in which the Owners share equally, and the ELG Upgrades, which will be the exclusive responsibility of Wheeling Power, will be classified in accordance with the recommendations of the independent engineer's report identifying the ELG Upgrades and CCR Upgrades and their associated costs, as previously adopted by this Committee.

RESOLVED, that to further implement and clarify Sections 3.2 and 7.9 of the Agreement, the Owners approve the following procedures related to capital items which have a depreciable life extending beyond, or with an in-service date not occurring until after, December 31, 2028:

- a. Wheeling Power will exclusively pay for any capital item whose in-service date is reasonably expected to be after December 31, 2028;
- b. Wheeling Power's Operating Representative may unilaterally authorize any capital expenditure that will be assigned exclusively to Wheeling Power, including the ELG Upgrades;
- c. if a capital expenditure has a depreciable life that extends beyond December 31, 2028, Kentucky Power's responsibility for the cost of that item will be limited to its 50% ownership share of the cost of the asset ratably allocated to the portion of such depreciable life occurring prior to December 31, 2028, and Wheeling Power will be responsible for the remainder;
- d. any other capital expenditures shall be allocated 50% to (and paid for by) each Owner, subject to the written approval of the Operating Committee;
- e. to the extent either Owner funds any capital item in excess of 50%, that capital item will be owned by the Owners in proportion to their investment in that asset for regulatory, tax and other purposes; and
- f. an Owner's Operating Representative may unilaterally authorize any capital expenditure for which such Owner shall be allocated greater than 75% of the capital costs, up to an aggregate amount of such capital costs that does not exceed \$3 million per year allocated to the other Owner.

IN WITNESS WHEREOF, the undersigned have signed this written consent action effective as of the Effective Date.

OPERATING REPRESENTATIVES:

DocuSigned by:

Deryle Brett Mattison

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D. Brett Mattison

DocuSigned by:

Christian T. Beam

E27434EFE1A34E4...
Christian T. Beam

EXHIBIT 2



BOUNDLESS ENERGY™

Keith D. Fisher
Senior Counsel

500 Lee Street East, Suite 800
Charleston, WV 25301
304.348.4154
kdfisher@aep.com

September 1, 2022

Via Electronic Filing

Karen Buckley
Acting Executive Secretary
Public Service Commission of West Virginia
201 Brooks St.
Charleston, WV 25301

Re: Case No. 21-0810-E-PC (closed)
Appalachian Power Company and Wheeling Power Company
Petition for Commission Consent and Approval to Enter into Ownership and Operating Agreements for the Mitchell Plant

Dear Ms. Buckley:

In accordance with the directives of the Commission in this matter, and as indicated in their “Compliance Filing” made July 11, 2022 in this matter, Appalachian Power Company and Wheeling Power Company hereby file as a closed entry, for the Commission’s and other parties’ information, the “Written Consent Action of the Mitchell Operating Committee” dated September 1, 2022, which document contains certain agreed-upon resolutions respecting the Mitchell Plant. In summary, the Written Consent Action: (1) authorizes Wheeling Power Company (“WPCo”) to act as the operator of the Mitchell Plant and approves the steps needed to further implement that change; (2) authorizes and ratifies the transfer of ELG and other essential permits from Kentucky Power Company (“KPCo”) to WPCo to facilitate timely ELG and other work; (3) provides that the ELG upgrades at the Mitchell Plant will be performed by WPCo and that the cost of those ELG investments, which enable the plant to operate beyond 2028, will be assigned exclusively to WPCo and not KPCo customers; (4) implements appropriate accounting procedures to ensure that KPCo and WPCo share in the investments and expenditures needed to operate the Mitchell Plant through 2028, including CCR work; and (5) provides for the allocation between KPCo and WPCo, in accordance with the orders of their respective commissions, of capital expenditures with a depreciable life that extends beyond 2028 or that will not be placed into service until after 2028.

Thank you for your attention to this matter. Should you have any questions regarding this correspondence, please do not hesitate to contact me.

Sincerely,

Keith D. Fisher (WV State Bar #11346)
Counsel for Appalachian Power Company
and Wheeling Power Company

Enclosure

cc: Certificate of Service

**WRITTEN CONSENT ACTION
OF THE MITCHELL OPERATING COMMITTEE**

September 1, 2022

The undersigned, being all of the Owners' Operating Representatives of the Operating Committee (the "Committee") of the Mitchell Plant Operating Agreement (the "Agreement"), do hereby consent to the adoption of the following resolutions, which resolutions shall be deemed to be adopted as of the date hereof ("Effective Date") and to have the same force and effect as if such resolutions had been adopted at a meeting duly called therefor:

1. Waiver of Notice.

RESOLVED, that any and all notice to take any action in adopting the following resolutions be, and it hereby is, waived by the undersigned.

2. Approval of Resolutions To Implement the Agreement

WHEREAS, Wheeling Power Company ("Wheeling Power") and Kentucky Power Company ("Kentucky Power") recognize that the Public Service Commission of West Virginia ("WVPSC") and the Kentucky Public Service Commission ("KPSC") approved different investments in response to federal environmental rules at the Mitchell Plant and different approaches to operating and owning the Mitchell Plant after December 31, 2028;

WHEREAS, the WVPSC in its orders authorized Wheeling Power to make any improvements or upgrades to the Mitchell Plant to enable compliance with the Effluent Limitations Guidelines ("ELG Rule"), and agreed exclusively to fund all of the capital expenditures associated with implementation of the ELG Rule ("ELG Upgrades"), and to make other necessary improvements or upgrades to the Mitchell Plant, to preserve the option to operate the plant past 2028;

WHEREAS, the KPSC in its orders authorized Kentucky Power to make only the improvements and upgrades to the Mitchell Plant to enable compliance with the Coal Combustion Residuals Rule ("CCR Rule"), and agreed to fund only its ownership share of the capital expenditures associated with the CCR Rule ("CCR Upgrades"), but not the ELG Rule, and acknowledged that because the ELG Upgrades are needed to operate the Mitchell Plant after 2028, approving the CCR and not the ELG Upgrades results in Kentucky Power being permitted only to operate the Mitchell Plant until the end of 2028;

WHEREAS, on November 19, 2021, each Owner filed with its Commission a proposed Mitchell Plant Operations and Maintenance Agreement and a proposed Mitchell Plant Ownership Agreement ("Proposed Mitchell Agreements") to replace the Agreement to facilitate compliance with the KPSC's and WVPSC's respective orders regarding compliance with the CCR and ELG Rules at the Mitchell Plant;

WHEREAS, the Committee believed that replacement of the Agreement with the New Mitchell Agreements at the soonest practical date was advisable and in the best interests of

Kentucky Power Company, Wheeling Power Company, and their respective customers;

WHEREAS, the KPSC and WVPSC issued orders adopting versions of the Mitchell Agreements on May 3, 2022 and July 1, 2022, respectively, that differ in material respects, such that the Owners are unable to enter into new agreements at the current time;

WHEREAS, the Agreement remains in full force and effect in accordance with its terms pending future negotiation of longer term arrangements by the Owners that replace the Agreement, subject to state and other applicable regulatory approvals;

WHEREAS, in light of the foregoing developments, the Operating Committee believes it is now in the best interests of the Mitchell Plant and their respective customers to continue operating under the Agreement in the short term to accomplish the operational objectives necessitated by the KPSC and WVPSC in their orders and prevent any delays in constructing the ELG Upgrades, which could have a negative effect on future plant outages and unit availability;

WHEREAS, the Committee must establish certain operating principles pursuant to its authority under the Agreement to appoint Wheeling Power as the operator of the Mitchell Plant, to enable the ELG Upgrades to be performed by Wheeling Power, and to adopt the procedures necessary to properly allocate costs between the two Owners such that Wheeling Power will pay for all of the costs of the ELG Upgrades, in accordance with the authority of the Committee under the Agreement;

WHEREAS, the Committee must also appropriately allocate costs between the two Owners such that Wheeling Power will pay for the cost of capital investments to the extent they have a depreciable life after December 31, 2028;

WHEREAS, the Committee is vested with certain enumerated rights and duties under the Agreement, as well as other duties as agreed by the Owners (Section 7.2(j));

WHEREAS, the rights and responsibilities of the Committee include, but are not limited to, (1) review and approval of an annual budget and operating plan (Section 7.2(a)); (2) decisions on capital expenditures (Section 7.2(d)); establishment and modification of billing procedures (Section 7.2(f)); (3) establishment of, termination of, and approval of any change or amendment to the operating arrangements between Kentucky Power and Agent pertaining to the Mitchell Plant (Section 7.2(h)); and (4) review and approval of plans and procedures designed to ensure compliance with any environmental law, regulation ordinance or permit (Section 7.2(i));

WHEREAS, pursuant to Section 7.9 of the Agreement, capital repairs and improvements to the Mitchell Plant will be determined by the Committee pursuant to the annual budgeting process which shall, pursuant to Section 7.10 of the Agreement, remain in effect throughout the applicable operating year subject to such changes, revisions, amendments and updating as the Committee may determine; and

WHEREAS, further pursuant to Section 7.9, the expenditures that the Committee determines have been or will be incurred exclusively for one Owner shall be assigned exclusively

to that owner, and, pursuant to Section 7.2(d), decisions on capital expenditures are among the responsibilities of the Committee.

NOW, THEREFORE, BE IT RESOLVED, that Kentucky Power's rights and obligations to operate and maintain the Mitchell Plant are delegated to Wheeling Power, and Wheeling Power accepts and consents to such delegation, effective as of the Effective Date, including, but not limited to, Kentucky Power's rights and obligations under Sections 1.1 (Appointment of Operator), 1.2 (Maintenance of Books and Records), 1.4 (Monthly Statements), 1.5 (Daily Operations), 3.1 (Capital Work), 5.1 (Coal Procurement), 6.3 (Accounting - Operating Expenses), 6.4 (Accounting – Maintenance Expenses), and 7.10 (Budgeting) of the Agreement, including the following which shall occur on or after the Effective Date:

- a. Kentucky Power's employees who work at the Mitchell Plant shall become employees of Wheeling Power;
- b. All open and active contracts on the Effective Date for the purchase of fuel, transportation, goods and services for the operation, maintenance and improvement of the Mitchell Plant and all collective bargaining agreements for labor at Mitchell Plant shall be assigned by Kentucky Power to Wheeling Power and assumed by Wheeling Power;
- c. All leased property used in support of the Mitchell Plant, including but not limited to vehicles and computer equipment, shall be transferred on the books of the lessor from the leased assets account of Kentucky Power to the leased assets account of Wheeling Power; and
- d. Ownership or other beneficial interest of the tugboat used at Mitchell Plant shall be transferred to Wheeling Power.

RESOLVED, that Wheeling Power will have the power and obligation as the operator of the Mitchell Plant to enter into and hold permits in its name on behalf of both Owners or on its own behalf, as the circumstances require, including the ELG permits, and all existing permits not held by Wheeling Power will be transferred to it in an orderly manner.

RESOLVED, that pursuant to Sections 7.2(d) and 7.9 of the Agreement, the Owners jointly recognize Wheeling Power's right to carry out and pay for the ELG Upgrades under the Agreement and approve the following procedures to facilitate that work consistent with the orders of the WVPSC and KPSC, and to protect Kentucky ratepayers from the associated costs and risks:

- a. The permits related to the ELG Upgrades at the Mitchell Plant will be transferred to Wheeling Power to the extent not held by Wheeling Power, and all prior action taken by the Owners in furtherance of the foregoing is ratified and approved;
- b. All construction and other contracts related to the ELG Upgrades will be in the name of Wheeling Power such that Wheeling Power (and not Kentucky Power) is contractually responsible for those contracts;

- c. The appropriate work orders and supporting accounting will be implemented to assign to Wheeling Power all costs associated with the ELG Upgrades;
- d. The appropriate work orders and supporting accounting will be implemented to assign to Wheeling Power and Kentucky Power equally all costs associated with the CCR Upgrades;
- e. The expenditures associated with the CCR Upgrades, in which the Owners share equally, and the ELG Upgrades, which will be the exclusive responsibility of Wheeling Power, will be classified in accordance with the recommendations of the independent engineer's report identifying the ELG Upgrades and CCR Upgrades and their associated costs, as previously adopted by this Committee.

RESOLVED, that to further implement and clarify Sections 3.2 and 7.9 of the Agreement, the Owners approve the following procedures related to capital items which have a depreciable life extending beyond, or with an in-service date not occurring until after, December 31, 2028:

- a. Wheeling Power will exclusively pay for any capital item whose in-service date is reasonably expected to be after December 31, 2028;
- b. Wheeling Power's Operating Representative may unilaterally authorize any capital expenditure that will be assigned exclusively to Wheeling Power, including the ELG Upgrades;
- c. if a capital expenditure has a depreciable life that extends beyond December 31, 2028, Kentucky Power's responsibility for the cost of that item will be limited to its 50% ownership share of the cost of the asset ratably allocated to the portion of such depreciable life occurring prior to December 31, 2028, and Wheeling Power will be responsible for the remainder;
- d. any other capital expenditures shall be allocated 50% to (and paid for by) each Owner, subject to the written approval of the Operating Committee;
- e. to the extent either Owner funds any capital item in excess of 50%, that capital item will be owned by the Owners in proportion to their investment in that asset for regulatory, tax and other purposes; and
- f. an Owner's Operating Representative may unilaterally authorize any capital expenditure for which such Owner shall be allocated greater than 75% of the capital costs, up to an aggregate amount of such capital costs that does not exceed \$3 million per year allocated to the other Owner.

IN WITNESS WHEREOF, the undersigned have signed this written consent action effective as of the Effective Date.

OPERATING REPRESENTATIVES:

DocuSigned by:

Deryle Brett Mattison

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D. Brett Mattison

DocuSigned by:

Christian T. Beam

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Christian T. Beam

**PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON**

CASE NO. 21-0810-E-PC

**APPALACHIAN POWER COMPANY and
WHEELING POWER COMPANY,**
public utilities.

*Petition for Commission Consent and Approval
to Enter into Ownership and Operating Agreements
for the Mitchell Plant*

CERTIFICATE OF SERVICE

I, Keith D. Fisher, counsel for Appalachian Power Company and Wheeling Power Company, do hereby certify that a true and correct copy of the foregoing filing was served upon the following, via electronic mail, on this 1st day of September, 2022:

Lucas R. Head, Esq. Public Service Commission of West Virginia 201 Brooks Street Charleston, WV 25301 <i>Counsel for Staff of WV Public Service Commission</i>	Robert F. Williams, Esq. Heather B. Osborn, Esq. John Auville, Esq. Consumer Advocate Division 300 Capitol Street, Suite 810 Charleston, WV 25301 <i>Counsel for Consumer Advocate Division</i>
Susan J. Riggs, Esq. Spilman Thomas & Battle, PLLC 300 Kanawha Blvd E Charleston, WV 25301 <i>Counsel for WVEUG</i>	Derrick P. Williamson, Esq. Barry A. Naum, Esq. Spilman Thomas & Battle, PLLC 1100 Bent Creek Blvd, Suite 101 Mechanicsburg, PA 17050 <i>Counsel for WVEUG</i>
Emmett Pepper, Esq. Pepper & Nason 8 Hale Street Charleston, WV 25301 <i>Counsel for CAG, SUN, and EEVV</i>	H. Brann Altmeyer, Esq. Jacob C. Altmeyer, Esq. Phillips, Gardill, Kaiser & Altmeyer, PLLC 61 Fourteenth Street Wheeling, WV 26003 <i>Counsel for WV Coal Association, Inc.</i>
Shannon Fisk, Esq. Earthjustice 48 Wall St., 15 th Floor New York, NY 10005 <i>Counsel for CAG, SUN, and EEVV</i>	Raghava Murthy, Esq. Earthjustice 48 Wall St., 15 th Floor New York, NY 10005 <i>Counsel for CAG, SUN, and EEVV</i>



Keith D. Fisher (WV State Bar #11346)

Exhibit TCK-2 - Kentucky Power Generating Unit Winter Storm Elliott Period (12/23/2022-12/27/2022) Performance Data

KPCo Unit Performance During the 5-Day Winter Storm Elliott Period (12/23/2022 - 12/27/2022)

Plant-Unit	Eq Forced Outage Rate (EFOR) (%)	Eq Availability Ftr (EAF) (%)	Net Cap Ftr (NCF) (%)
Big Sandy Unit 1	0.0	0.0	0.0
Mitchell Unit 1	13.7	86.3	80.3
Mitchell Unit 2	21.6	78.4	74.1

Performance Metric Definitions¹

Equivalent Forced Outage Factor (EFOR) - The ratio of a generating unit's forced outage hours + derates to its forced outage hours + service hours expressed as a percentage.

Equivalent Availability Factor (EAF) - The ratio of a generating unit's available hours – all derate hours to the number of hours in the period as a percentage

Net Capacity Factor (NCF) - The ratio of a generating unit's net generation to its maximum potential output for the period as a percentage.

¹ Formal definitions and equations for performance metrics can be found in the **NERC 2023 Data Reporting Instructions - Appendix F**.

Kentucky Power Generation Units Outages and Derates during Winter Storm Elliott (12/23/2023 - 12/27/2023)							
Unit Name	Event Type*	Start Date	End Date	Event Description**	Duration (Hours)	MW Reduction	MWh Loss
Big Sandy 1	PO	9/10/2022 0:00	1/14/2023 11:47	Boiler i/r, Generator Field Out inspection/possible rewedge, Turbine Valve i/r, Corrosion Fatigue i/r, Cooling Tower i/r, ReHeat Attenuator i/r, Gas valve i/r, FD Fan and Motor i/r, High Energy Piping (HEP) i/r, Flow Accelerated Corrosion (FAC) i/r, Core Loop testing.	120	295.4	35448
Mitchell 1	D3	12/22/2022 0:00	12/30/2022 0:00	Large clinker growing on North side of Boiler	120	35	4200.1
Mitchell 1	D1	12/24/2022 6:48	12/24/2022 7:06	Reagent slurry feed tanks have frozen level indications and tanks were lower than expected	0.3	465.1	139.4
Mitchell 1	D1	12/24/2022 7:06	12/24/2022 7:43	Reagent slurry feed tanks have frozen level indications and tanks were lower than expected	0.62	97.1	60.1
Mitchell 1	D1	12/24/2022 7:43	12/24/2022 8:20	Reagent slurry feed tanks have frozen level indications and tanks were lower than expected	0.62	465.1	286.5
Mitchell 1	D1	12/24/2022 8:20	12/24/2022 12:00	Reagent slurry feed tanks have frozen level indications and tanks were lower than expected	3.67	140.1	513.7
Mitchell 1	D1	12/24/2022 13:48	12/24/2022 19:34	Opacity	5.77	80.1	462.1
Mitchell 1	D1	12/24/2022 19:34	12/25/2022 9:00	Opacity	13.43	90.1	1210.6
Mitchell 1	D1	12/25/2022 10:07	12/25/2022 12:31	Frozen lumps of coal causing conveyor trip out outs	2.4	135.1	324.2
Mitchell 1	D1	12/26/2022 0:20	12/26/2022 8:29	Opacity	8.15	45.1	367.3
Mitchell 1	D1	12/26/2022 8:29	12/26/2022 8:46	Opacity	0.28	60.1	16.9
Mitchell 1	D1	12/26/2022 8:46	12/27/2022 0:00	Opacity	15.23	85.1	1296.1
Mitchell 1	D3	12/27/2022 0:00	12/27/2022 1:40	Opacity	1.67	85.1	141.7
Mitchell 1	D3	12/27/2022 1:40	12/27/2022 2:02	Opacity	0.37	135.1	49.3
Mitchell 1	D3	12/27/2022 2:02	12/27/2022 2:53	Opacity	0.85	155.1	131.7
Mitchell 1	D3	12/27/2022 2:53	12/27/2022 4:43	Opacity	1.83	185.1	339.6
Mitchell 1	D3	12/27/2022 4:43	12/27/2022 7:22	Opacity	2.65	205.1	543.7
Mitchell 1	D3	12/27/2022 7:22	12/27/2022 11:03	Opacity	3.68	235.1	865.6
Mitchell 1	D3	12/27/2022 11:03	12/28/2022 0:00	Opacity	12.95	245.1	3174.4
Mitchell 2	D1	12/23/2022 10:10	12/23/2022 10:28	25 Pulv issue	0.3	95.2	28.4
Mitchell 2	D1	12/23/2022 10:28	12/23/2022 17:44	25 Pulv issue, could not get dampers to operate	7.27	90	654.3
Mitchell 2	D1	12/23/2022 12:07	12/23/2022 13:56	Opacity	1.82	25.2	45.8
Mitchell 2	D1	12/23/2022 13:56	12/23/2022 14:53	Opacity	0.95	50	47.4
Mitchell 2	D1	12/23/2022 14:53	12/23/2022 19:22	Opacity	4.48	100	448
Mitchell 2	D1	12/23/2022 19:22	12/23/2022 21:08	Opacity	1.77	90	158.8
Mitchell 2	D1	12/23/2022 21:08	12/24/2022 2:46	Opacity	5.63	150	844.7
Mitchell 2	D1	12/24/2022 2:46	12/24/2022 4:41	Opacity	1.92	90	172.3
Mitchell 2	D1	12/24/2022 4:41	12/24/2022 14:08	Opacity	9.45	75	708.8
Mitchell 2	D1	12/24/2022 6:48	12/24/2022 7:08	Reagent slurry feed tanks have frozen level indications and tanks were lower than expected	0.33	415.2	138.3
Mitchell 2	D1	12/24/2022 7:08	12/24/2022 12:00	Reagent slurry feed tanks have frozen level indications and tanks were lower than expected	4.87	210.2	1023.3
Mitchell 2	D1	12/24/2022 14:08	12/25/2022 0:00	Opacity	9.87	90	888.2
Mitchell 2	D3	12/25/2022 0:00	12/26/2022 0:00	Anticipated opacity	24	190.2	4565
Mitchell 2	D3	12/26/2022 0:00	12/27/2022 12:38	Opacity	36.63	190.2	6968
Mitchell 2	D3	12/27/2022 12:38	12/27/2022 14:02	Opacity	1.4	210	294
Mitchell 2	D3	12/27/2022 14:02	12/27/2022 15:12	Opacity	1.17	230	268.7
Mitchell 2	D3	12/27/2022 15:12	12/27/2022 16:08	Opacity	0.93	340	317.7
Mitchell 2	D3	12/27/2022 16:08	12/28/2022 23:40	Opacity	7.87	365	2871.6

* Event Type:

Outage

PO Planned outage

Derate

D1 Requires immediate reduction in capacity

D2 Does not require an immediate reduction in capacity, but requires a reduction within six (6) hours

D3 Can be postponed beyond six (6) hours, but requires reduction in capacity before the end of the next weekend.

**Note: i/r = inspection and repair

