COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company For 1) A Certificate Of Public Convenience And Necessity To Construct A Natural Gas-Fired Combined Cycle Generating Facility In Lawrence County, Kentucky; 2) A Site Compatibility Certificate; 3) A Certificate Of Public Convenience And Necessity To Construct A New Transmission Substation In Boyd County, Kentucky; 4) Approval Of A Short-Term Capacity Purchase Agreement; And 5) For All Other Required Approvals And Relief	))))))))))	Case No. 2026-00324

DIRECT TESTIMONY OF

FRANK E. BLAKE

ON BEHALF OF KENTUCKY POWER COMPANY

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I. INTRODUCTION

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

A. My name is Frank E. Blake, and I am Director – Environmental Services for American Electric Power Service Corporation ("AEPSC"). AEP is the parent company of Kentucky Power Company ("Kentucky Power" or the "Company"). AEPSC supplies engineering, financing, accounting, regulatory, and similar planning and advisory services to AEP's regulated electric operating companies, including Kentucky Power. My business address is 1 Riverside Plaza, Columbus, Ohio 43215.

II. BACKGROUND

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND BUSINESS EXPERIENCE.

A. I earned a Bachelor's degree in civil engineering in 1997 and Master's degree in education in 2004, both from Ohio University. Currently, I am taking coursework to become a professional surveyor. Since 2003, I have been a registered professional engineer in the State of Ohio. I began employment with AEP in 1995 and have worked in a variety of environmental positions with increasing responsibility related to day-to-day compliance, new generation projects, state and federal regulatory development, and various strategic environmental planning initiatives. I assumed my current position as Director – Environmental Services in 2019.

Q. WHAT ARE YOUR PRINCIPAL AREAS OF RESPONSIBILITY?

A. My responsibilities focus on strategic environmental compliance planning, regulatory engagement, and external engagement at the state and federal levels. In addition, my responsibilities support the development, evaluation, and implementation of new federal and state environmental regulations across the AEP operating companies, including Kentucky Power.

Q. HAVE YOU PREVIOUSLY TESTIFIED IN ANY REGULATORY PROCEEDINGS?

A. Yes. I have filed testimony before the Arkansas Pollution Control and Ecology Commission in Consolidated Docket No. 08-006-P regarding air permitting for the Southwestern Electric Power Company's Turk Power and the Corporate Commission of the State of Oklahoma (Docket PUD-2024-000057). I have also filed testimony on behalf of the Indiana Michigan Power Company before the Indiana Utility Regulatory Commission (Cause Number 46443 and Cause Number 46454). I have not testified in any proceeding before the Public Service Commission of Kentucky.

III. PURPOSE OF TESTIMONY

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

A. The purpose of my Direct Testimony is to discuss the environmental aspects and related permitting requirements associated with Kentucky Power's proposed Combined-Cycle Generation Project.

IV. COMBINED-CYCLE GENERATION PROJECT ENVIRONMENTAL ASPECTS

Q. PLEASE BRIEFLY DESCRIBE THE COMBINED-CYCLE GENERATION PROJECT.

A. The proposed Combined-Cycle Generation Project is a new natural gas-fired combined-cycle electric generating plant to be located at the existing Kentucky Power Big Sandy Plant in Louisa, Kentucky. Company Witness Dilley provides further details of the Combined-Cycle Generation Project.

Q. PLEASE SUMMARIZE THE ENVIRONMENTAL ASPECTS OF THE COMBINED-CYCLE GENERATION PROJECT.

A. The environmental aspects associated with construction of the Combined-Cycle Generation Project include stormwater management, fugitive dust minimization, and the potential need to mitigate wetland impacts. Operational environmental aspects include combustion turbine air emissions, potable and non-potable water supplies, as well as wastewater discharge associated with operation of the cooling towers and miscellaneous low volume plant systems.

Q. PLEASE EXPLAIN THE ENVIRONMENTAL REGULATORY FRAMEWORK APPLICABLE TO NEW NATURAL GAS-FIRED GENERATION FACILITIES SUCH AS THE COMBINED-CYCLE GENERATION PROJECT.

A. The Combined-Cycle Generation Project is subject to state and federal regulatory requirements that are administrated and enforced by the Kentucky Department for Environmental Protection ("KDEP"), the United States Environmental Protection Agency ("EPA"), and the United States Army Corps of Engineers ("USACE"). These agencies issue permits that establish requirements for the construction and operation of the

Combined-Cycle Generation Project that meet applicable regulations designed to protect human health and the environment. These permits contain emission, wastewater discharge, and other limits, along with related monitoring, recordkeeping, and reporting requirements.

Q. PLEASE SUMMARIZE THE CURRENT ENVIRONMENTAL REGULATIONS AND RELATED PERMITS APPLICABLE TO THE COMBINED-CYCLE GENERATION PROJECT.

A. With respect to air permitting, the Combined-Cycle Generation Project must obtain a permit to install support construction and must revise the existing Title V Permit for the existing Big Sandy Unit 1 plant to support operations associated with the Combined-Cycle Generation Project. KDEP administers these air permitting programs. The new units will also be subject to the EPA Title IV Acid Rain Rule and Cross-State Air Pollution Rule, which are emission allowance cap-and-trade programs administered by the EPA. Prior to construction, a stormwater construction permit must be obtained from KDEP. Operation of the facility will also require the current Clean Water Act National Pollution Discharge Elimination System ("NPDES") permit for the existing Big Sandy Plant to be modified. The NPDES permitting program is administered by KDEP. The proposed Combined-Cycle Generation Project area is currently being evaluated for the presence of wetlands. If wetlands are identified, then efforts will be made to avoid or minimize disturbance. If wetlands are identified and cannot be avoided, a Clean Water Act Section 401 Permit from KDEP and Section 404 Certification from the USACE may be needed.

Q. PLEASE SUMMARIZE THE AIR EMISSION CONTROL SYSTEMS FOR THE COMBINED-CYCLE GENERATION PROJECT.

A. Emission controls for the Combined-Cycle Generation Project combustion turbines include efficient combustion systems, a selective catalytic reduction system to reduce nitrogen oxides emissions, and an oxidation catalyst to reduce volatile organic compounds emissions.

V. PERMITTING AND COMBINED-CYCLE GENERATION PROJECT EXECUTION

Q. PLEASE SUMMARIZE THE AIR PERMITTING SCHEDULE NEEDED TO COMMENCE CONSTRUCTION OF THE COMBINED-CYCLE GENERATION PROJECT.

A. The air permit application will be submitted to KDEP in the fourth quarter of 2026. A final air permit is targeted to be issued by KDEP late in 2027 or early 2028. As discussed by Company Witness Dilley, the air permit timeline is a critical milestone to support the overall project schedule.

VI. GREENHOUSE GAS STANDARDS

Q. PLEASE DESCRIBE THE APPLICABILITY OF THE MAY 2024 EPA CLEAN AIR ACT SECTION 111 GREENHOUSE GAS ("GHG") STANDARDS TO THE COMBINED-CYCLE GENERATION PROJECT.

A. On May 9, 2024, the EPA finalized GHG emission standards for new natural gas combustion turbine units ("2024 GHG Standards"). These standards are comprised of three subcategories based on the annual capacity factor of the units. For low load units (<20% capacity factor), the standard is based on the use of natural gas. The standards for intermediate load units (20 to 40% capacity factor) are based on high efficiency designed

units. Finally, for base load units (>40% capacity factor), the standards are designed to be implemented in two phases. Phase 1 is based on high efficiency designed turbines, while Phase 2 is based on the use of carbon capture and storage technology.

Q. WHAT IS THE CURRENT STATUS OF THE 2024 GHG STANDARDS?

A. On September 17, 2026, the EPA partially rescinded the 2024 GHG Standards, which resulted in the elimination of the Phase 2 baseload unit standard based on the use of carbon capture and storage technology. Also on September 17, 2026, the EPA proposed to repeal the 2024 standards altogether. The EPA is expected to finalize the repeal in 2027.

VII. CONCLUSION

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

VERIFICATION

The undersigned, Frank E. Blake, being duly sworn, deposes and says he is the Director – Environmental Services for American Electric Power Service Corporation that he has personal knowledge of the matters set forth in the foregoing testimony and the information contained therein is true and correct to the best of his information, knowledge, and belief after reasonable inquiry.

Frank E. Blake

State of Ohio)
) Case No. 2026-00324
County of Franklin)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Frank E. Blake, on Nov. 4, 2026.

Notary Public

My Commission Expires N/A

Notary ID Number

ROBERT J. SCHMIDT, JR.
ATTORNEY AT LAW
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION HAS NO EXPIRATION DAY
SECTION 147.03 R.C.