COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC JOINT APPLICATION OF KENTUCKY UTILITIES COMPANY AND LOUISVILLE GAS AND ELECTRIC COMPANY FOR CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY AND SITE COMPATIBILITY CERTIFICATES AND APPROVAL OF A DEMAND SIDE MANAGEMENT PLAN	**)**	**CASE NO. 2022-00402**

DIRECT TESTIMONY OF PHILIP A. IMBER DIRECTOR, ENVIRONMENTAL AND FEDERAL REGULATORY COMPLIANCE KENTUCKY UTILITIES COMPANY AND LOUISVILLE GAS AND ELECTRIC COMPANY

Filed: December 15, 2022

INTRODUCTION

Q. Please state your name, position, and business address.

A. My name is Philip A. Imber. I am the Director of Environmental and Federal Regulatory Compliance for Kentucky Utilities Company ("KU") and Louisville Gas and Electric Company ("LG&E") (collectively, "Companies") and an employee of LG&E and KU Services Company, which provides services to KU and LG&E. My business address is 220 West Main Street, Louisville, Kentucky 40202. A complete statement of my education and work experience is attached to this testimony as Appendix A.

Q. Have you previously testified before this Commission?

A. Yes. I testified before this Commission at the hearing in the Companies' 2021 Integrated Resource Plan proceeding, Case No. 2021-00393.[1] Also, I have sponsored responses to data requests in proceedings before the Commission.[2]

Q. What is the purpose of your direct testimony?

A. The purpose of my testimony is to address and update the Commission concerning environmental regulations that are pertinent to the Companies' proposals in this proceeding. Specifically, I provide updates on the status and impact of the U.S. Environmental Protection Agency's ("EPA's") Good Neighbor Plan regarding nitrogen oxide ("NOx") emissions and its anticipated revisions to the New Source Performance Standard ("NSPS") for greenhouse gas ("GHG") emissions from electric generating units. I will also discuss why the Companies' modeling assumptions regarding GHG

[1] *Electronic 2021 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company*, Case No. 2021-00393, July 13, 2022 H.V.T. at 12:06:10 – 1:37:15.
[2] *See, e.g.,* Case No. 2021-00393, Companies' Responses to Joint Intervenors 1-26 and 1-27 (Feb. 11, 2022).

emissions regulations over the next 30 years are reasonable. Finally, I provide a list of all environmental permits required for the generating units for which the Companies are seeking certificates of public convenience and necessity ("CPCNs") in this proceeding, and I address the need for and status of related site compatibility certificates.

THE GOOD NEIGHBOR PLAN

Q. What is the Good Neighbor Plan?

A. To understand the Good Neighbor Plan, it is useful to understand the regulatory context in which EPA promulgated it, which is the National Ambient Air Quality Standards ("NAAQS"). Under the federal Clean Air Act as amended, EPA has authority to prescribe the maximum concentration of certain pollutants allowed in ambient air under NAAQS. There are six pollutants addressed by NAAQS, sometimes called "criteria pollutants," one of which is ozone. The most recent ozone NAAQS, which EPA issued in 2015, requires ambient air ozone concentrations not to exceed 70 parts per billion (ppb).[3] Nitrogen oxides (NOx) are a precursor to ozone; therefore, reductions in permissible ozone levels under NAAQS require reduced NOx emissions, including from coal-fired electric generating units. States have primary NAAQS compliance authority via State Implementation Plans ("SIPs") in which states formulate and require emissions restrictions needed to achieve compliance, including from electric generating units. If states' SIPs are insufficient to result in NAAQS compliance, EPA must issue a Federal Implementation Plan ("FIP") to achieve compliance.

[3] 80 Fed. Reg. 65292 (Oct 26, 2015).

In addition to achieving NAAQS compliance through local emission reductions, the Clean Air Act includes a "good neighbor provision" that requires states to prohibit emissions that will contribute significantly to NAAQS noncompliance in other states.[4] Again, states have the primary authority for good neighbor compliance through SIPs, but EPA must issue FIPs when SIPs are insufficient. Perhaps the most notable recent set of FIPs is the Cross-State Air Pollution Rule ("CSAPR"), which, among other things, EPA issued to address NOx emissions from electric generating units to achieve compliance with 2008 ozone NAAQS standards through state-level emissions budgets and an emission allowance trading system. Collections of FIPs issued together to achieve good neighbor compliance are also called "transport rules."

EPA's proposed Good Neighbor Plan is a transport rule designed to aid in compliance with the 2015 ozone NAAQS.[5] The proposed rule would accomplish its compliance goal in part by revising and tightening the existing CSAPR NOx allowance trading program with revised NOx emissions budgets for fossil fuel-fired power plants in 25 states, including Kentucky, beginning in the 2023 ozone season (May through September). The rule's proposed emissions budgets would initially assume the consistent operation of emissions controls already installed, not the installation of any additional controls. In 2024, emissions budgets for units without NO_x controls would assume stringent operation levels of *state of the art* combustion controls (0.199 lbs/mmbtu). Beginning in 2026, emissions budgets would assume installation of selective catalytic reduction ("SCR") controls at all coal-fired generating units over 100 MW, regardless of whether units actually have SCRs. In addition, the rule would:

[4] 42 U.S.C. 7410(a)(2)(D)(i)(I).
[5] 87 Fed. Reg. 20,036 (Apr. 6, 2022).

impose a daily emissions rate limit with a three to one allocation surrender ratio for large coal-fired units, which would take effect in 2024 for SCR-equipped units and in 2027 for units without existing NO_x controls; limit the size of the emissions allowance bank, further limiting flexibility to operate non-SCR-equipped units; and beginning in 2025, annually recalibrate emissions budgets to account for new retirements, new units, and changing operation. In short, as proposed, the Good Neighbor Plan would effectively require non-SCR-equipped coal units to cease operating, or operate only at very minimal levels, during each year's ozone season beginning in 2026.

Q. If the Good Neighbor Plan becomes final in its proposed form, how might the Companies comply with it?

A. If the Good Neighbor Plan becomes final as proposed, the various NO_x allocation market mechanisms implemented in the Good Neighbor Plan will cause significant strain on or collapse of the NO_x allocation market. As such, it is imperative the Companies prepare for self-compliance with the Good Neighbor Plan. Self-compliance equates to implementing control technologies as prescribed in the Good Neighbor Plan or idling units without prescribed NO_x controls – in either case, compliance with the Good Neighbor Plan drives matching annual projected emissions with annual projected allocations to the extent possible.

Q. Have the Companies asked EPA to revise the Good Neighbor Plan?

A. Yes. The Companies filed comments with EPA under my signature to address the Companies' concerns with the Good Neighbor Plan. Among other items the comments addressed, the Companies were very clear about the cost and reliability impacts the 2026 deadline could create:

> Because new generation cannot be constructed within the 2026 compliance timeline of the proposed GNP [Good Neighbor Plan], LKE [the Companies] would face the choice of installing potentially uneconomic SCRs on coal units it may otherwise retire within a few more years or idling or retiring these units prior to the 2026 ozone season and relying on rolling blackouts until new generation capacity can be constructed. Thus, the proposed timeline of the GNP either extends the lives of coal units that would otherwise be retired or creates major reliability issues.[6]

Q. When will EPA finalize the Good Neighbor Plan?

A. Given the rule's stated intention to be effective for the 2023 ozone season, the current expectation is that EPA will finalize the Good Neighbor Plan by March 2023.

GREENHOUSE GAS NEW SOURCE PERFORMANCE STANDARDS

Q. What is the status of greenhouse gas New Source Performance Standards for electric generating units?

A. EPA has stated in several forums that it anticipates issuing a proposed rulemaking to revise the existing greenhouse gas New Source Performance Standards in March 2023.[7] Although the rulemaking will not be final when issued in March 2023, it will have immediate effect unless stayed by a court.

Q. What are the current greenhouse gas New Source Performance Standards that would apply to the Companies' proposed NGCC units?

[6] Comments of LG&E and KU Energy, LLC on the Proposed Federal Implementation Plan Addressing Regional Ozone Transport for the 2015 8-Hour Ozone National Ambient Air Quality Standard (NAAQS), Docket ID No. EPA-HQ-OAR-2021-0668 (June 21, 2022), available at https://downloads.regulations.gov/EPA-HQ-OAR-2021-0668-0408/attachment_1.pdf.

[7] *See, e.g.,* EPA Memorandum Opening Non-Rulemaking Docket for Public Input, EPA-HQ-OAR-2022-0723 (Sept. 1, 2022) (opening docket for public comment on GHG NSPS until Mar. 27, 2023), available at https://downloads.regulations.gov/EPA-HQ-OAR-2022-0723-0001/content.pdf; U.S. Office of Management and Budget, Office of Information and Regulatory Affairs, Unified Agenda and Regulatory Plan, Agency Rule List Spring 2022, RIN 2060-AV09, "Amendments to the NSPS for GHG Emissions From New, Modified, & Reconstructed Stationary Sources: EGUs" (showing Notice of Proposed Rulemaking date of March 2023), available at https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=202204&RIN=2060-AV09.

A. EPA issued the first greenhouse gas New Source Performance Standards in 2015, which established NGCC as the best system of emission reduction for "base load natural gas-fired units" with a performance standard of 1,000 lbs. CO_2 per MWh.[8]

Q. Will the proposed NGCC units be able to meet the current standard?

A. Yes. Cane Run Unit 7 (which is an NGCC) typically operates at a CO_2 emission rate below 800 lbs./MWh, more than 20% below the current permissible emission level and less than half of recent Mill Creek Unit 2 carbon intensity (greater than 1,800 lbs/MWh). My understanding is that the new units the Companies are proposing are at least that efficient. For reference, the Companies' large-frame simple-cycle combustion turbines, non-baseload service, typically emit just around 1,100 lbs. CO_2 per MWh.

Q. Do you anticipate that the revised greenhouse gas New Source Performance Standards will significantly reduce the CO_2 emission levels in the current standards for NGCC units?

A. My current expectation is that the revised greenhouse gas New Source Performance Standards will reduce the permissible CO_2 emission level for new NGCC units, but not below the level that would make NGCCs uneconomical (e.g., by setting a standard that would require carbon capture and sequestration). That belief has two bases. First, the Clean Air Act definition of "standard of performance" requires EPA to consider the cost of the standard it establishes based on the "best system of emission reduction," which also must be "adequately demonstrated." The Clean Air Act states in part:

> The term "standard of performance" means a standard for emissions of air pollutants which reflects the degree of emission limitation

[8] *See* 87 Fed. Reg. 64,513 (Oct. 23, 2015), available at https://www.govinfo.gov/content/pkg/FR-2015-10-23/pdf/2015-22837.pdf.

> achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any non-air-quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.[9]

Thus far, based on my own industry knowledge and review of EPA's April 2022 white paper on greenhouse gas emission reduction technologies,[10] it is unclear that any system of emission reduction for "base load natural-gas fired units" other than NGCC meets the cost and adequate demonstration standards.

The second and more compelling reason I believe the Companies' proposed NGCC units will meet the revised greenhouse gas New Source Performance Standards for CO_2 is that it would be counterproductive from a CO_2 emissions perspective to establish a standard that prevented the construction of much lower CO_2-emitting NGCCs. Such a standard would effectively compel continuing investment in (e.g., by adding SCRs) and operation of higher CO_2-emitting coal-fired units. Mill Creek Unit 2 and Ghent Unit 2 both emit more than two times of Cane Run Unit 7's CO_2 emissions on a per-MWh basis. They are far from the only examples of such units that could and would retire across the entire electric generating unit industry in the near future if cost-effective NGCC units are a viable alternative. Therefore, it seems unlikely that EPA would establish a greenhouse gas New Source Performance Standards for CO_2 that would prevent the Companies from proceeding with their proposed NGCC units.

[9] 42 U.S.C. Sec. 7411(a)(1).

[10] EPA Office of Air Quality Planning and Standards Sector Policies and Programs Division, "Available and Emerging Technologies for Reducing Greenhouse Gas Emissions from Combustion Turbine Electric Generating Units" (Apr. 21, 2022), available at https://www.epa.gov/system/files/documents/2022-04/epa_ghg-controls-for-combustion-turbine-egus_draft-april-2022.pdf.

ASSUMPTIONS CONCERNING FUTURE GREENHOUSE GAS REGULATIONS

Q. Are the assumptions the Companies made in their Resource Assessment concerning future greenhouse gas regulations reasonable?

A. Yes. Although I did not conduct the modeling involved in the Companies' Resource Assessment and do not purport to be an expert in those matters, I was involved in forming the greenhouse gas assumptions that informed the modeling that resulted in the Resource Assessment. Those assumptions are indeed reasonable.

Q. What were those assumptions, and why were they reasonable?

A. First, in the base-case scenarios the Companies assumed that the existing greenhouse gas New Source Performance Standards would remain effectively unchanged (i.e., would continue to permit NGCC and SCCT units to be built). I believe that assumption is reasonable on the grounds I discussed above.

Second, the Companies assumed that the greenhouse gas emissions standards for existing generating units would be consistent with the Affordable Clean Energy ("ACE") standards EPA proposed in 2018 and made final in 2019.[11] Although the ACE rule was stayed by the D.C. Circuit Court of Appeals and later withdrawn by EPA, it is the most recent rulemaking by EPA on this issue that would appear to be consistent with the U.S. Supreme Court's majority opinion in *West Virginia v. EPA* because it relies on technology improvements, namely heat-rate improvements, for coal-fired units as the best system of emissions reduction.[12] In evaluating a best system of emissions reductions under the ACE Rule, the Companies identified potential

[11] *See* https://www.epa.gov/stationary-sources-air-pollution/affordable-clean-energy-rule#:~:text=The%20ACE%20rule%20establishes%20emission,under%20section%20111(d).
[12] *West Virginia v. EPA*, 597 U.S. ___ (2022).

efficiency projects that may be applicable; however, the ACE Rule does not drive a transition from the Companies' existing electric generating units.

Third, the Companies conducted their modeling using three different CO_2 price cases: $0/ton, $15/ton, and $25/ton. This approach to CO_2 pricing is reasonable on two grounds: (1) it is the same set of CO_2 pricing scenarios the Commission Staff asked the Companies to analyze in the Companies' recent 2021 IRP proceeding; and (2) after the U.S. Supreme Court's opinion in *West Virginia v. EPA*, it appears that EPA lacks authority to implement a national CO_2 pricing program under its existing Clean Air Act authority; and the current Congress does not appear inclined toward such legislation, making any federal CO_2 pricing regime unlikely in the near term.

Q. Did the Companies account for methane emissions pricing under the Inflation Reduction Act?

A. Yes, the Companies did account for it, but the price is zero. The Inflation Reduction Act states in relevant part:

> The Administrator shall impose and collect a charge on methane emissions that exceed an applicable waste emissions threshold under subsection (f) from an owner or operator of an applicable facility that reports more than 25,000 metric tons of carbon dioxide equivalent of greenhouse gases emitted per year pursuant to subpart W of part 98 of title 40, Code of Federal Regulations, regardless of the reporting threshold under that subpart.[13]

The total of all the Companies' reportable emissions of carbon dioxide equivalent of greenhouse gases under Subpart W of 40 CFR § 98.230 *et seq.*, including LG&E's gas operations, is less than 25,000 metric tons per year, much less 25,000 metric tons per

[13] Inflation Reduction Act, Pub. Law No. 117-169, Sec. 60113 "Methane Emissions Reduction Program," subpart (c) "Waste Emissions Charge," available at https://www.congress.gov/117/bills/hr5376/BILLS-117hr5376enr.pdf (PDF page 257 of 273).

year *per facility*. The Inflation Reduction Act's methane charge is therefore zero for the Companies, including their proposed NGCC units.

ENVIRONMENTAL PERMITS

Q. What environmental work will the Companies need to perform before beginning to construct the Mill Creek and Brown NGCC units?

A. Before beginning construction, the Mill Creek NGCC unit must receive an air construction permit from Louisville Metro Air Pollution Control District and the Brown NGCC unit must receive an air construction permit from the KYDAQ. Both of these permits must comply with the Title V program of the Clean Air Act. In addition to the air construction permits for the NGCC units, as part of the CPCN and Site Compatibility Certificate process with the Commission, the Companies must submit an acceptable cumulative environmental assessment to the Kentucky Energy and Environment Cabinet. The final site footprint for the NGCC units and new gas pipeline infrastructure will determine if, for example, there are affected streams in the site area that would require a permit from the U.S. Army Corps of Engineers.

Q. Are there other environmental permits that will be required before each NGCC unit becomes operational?

A. Yes, there are several environmental permits that must be revised or updated prior to the commercial operation of each NGCC unit, which I have listed in Exhibits PAI-1 (Mill Creek) and PAI-2 (Brown).

Q. What is the expected timeline for obtaining the necessary environmental permits to begin constructing each NGCC?

A. The only environmental permit the Companies need to obtain before beginning to construct each NGCC is a Title V air construction permit. The Companies expect to

file an application for each permit by the end of December 2022 and seek final Title V permits issued by October 1, 2023.

Q. Will the Companies have to obtain any environmental permits in connection with their proposed self-build and build-to-transfer solar facilities or battery facility?

A. New solar or battery sites will require a general permit for industrial stormwater discharges. Certainly, there will be no need for air permits or water withdrawal or pollution discharge permits. Regarding the solar facilities, the final site footprint for the Mercer County Solar Facility will determine if, for example, there are affected streams in the site area that would require a permit from the U.S. Army Corps of Engineers. I have listed possible permits in Exhibit PAI-3. Because the Marion County Solar Facility is being developed and constructed under a build-to-transfer agreement, the developer, not the Companies, will be responsible for obtaining all necessary permits.

SITE COMPATIBILITY CERTIFICATES

Q. Are the Companies asking the Commission to issue Site Compatibility Certificates for the NGCC units or the solar facilities?

A. The Companies are asking the Commission to issue Site Compatibility Certificates pursuant to KRS 278.216 for the Mill Creek NGCC and the Brown NGCC. In support of that request, the Companies are providing Site Assessment Reports with the content required under KRS 278.708. Those reports are attached as exhibits to the Application. The Companies recognize the need to obtain a Site Compatibility Certificate for the Mercer County Solar Facility, but are not requesting one at this time. The Companies plan to make that request in a filing at the Commission in 2023. Regarding the Marion County Solar Facility, because it is being developed and constructed under a build-to-

transfer agreement, a Site Compatibility Certificate is not necessary for the Companies because they are not constructing the facility. Since the battery facility to be constructed at E.W. Brown is not a generating facility, a Site Compatibility Certificate is not necessary, and, therefore, the Companies are not requesting one.

Q. Does this conclude your testimony?

A. Yes.

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Philip A. Imber**, being duly sworn, deposes and says he is the Director, Environmental and Federal Regulatory Compliance for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the foregoing testimony, and the answers contained therein are true and correct to the best of his information, knowledge, and belief.

Philip A. Imber

Philip A. Imber

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 9th day of December 2022.

Notary Public

Notary Public ID No. KYNP53381

My Commission Expires:

July 11, 2026

APPENDIX A

Philip A. Imber
Director, Environmental and Federal Regulatory Compliance
Kentucky Utilities Company
Louisville Gas and Electric Company
220 West Main Street
Louisville, Kentucky 40202
Telephone: (502) 627-4144

Previous Positions

Director, Environmental Affairs	July 2021 – Nov. 2021
Manager, Land, & Water – Environmental Affairs	Feb. 2019 – July 2021
Manager, Air – Environmental Affairs	Mar. 2016 – Feb. 2019
Manager, Major Capital Projects, Project Engineering	Dec. 2010 – Mar. 2016
Sr. Chemical Engineer, Project Engineering	May 2007 – Dec. 2010
Chemical Engineer III, Project Engineering	Oct. 2001 – May 2007

Professional/Trade Memberships

Power Generators Air Coalition – Board of Directors
Utility Information Exchange of Kentucky – Chair
Edison Electric Institute – Environmental Advisory Committee
Midwest Ozone Group – Past Chair of Technical Committee

Education

M.B.A., Bellarmine University, 2000
B.S.E., Chemical Engineering, University of Michigan, 1996

Civic Activities

Bingham Fellow – Leadership Louisville
Bellarmine University Board of Overseers
University of Michigan Alumni Association, Past President - Louisville Chapter
Volunteer for various LG&E and KU civic activities

Mill Creek Generating Station
Environmental Permitting and Regulatory Submittal Requirements for Natural Gas Combine-Cycle Unit

Permit	Regulatory Agency	Regulated Activity	Authority	Status
Title V Construction Permit	Louisville Metro Air Pollution Control District (LMAPCD)	Construction of a major or minor source of air pollution and air pollution control equipment.	Regulation 2.03	Permit application submitted by 12/31/2022
Title V Operating Permit		Operation of a major source of air pollution and pollution control equipment.	Regulation 2.16	Permit application submitted on a 5 year cycle. Next application due date is January 31, 2025.
Acid Rain Permit		Acid rain permit is required for >25MW combustion unit.	Regulation 6.47	Permit application to be submitted no later than 24 months prior to commencing operations.
NOx RACT Plan		Amendment to Board Order and site-specific plan for oxides of nitrogen (NOx) reasonably available control technology (RACT). Upon Board approval, the amended plan will be submitted to U.S. Environmental Protection Agency (USEPA) for revision of the Kentucky State Implementation Plan (KYSIP).	KYSIP	This will be submitted after the construction permit is issued and prior to or in conjunction with the Title V operating permit.
Kentucky Pollutant Discharge Elimination System (KPDES) Permit	Kentucky Division of Water (KYDOW)	Discharge of process wastewater from an industrial point source.	401 KAR 5:055 401 KAR 5:060	Amendment to existing permit to be submitted. Permit renewal due for submittal by January 1, 2023.
Best Management Practices Plan (BMP)		Best Management Practices to prevent or minimize the potential for the release of a "BMP Pollutant" from ancillary activities through site run-off, spillage/leaks, sludge/waste disposal, or raw material storage.	401 KAR 5:065	Existing plan will be updated to incorporate KPDES Permit Modification.
Spill Prevention, Control and Countermeasures (SPCC) Plan		Requirements to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or	40 CFR 112	Existing plan will be updated as needed during closure of existing units,

Permit	Regulatory Agency	Regulated Activity	Authority	Status
		upon the navigable waters of the U.S. or adjoining shorelines.		construction, unit start-up & operation.
Groundwater Protection Plan		Activities with the potential to contaminate groundwater.	401 KAR 5:037	Existing plan will be updated as needed during construction, unit start-up & operation.
Section 404 or Nationwide Permit (NWP 39 – Commercial and Institutional Developments)	Army Corp of Engineers			If applicable, required for the commencement of construction. To be issued prior to Full Notice to Proceed.
Above Ground Storage Tank (AST) Permit	State Fire Marshall	Flammable, Combustible and Hazardous material storage vessel installations	815 KAR 10:060	
Certificate of Public Convenience and Necessity for Construction of Utilities	Kentucky Public Service Commission (KYPSC)	Required for construction of utilities. A site compatibility certificate also must be obtained prior to commencing construction of facilities for electric generation capable of generating (in the aggregate) more than 10 MW. The site compatibility certificate requires submission of a site assessment report.	KRS 278.020 KRS 278.216 KRS 278.708	Submitted by 12/31/2022.
Cumulative Environmental Assessment	Kentucky Energy and Environment Cabinet (KYEEC)	Required before construction of a facility for the generation of electricity. This assessment will contain a description of project impact to environmental resources.	KRS 224.10-280	Submitted by 12/31/2022.

EW Brown Generating Station
Environmental Permitting and Regulatory Submittal Requirements for Natural Gas Combine-Cycle Unit

Permit	Regulatory Agency	Regulated Activity	Authority	Status
Title V Air	Kentucky Division for Air Quality (KYDAQ)	Major modification of existing Title V permit for the construction and operation of a source of air pollution and air pollution control equipment.	401 KAR 52:020	Permit modification application submitted by 12/31/2022. Next renewal application due by December 8, 2023.
Acid Rain Permit		Acid rain permit is required for >25MW combustion unit.	401 KAR 52:060	Permit application to be submitted no later than 24 months prior to commencing operations.
Kentucky Pollutant Discharge Elimination System (KPDES) Permit	Kentucky Division of Water (KYDOW)	Discharge of process wastewater from an industrial point source.	401 KAR 5:055 401 KAR 5:060	Amendment to existing permit to be submitted. Permit renewal due for submittal by May 4, 2024.
Best Management Practices Plan (BMP)		Best Management Practices to prevent or minimize the potential for the release of a "BMP Pollutant" from ancillary activities through site run-off, spillage/leaks, sludge/waste disposal, or raw material storage.	401 KAR 5:065	Existing plan will be updated to incorporate KPDES Permit Modification.
Spill Prevention, Control and Countermeasures (SPCC) Plan		Requirements to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the U.S. or adjoining shorelines.	40 CFR 112	Existing plan will be updated as needed during construction, unit start-up & operation.
Groundwater Protection Plan		Activities with the potential to contaminate groundwater.	401 KAR 5:037	Existing plan will be updated as needed during construction, unit start-up & operation.
Section 404 or Nationwide Permit (NWP 39 – Commercial and Institutional Developments)	Army Corp of Engineers			If applicable, required for the commencement of construction. To be issued prior to Full Notice to Proceed.

Permit	Regulatory Agency	Regulated Activity	Authority	Status
Above Ground Storage Tank (AST) Permit	**State Fire Marshall**	**Flammable, Combustible and Hazardous material storage vessel installations**	**815 KAR 10:060**	
Certificate of Public Convenience and Necessity for Construction of Utilities	**Kentucky Public Service Commission (KYPSC)**	**Required for construction of utilities. A site compatibility certificate also must be obtained prior to commencing construction of facilities for electric generation capable of generating (in the aggregate) more than 10 MW. The site compatibility certificate requires submission of a site assessment report.**	**KRS 278.020 KRS 278.216 KRS 278.708**	**Submitted by 12/31/2022.**
Cumulative Environmental Assessment	**Kentucky Energy and Environment Cabinet (KYEEC)**	**Required before construction of a facility for the generation of electricity. This assessment will contain a description of project impact to environmental resources.**	**KRS 224.1[i]0-280**	**Submitted by 12/31/2022.**

Mercer County
Environmental Permitting and Regulatory Submittal Requirements for Solar Installation

Permit	Regulatory Agency	Regulated Activity	Authority	Status
Kentucky Pollutant Discharge Elimination System (KPDES) Permit	Kentucky Division of Water (KYDOW)	General permit for industrial stormwater discharges.	401 KAR 5:055 401 KAR 5:060	
Best Management Practices Plan (BMP)		Best Management Practices to prevent or minimize the potential for the release of a "BMP Pollutant" from ancillary activities through site run-off, spillage/leaks, sludge/waste disposal, or raw material storage.	401 KAR 5:065	
Spill Prevention, Control and Countermeasures (SPCC) Plan		Requirements to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the U.S. or adjoining shorelines.	40 CFR 112	
Groundwater Protection Plan		Activities with the potential to contaminate groundwater.	401 KAR 5:037	
Section 404 or Nationwide Permit (NWP 39 – Commercial and Institutional Developments)	Army Corp of Engineers			If applicable, required for the commencement of construction. To be issued prior to Full Notice to Proceed.
Certificate of Public Convenience and Necessity for Construction of Utilities	Kentucky Public Service Commission (KYPSC)	Required for construction of utilities. A site compatibility certificate also must be obtained prior to commencing construction of facilities for electric generation capable of generating (in the aggregate) more than 10 MW. The site compatibility certificate requires submission of a site assessment report.	KRS 278.020 KRS 278.216 KRS 278.708	
Cumulative Environmental Assessment	Kentucky Energy and Environment Cabinet (KYEEC)	Required before construction of a facility for the generation of electricity. This assessment will contain a description of project impact to environmental resources.	KRS 224.1[i]0-280	