COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2022 INTEGRATED	**)**	
RESOURCE PLAN OF EAST KENTUCKY	**)**	**CASE NO.**
POWER COOPERATIVE, INC.	**)**	**2022-00098**

RESPONSES TO ATTORNEY GENERAL'S SECOND INFORMATION REQUEST

TO EAST KENTUCKY POWER COOPERATIVE, INC.

DATED AUGUST 30, 2022

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2022 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	**)**	**CASE NO. 2022-00098**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Chris Adams, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Attorney General's Second Request for Information in the above-referenced case dated August 30, 2022, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Subscribed and sworn before me on this 20th day of September 2022.

Notary Public

GWYN M. WILLOUGHBY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP38003
My Commission Expires Nov 30, 2025

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

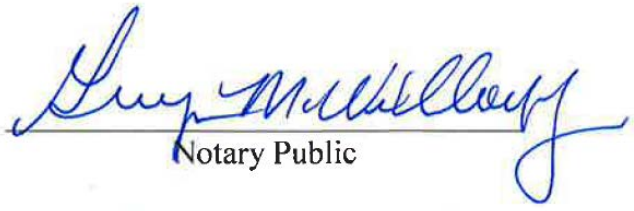
2022 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	**)**	**CASE NO. 2022-00098**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Darrin Adams, being duly sworn, states that she he supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Attorney General's Second Request for Information in the above-referenced case dated August 30, 2022, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Subscribed and sworn before me on this 20th day of September 2022.



Notary Public

GWYN M. WILLOUGHBY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP38003
My Commission Expires Nov 30, 2025

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2022 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	))	**CASE NO. 2022-00098**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Greg Breyer, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Attorney General's Second Request for Information in the above-referenced case dated August 30, 2022, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Greg Breyer

Subscribed and sworn before me on this 8th day of September 2022.

Lisa G. Stanfield
Notary Public

Lisa G. Stanfield
Notary Public, ID KYNP11141
State at Large, Kentucky
My Commission Expires on 8/15/24

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2022 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	**)**	**CASE NO. 2022-00098**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Denise Foster Cronin, being duly sworn, states that she has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Attorney General's Second Request for Information in the above-referenced case dated August 30, 2022, and that the matters and things set forth therein are true and accurate to the best of her knowledge, information and belief, formed after reasonable inquiry.

Denise R Foster Cronin

Subscribed and sworn before me on this 13th day of September 2022.

William Blake Kinney
Notary Public

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2022 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	))	**CASE NO. 2022-00098**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Scott Drake, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Attorney General's Second Request for Information in the above-referenced case dated August 30, 2022, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Scott Drake

Subscribed and sworn before me on this 20th day of September, 2022.

Gwyn M. Willoughby
Notary Public

GWYN M. WILLOUGHBY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP38003
My Commission Expires Nov 30, 2025

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2022 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	**)**	**CASE NO. 2022-00098**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Mark Horn, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Attorney General's Second Request for Information in the above-referenced case dated August 30, 2022, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Mark Horn

Subscribed and sworn before me on this 20th day of September 2022.

Notary Public

GWYN M. WILLOUGHBY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP38003
My Commission Expires Nov 30, 2025

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2022 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	**)**	**CASE NO. 2022-00098**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Craig Johnson, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Attorney General's Second Request for Information in the above-referenced case dated August 30, 2022, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Craig Johnson

Subscribed and sworn before me on this 20th day of September 2022.

Gwyn M. Willoughby
Notary Public

GWYN M. WILLOUGHBY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP38003
My Commission Expires Nov 30, 2025

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2022 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	))	**CASE NO. 2022-00098**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Julia Tucker, being duly sworn, states that she has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Attorney General's Second Request for Information in the above-referenced case dated August 30, 2022, and that the matters and things set forth therein are true and accurate to the best of her knowledge, information and belief, formed after reasonable inquiry.

Julia J. Tucker

Subscribed and sworn before me on this 20th day of September, 2022.

Gwyn M. Willoughby
Notary Public

GWYN M. WILLOUGHBY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP38003
My Commission Expires Nov 30, 2025

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2022-00098
SECOND REQUEST FOR INFORMATION RESPONSE

ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 1
RESPONSIBLE PARTY: Julia J. Tucker

Request 1. Refer to the 2022 Integrated Resource Plan generally. Explain in detail whether EKPC plans to modify the pending IRP in any way based upon the recently enacted Inflation Reduction Act of 2022. 1 If so, explain in detail what modifications, if any, will be made. If not, explain why not.

Response 1. No, EKPC does not plan to modify the pending IRP based on the recently enacted Inflation Reduction Act of 2022. EKPC's 2022 IRP was based on information known prior to April 1, 2022, the required filing date. Any changes to rules, laws, regulations, etc. subsequent to that date will be addressed as appropriate in future filings.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2022-00098
SECOND REQUEST FOR INFORMATION RESPONSE

ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 2
RESPONSIBLE PARTY: Julia J. Tucker

Request 2. Refer to the 2022 Integrated Resource Plan generally. Explain in detail whether EKPC needs to modify any prior response to discovery requests from any party in the pending case based upon the Inflation Reduction Act of 2022. If so, explain in detail what modifications, if any, will be made. If not, explain why not.

Response 2. No, EKPC does not plan to modify any prior response to discovery requests from any party based on the Inflation Reduction Act of 2022. EKPC's responses have been based on information known at the time of filing the IRP on April 1, 2022. Any changes to rules, laws, regulations, etc. subsequent to that date will be addressed as appropriate in future filings.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2022-00098
SECOND REQUEST FOR INFORMATION RESPONSE

ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 3
RESPONSIBLE PARTY: Jerry Purvis

Request 3. Refer to the 2022 Integrated Resource Plan generally.

Request 3a. Provide a detailed discussion regarding all pending United States Environmental Protection Agency ("EPA") regulations that could impact EKPC's coal operations.

Response 3a. The U.S. Environmental Protection Agency ("EPA") updated its spring 2022 Unified Agenda of Regulatory and Deregulatory Actions on June 20, 2022. The following high-level EPA regulations that affect coal generation are the following:

2022 Ozone Federal Implementation Plan ("FIP") – this proposed rule implements the 2015 ozone season standards pursuant to 2022 Cross State Air Pollution rule set to begin May 31, 2023, also known in the Industry as the 'transport rule'. The ozone FIP was proposed April 6, 2022, official comments placed in the record June 6, 2022. The proposed rule expects to retire 25,000 MW of coal-fired generation given that several units cannot meet the standard in the timeframe required circa 2026 – 2028. Industry is expected to optimize its existing selective catalytic reduction reactors (SCRs), convert to natural gas or retire the coal-fired units by 2028, thus, causing a generation shift in the Industry.

National Environmental Policy Act ("NEPA") Guidance - President Nixon signed the NEPA into law on January 1, 1970. Congress enacted NEPA to establish a national policy for the environment, provide for the establishment of the Council on Environmental Quality ("CEQ"), and for other purposes. NEPA was the first major environmental law in the United States and is often called the "Magna Carta" of Federal environmental laws. NEPA requires Federal agencies to assess the environmental effects of proposed major Federal actions prior to making decisions.

Section 101 of NEPA sets forth a national policy "to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans." 42 U.S.C. 4331(a). Section 102 of NEPA establishes procedural requirements, applying that national policy to proposals for major Federal actions significantly affecting the quality of the human environment by requiring Federal agencies to prepare a detailed statement on: (1) the environmental impact of the proposed action; (2) any adverse effects that cannot be avoided; (3) alternatives to the proposed action; (4) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and (5) any irreversible and irretrievable commitments of resources that would be involved in the proposed action. 42 U.S.C. 4332(2)(C).

NEPA ensures agencies consider the significant environmental consequences of their proposed actions and inform the public about their decision-making. Countries and non-governmental organizations all over the globe have created their own environmental impact assessment

programs, modeled upon NEPA, making NEPA an international catalyst in the field of environmental protection.

NEPA established CEQ within the Executive Office of the President to ensure that Federal agencies meet their obligations under NEPA. CEQ oversees NEPA implementation, principally through issuing guidance and interpreting regulations that implement NEPA's procedural requirements. CEQ also reviews and approves Federal agency NEPA procedures, approves alternative arrangements for compliance with NEPA for emergencies, and helps to resolve disputes between Federal agencies and with other governmental entities and members of the public. One of CEQ's major responsibilities is also to develop and recommend national policies to the President that promote the improvement of environmental quality and meet the Nation's goals. For more information on CEQ initiatives, please visit WhiteHouse.gov/CEQ.

CEQ's NEPA implementing regulations are found at 40 CFR Parts 1500-1508. A final rule revising the regulations was published on July 16, 2020, and became effective on September 14, 2020. CEQ is now engaged in a comprehensive review of the 2020 rule pursuant to E.O. 13990 (January 20, 2021).[1]

On May 20, 2022, the CEQ issued the National Environmental Policy Act implementation regulations pursuant to 40 CFR parts 1500-1508. This rule's purpose is to reduce paperwork, reduce delays for approvals, refresh definitions, and layout a more efficient process for those who borrow federal money from Rural Utilities Service under the U.S. Department of Agriculture.

[1] https://ceq.doe.gov/index.html

Coal Combustion Residuals ("CCR") – EPA revised the 2015 CCR rule on August 28, 2020 and November 12, 2020 respectively, called CCR Part A and Part B Rules that further define timelines for the closure of CCR surface impoundments (ash ponds). Part A provided two opportunities to close CCR surface impoundments; option one, would allow the utility to request more time to close under technical infeasibility to meet the April 21, 2021 deadline or under option 2 Part A, the utility could commit to permanent cessation of the coal fired boilers by a date certain.

Under Part A, applicants must submit by November 2020. Post November 2020, EPA began its review of the utility applications posted to the Docket. EPA's approach was to review the Docket in tranches beginning 1/11/2022. The initial outcome reflected that EPA conditionally approved EKPC and found other applicants "not complete", "denied" or "not reviewed". EPA is not complete with their review of the 59 Part A and B facilities seeking approval.

Under CCR Part B final rule, should a facility need additional time to close the surface impoundment and desire to retire the coal-fired boiler date certain, an application could be submitted to EPA for approval. Applicants must meet condition set forth by EPA with regards to groundwater data and design, and will continue to ensure there is no reasonable probability of adverse effects to human health and the environment. Applicants had until December 14, 2020 to maker their final submittal to EPA for review and approval under Part B.

EPA, under Part A and Part B, built a public docket to receive comments for 60 days, and provided their determinations thereafter. For more concerning Part A, and status updates, please see https://www.epa.gov/coalash/coal-combustion-residuals-ccr-part-implementation. For more

under Part B, please refer to: https://www.epa.gov/coalash/coal-combustion-residuals-ccr-part-b-implementation.

PM_{10} / $PM_{2.5}$ National Ambient Air Quality ("NAAQs") – EPA uses a NAAQs standards process to conduct a five panel review of science, health, welfare and environmental standards in order to make air quality determinations whether or not to keep or lower the NAAQs standards. EPA NAAQs review is required by the statues every five years to protect human health and the environment. EPA is reviewing the NAAQs for particulate matter ("PM") and will provide a public announcement possibly fall of 2022 in accordance to the EPA unified regulatory agenda.

Visibility / Regional Haze – Should EPA lower PM NAAQs, this rule will implement the PM NAAQs, and incorporate possibly the outcomes of the ozone FIP, resulting in ozone season NOx reductions. Expectations as outlined in the EPA unified agenda for regulations is a final rule out March 2023.

Affordable Clean Energy Rule ("ACE") – On June 19, 2019, EPA issued the final ACE rule that replaced the prior administration's overreaching Clean Power Plan ("CPP") with a rule that restored rule of law, empowers states and supports energy diversity. This rule established emission guidelines for the states to use when developing plans to limit carbon dioxide ("CO2") at their coal-fired electric generating units ("EGUs"). In its original notice, EPA repealed the CPP, and issued new implementing regulations and futures rules to regulate carbon dioxide emissions. Since this time further rulemaking is pending given the Supreme Court case WV v. EPA. Replacement rule in accordance to the unified regulatory agenda is summer of 2022.

Mercury Air Toxics Rule ("MATs") – In the National Emission Standards for Hazardous Air Pollutants ("HAPs") for Coal- and Oil-fired EGUs, also known as the MATs, EPA set technology-based emission standards for mercury and other HAPs emitted by units with a capacity of more than 25 megawatts.

On May 22, 2020, EPA issued a final supplemental finding for MATs, Risk and Technology review stating that no further action was needed at the time. However, on January 31, 2022, EPA proposed the revocation of the 2020 Reconsideration and Affirmation of the Appropriate and Necessary Supplemental Finding. EPA is conducting risk, and review of technology for coal-fired units with regards to HAPs and particulate matter PM. In accordance to the unified agenda the rule is expected to be out for review in a final rule June 2023.

Effluent Limitations Guidelines ("ELG") – On September 30, 2015, EPA issued a final rule revising the ELG regulations under 40 CFR Part 423 for Steam Electric Generating category for the first time since 1982 that revised technology based standards, environmental performance, and water quality standards.

Later, EPA initiated a supplemental rulemaking to strengthen certain discharge limits within this final rule issued August 31, 2020. EPA re-visited two specific waste streams; flue gas desulfurization ("FGD") waste water and bottom ash ("BA") transport water.

On August 3, 2021, EPA announced in the Federal Register Notice of a 2021 supplemental Steam Electric Rulemaking based upon the science based review of the 2020 Steam Electric Reconsideration Rule and the executive Order 13990 finding opportunities for improvement and

plan to issue a proposed rule in the fall of 2022 with a pending final rule scheduled for September 2023.

Waters of the United States – On December 7, 2021, EPA and the Department of the Army ("the agencies") announced a proposed rule to revise the definition of the "waters of the United States (WOTUS)." The agencies proposed to put back into place the pre-2015 definition of the WOTUS updated to reflect the considerations of the Supreme Court. This approach would support implementation while agencies could continue to consult with tribes, local governments, and stakeholders. In addition, EPA and the U.S. Army Corp of Engineers in receipt of the U.S. District Court Arizona District August 30, 2021, order vacating and remanding the Navigable Waters Protection Rule ("NWPR") essentially halted the implementation of the NWPR in light of the pre-2015 regulatory regime for WOTUS.

Clean Water Act Section 401 Water Quality Certification Improvement Rule – On June 1,2022, the EPA proposed a rule to support a predictable, efficient, stable, and transparent water quality certification process under Clean Water Act ("CWA") section 401. The Agency's proposed rule is grounded in the fundamental principles of cooperative federalism that have been essential to the effective implementation of the CWA by EPA, states, territories, and Tribes over the past 50 years.

February 28, 2022, EPA lifted the stay on the **National Emissions Standards for Hazardous Air Pollutants ("NESHAP") for Stationary Combustion turbines** from ***2004***, rule effective March 9, 2022. Essentially the rule set forth that combustion turbines must meet or be below 91 ppb formaldehyde at 15% O_2 via a stack test.

New Source Performance Standards – gas-fired generation. On April 21, 2022, EPA issued a white paper outlining greenhouse gas guidance for natural gas-fired generation signaling to the Industry that EPA intends to regulate carbon dioxides on combustion turbines.

Request 3b. Provide a detailed discussion regarding all pending EPA regulations that could impact EKPC's gas operations.

Response 3b.

2022 Cross State Air Pollution Rule mostly affects coal-fired generation since it is the larger emitters of nitrous oxides requiring low NOx burners and SCRs or selective non-catalytic reactors ("SNCRs"). Natural gas-fired generation utilizes combustion turbine technology which over two decades have lowered NOx emissions via enhanced burner technology, turbine design and water injection. Combustion turbine technology essentially lowered its footprint in nitrous oxides and ozone. In recognition of this, EPA in the proposed rule provides very few allocations under the proposed Ozone FIP. Until the final rule is issued, it would be difficult to assess the impact of this rule for gas-fired generation.

Visibility / Regional Haze – gas-fired generation contributes significantly less particulate matter and nitrous oxides to the atmosphere than coal-fired generation. As EPA lowers the particulate matter via PM NAAQs, once the levels are understood in the final rule, EKPC will be able to assess how this rule will meet its objectives for visibility, and regional haze as it relates to the new PM NAAQs.

PM_{10} / $PM_{2.5}$ NAAQs – Five Panel reviews the science, health, welfare and environmental standards to make a determination whether to lower the standards to protect human health and the

environment with regard to particulate matter and other criteria pollutants. Once the final rule and limits are published, EKPC will engage consultants to assess impacts to all of its generating assets including gas generation. In accordance to the unified regulatory guidance, an announcement is expected anytime.

February 28, 2022, EPA lifted the stay on the **NESHAP for Stationary Combustion turbines** from ***2004***, rule effective March 9, 2022 which outlines that emissions for formaldehyde must be below 91 ppm at 15% O_2. EKPC gas generation is not a major source of HAPs, one of which is formaldehyde and therefore, falls outside the rule.

New Source Performance Standards ("NSPS") – gas-fired generation, white paper published April 21, 2022. White paper guidance is not an environmental law, however, it does shed light on EPA's thinking toward carbon capture and sequestration use on future combustion turbine combined cycle gas generation. When this will become law is unknown at this time.

Affordable Clean Energy Rule - A replacement rule for Affordable Clean Energy Rule under Clean Air Act Section 111(d) for existing fossil units is forthcoming from EPA end of this year. Until it appears in the federal register, it is impossible to address impacts to our gas generation.

Clean Water Act Section 401 Water Quality Certification Improvement Rule – is a coordination rule between the States and Federal EPA with regards to water quality certifications ensuring the States Division of Water and U.S. Army Corp of Engineers and EPA are coordinating any projects that impact Water of the U.S. The result of this rule could increase the scope of coordination, increase time for review and decrease velocity of approvals for any projects including gas generation.

Request 3c. Provide copies of all comments that EKPC has submitted to the EPA in the past year.

Response 3c.

To address this response please see EPA docket for ozone FIP at: https://www.regulations.gov/comment/EPA-HQ-OAR-2021-0668-0372

To address the official comments on the EPA Part A demonstration, please see the EPA docket at: https://www.regulations.gov/docket/EPA-HQ-OLEM-2021-0595/document

To address the official comments on EPA 401 Water Quality Certification Improvement Rule, please see the EPA-HQ-OW-2022-0128: https://www.regulations.gov/docket/EPA-HQ-OW-2022-0128/comments?filter=east%20kentucky%20power%20cooperative

EKPC responded to an EPA 308 Clean Water Act request for information in February 2022.

EKPC also endorsed comments submitted by Midwest Ozone Group ("MOG"), Utilities Solid Waste Activities Group ("USWAG"), Electric Power Research Institute ("EPRI") and the NRECA as applicable to the EPA Ozone FIP, the MATs RTR, CCR Rule, ELG, ACE, NSPS Guidance and WOTUS. EKPC will work closely with the Kentucky Energy and Environmental Cabinet, EPA regulators and trade groups to provide constructive comments for the betterment of rulemaking and to stand up for our Owner-Member Cooperatives ("owner-members").

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2022-00098
SECOND REQUEST FOR INFORMATION RESPONSE

ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 4
RESPONSIBLE PARTY: Greg Breyer

Request 4. Refer to the 2022 Integrated Resource Plan generally. Explain in detail whether EKPC has encountered shortages of transformers and/or spare transformer parts. If so, explain what measures have been taken to remediate these issues.

Response 4. EKPC has not encountered shortages of transformers and/or spare transformer parts. EKPC orders a variety of transformers as a normal course of our business operations. Over the last two years, EKPC has observed inflationary pressures, lead time issues, labor shortages, and allocations with transformers.

Transformer lead times have extended, in many cases, to one hundred weeks or more. In addition, some suppliers are experiencing further delays after receipt of purchase orders. These supply dynamics make it extremely difficult to consistently plan projects and resupply critical inventory levels.

As a result, EKPC has taken a number of steps to mitigate the current market risks. These include extended planning/ordering horizons, stricter commercial terms including liquidated

damages for failure to meet schedules, increasing spare inventory levels, supply diversification, regular review of primary supplier production schedules, and purchasing refurbished units from qualified suppliers when available. EKPC will continue to monitor the market and supplier performance to mitigate future risk for transformer needs ensuring reliability of supply and operations for our owner-members.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2022-00098
SECOND REQUEST FOR INFORMATION RESPONSE

ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 5
RESPONSIBLE PARTY: Julia J. Tucker

Request 5. Refer to the Company's response to the Attorney General's First Request for Information ("Attorney General's First Request"), Item 1(a).

Request 5a. Provide further explanation as to how the combustion turbines will be needed to "follow the load and ramp up when the load curve out strips the available resources."

Response 5a. The load shape in California has been documented to have changed significantly since the substantial addition of solar resources. It has developed into what has colloquially been labeled the "duck" curve. During the day when the sun is providing fuel to solar generation facilities, the net load curve remains relatively flat. As the sun sets, the load curve sharply increases because the solar generation facilities no longer have sufficient fuel. The sharp rise in the load curve requires a generation resource that can come on line quickly and ramp up quickly to follow the change in the load curve. Economic base load generation would already be on line and dispatched. The change in the load serving curve requires generation resources that

can quickly ramp up in the evening and quickly ramp down in the morning as the solar generation comes back on line. Today that proven technology would be combustion turbines.

Request 5b. EKPC states that it is not prudent to prematurely retire conventional resources until adequate renewables are installed, battery technology matures, and these resources prove they can supply the real time energy for system reliability at reasonable cost.

i. Expound upon what is meant by "adequate renewables are installed."

ii. Explain what needs to occur for battery technology to mature.

iii. Explain how the renewable resources will prove they can supply real time energy for system reliability at reasonable cost.

Response 5b i-iii. Adequate renewables would be when the combination of the renewable generation and a storage technology solution can reliably supply the load. One method for renewables to become adequate is to have a storage technology that can release the energy stored by the renewable generation. Current battery technology can only store approximately four hours of energy. The sun shines roughly 8 to 12 hours per day, depending on the season, so a battery needs to be able to discharge energy at least 12 to 16 hours per day for renewable energy to supplant base load plants. Solar and wind could be paired together to cover more hours of the day, but there would still be a need for battery storage in the 8 to 12 hours per day range.

EAST KENTUCKY POWER COOPERATIVE, INC.

CASE NO. 2022-00098

SECOND REQUEST FOR INFORMATION RESPONSE

ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022

REQUEST 6

RESPONSIBLE PARTY: Julia J. Tucker

Request 6. Refer to the Company's response to the Attorney General's First Request, Item 1(d).

a. The Company states that "[p]roviding energy strictly from non-dispatchable, intermittent resources will result in periods of severe under and over supply." Expound upon the ramifications of severe under and over supply. Discuss potential brownouts and blackouts as well as the cost of the under and over supply of renewable resources in the response.

b. The Company states that "[t]he need for resources that can follow the load demand pattern, provide voltage support and quickly ramp up to higher generation levels will continue to be great." Provide the types of resources to which EKPC is referencing in this statement.

Response 6. If solar is supplying all load during the daylight hours and wind is supplying all load during the overnight hours, then the maximum load must be planned for supply. A solar facility does not regulate energy output. If the sun is shining, the generator has fuel. If the sun is not shining, then the generator is without fuel.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2022-00098
SECOND REQUEST FOR INFORMATION RESPONSE

ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 7
RESPONSIBLE PARTY: Julia J. Tucker

Request 7. Refer to the Company's response to the Attorney General's First Request, Item 2(b).

Request 7a. EKPC states that it intends to economically diversify partnering opportunities. Explain the "partnering opportunities" that EKPC is referring to in the response.

Response 7a. Taxable entities have historically been able to extract more benefits from renewable energy projects than have non-taxable entities. EKPC would seek to find partners who could extract more benefits from a project than EKPC could achieve on its own, and would be willing to share a portion of those benefits with EKPC. To the extent that the recently enacted Inflation Reduction Act might alter this calculus, EKPC is still reviewing and assessing the legislation.

Request 7b. EKPC states that the most economic alternatives will be solicited regarding market purchases, fossil fuels, renewables, storage, demand management, energy efficiency

programs, and partnering opportunities. Explain whether the Company intends to consider reliability of a resource along with the cost.

Response 7b. Yes, reliability is always considered in the analysis of new resources. Total system costs are evaluated for each alternative. When an alternative has poor reliability, then other less efficient or higher cost resources may have to be utilized when the resource is not available. The cost to replace that energy is included in the total system cost analysis.

EAST KENTUCKY POWER COOPERATIVE, INC.
CASE NO. 2022-00098
SECOND REQUEST FOR INFORMATION RESPONSE

ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 8
RESPONSIBLE PARTY: Julia J. Tucker

Request 8. Refer to the Company's response to the Attorney General's First Request, Item 3(c). EKPC asserts "[a]reas of the United States that have prematurely retired their conventional energy resources are facing self-inflicted reliability issues created by not having adequate resources to supply energy when non-dispatchable resources cannot provide energy during critically high load periods." Expound upon this statement and provide examples of the reliability issues that can occur from an over reliance on intermittent, non-dispatchable renewable resources.

Response 8. California is a prime example of over dependence on non-dispatchable resources. They are dependent on massive transfers of energy into the state to maintain reliability because the laws severely restrict conventional generation. This dependence on the transmission system has helped to cause some of the forest fire issues and has resulted in limited power supply availability. Texas is highly dependent on wind generation. Winter storm Uri spotlighted the issues with depending on intermittent resources during freezing weather conditions. Organizations such as the National Electric Reliability Council have issued cautions that the premature retirement of

fossil and nuclear-fueled baseload generators could result in reliability impacts, particularly in the Midwest and Western United States.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 9
RESPONSIBLE PARTY: Julia J. Tucker

Request 9. Refer to the Company's response to the Attorney General's First Request, Item 3(d). Other than some of the current intervenors, explain whether there are other entities pressuring EKPC to decarbonize, and if so, identify the same.

Response 9. EKPC is not aware of specific entities pressuring EKPC to decarbonize. However, changes in federal law continue to increase the cost of generating electricity from fossil fuel resources. EKPC's goal is to provide safe and reliable electric service at competitive rates.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 10
RESPONSIBLE PARTY: Julia J. Tucker

Request 10. Refer to the Company's response to the Attorney General's First Request, Item 4(b). Expound upon how moving from natural gas boilers to electric boilers reduces emissions.

Response 10. Industries are bound by environmental regulations just like EKPC facilities are regulated. A stand-alone industry can reduce its carbon emissions by converting a natural gas boiler to an electric boiler, there are no carbon emissions associated with the electric boiler on the industry's premises.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 11
RESPONSIBLE PARTY: Julia J. Tucker

Request 11. Refer to the Company's response to the Attorney General's First Request, Item 4(c). Provide further explanation of the portion of the response indicating there may be less availability of natural gas, or penalties or fees levied for using natural gas.

Response 11. New natural gas wells and additional pipelines are not currently being developed in any significant manner due to uncertainty of future regulations. If the US continues to develop Liquefied Natural Gas ("LNG") facilities for transport overseas, the domestic supply of gas will be constricted, thus reducing the availability of natural gas and tying the price of natural gas to world market prices – which are increasing due to conflict in Europe. Constrained availability of the resource domestically and increased market demand globally will therefore increase the price of the commodity. Moreover, the federal government could impose fees for using a fossil resource, thus increasing the costs, and driving users to other fuel source alternatives.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 12
RESPONSIBLE PARTY: Julia J. Tucker

Request 12. Refer to the Company's response to the Attorney General's First Request, Item 5(a). Explain in detail whether the recently passed Inflation Reduction Act of 2022 will require EKPC to retrofit its existing fleet or prematurely shutter any of its generating resources. If any of the generation resources will be retired earlier than previously expected, identify the retirement dates and the replacement generation resources.

Response 12. EKPC is studying the Inflation Reduction Act of 2022, but is not yet aware of anything in the Act that would require retrofits or retirements.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 13
RESPONSIBLE PARTY: Chris Adams

Request 13. Refer to the Company's response to the Attorney General's First Request, Item 7(a) and (b). Provide an unredacted copy of the referenced annual reports that provide the net savings realized as a PJM member for 2021 and 2022.

Response 13. EKPC is providing the confidential information to each of the intervenors who have signed confidentiality agreements. See confidential attachments: "*Response 13 AG – Integration Annual Report 2021 – CONFIDENTIAL*" and "*Response 13 AG – Integration Annual Report 2022 – CONFIDENTIAL.*"

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 14
RESPONSIBLE PARTY: Julia J. Tucker

Request 14. Refer to the Company's response to the Attorney General's First Request, Item 7(c).

Request 14a. Explain why prior to becoming a PJM member EKPC's coal fired units operated inefficiently to follow load.

Response 14a. For example, EKPC's daily peak load might have been 1,500 MW and its minimum load was 1,000 MW. EKPC has 1,346 MW at Spurlock station. The plant is most efficient at full load, so it is most efficient at 1,346 MW output. However, to balance the generation against the load, the plant would have to be turned down to less efficient levels to get to the minimum load level of 1,000 MW. Then, throughout the day, the load was fluctuating by 150MW or more within the hour, also causing the coal fired unit to run at less than efficient levels.

Request 14b. Explain whether prior to becoming a PJM member EKPC is asserting that the coal fired units were not operating in an economic fashion.

Response 14b. See Response 14 (a).

Request 14c. In general, what percentage of the time does EKPC purchase electricity from PJM for a lower cost than EKPC can generate the electricity?

Response 14c. Twenty to thirty percent of the time.

Request 14d. Provide a detailed summary of what EKPC's participation in PJM entails on a daily basis.

Response 14d. Each day, EKPC forecasts its expected load for the next day and bids that load into the Day Ahead market. EKPC also forecasts its expected generation availability by unit, its expected fuel cost, and expected variable costs associated with running each unit. That data is also placed into Markets Gateway for the PJM Day Ahead auction. The input system closes at 10:30 am and PJM runs a reliability constrained economic dispatch to decide how to best serve the expected load for the next day. Once the model is complete, each participant receives notice of how much they have spent to purchase their load from the market and how each of their generators have cleared and at what prices. The next day in real time, the load will be balanced against the actual load and EKPC will either be a net buyer or seller of load at the real time price, cleared on an hourly basis. The generation will either match the Day Ahead award, or it will be balanced on a real time basis and EKPC will be a net buyer or seller of generation at the real time price, cleared on a five minute basis.

Request 14e. EKPC discusses how the low natural gas prices prior to the fall of 2021 allowed EKPC to purchase lower cost energy from PJM without having to invest in new generating resources. Explain in detail whether EKPC can still purchase lower cost energy from PJM since natural gas prices have risen after the fall of 2021.

Response 14d. There are times that EKPC can still purchase lower cost energy from the market than what it can generate, but it is less frequent now than it was previous to the Fall of 2021. If the market is lower than EKPC's generation cost, then PJM will not dispatch the EKPC units. If the market is higher than EKPC's generation costs, then PJM will economically dispatch the EKPC units.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 15
RESPONSIBLE PARTY: Julia J. Tucker / Michelle Carpenter

Request 15. Refer to the Company's response to the Attorney General's First Request, Item 7(d).

Request 15a. EKPC states that it has been able to supply energy for its owner-members at a lower cost than what would have occurred with EKPC self-supplying all of its own energy resources prior to the fall of 2021. If the favorable prices after the fall of 2021 are gone, explain in detail how EKPC is currently benefiting as a member of PJM.

Response 15a. EKPC still benefits by PJM being its balancing authority and reliability coordinator. Even if EKPC's generation is the lowest cost and so EKPC is using its resources to supply its load, the balancing services and reliability coordination are very valuable to EKPC. If PJM did not provide those services, EKPC would have to pay someone else to provide them.

Request 15b. EKPC asserts that it has been able to make money selling extra capacity into the PJM market in the summer. Provide the revenue from the PJM market sales for the last five years.

Response 15b. PJM capacity market revenue for the last five calendar years is provided below:

	Year Ending December 31,				
	2017	2018	2019	2020	2021
Total PJM Capacity Market Revenue	$ 22,704,877	$ 3,224,901	$ 6,270,864	$ 10,865,180	$ 16,468,347

Request 15c. EKPC states that it has not had to carry as high of a reserve requirement in the winter period because it has PJM to help secure its load requirements, which has saved on capital investment costs. Explain in detail whether EKPC has conducted a cost/benefit analysis after the fall of 2021 to determine whether it is still beneficial to be a member of PJM.

Response 15c. No, EKPC has not conducted a specific cost / benefit analysis after the Fall of 2021 but EKPC would expect such an analysis would continue to show a benefit to membership. Information incorporating this time period was included in EKPC's last annual report.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 16
RESPONSIBLE PARTY: Julia J. Tucker

Request 16. Refer to the Company's response to the Attorney General's First Request, Item 8.

Request 16a. EKPC states that "[a]s more and more coal plants retire within the PJM footprint, PJM becomes more dependent on natural gas for summer and winter generation." EKPC further asserts that natural gas generation can be exceptionally reliable as the natural gas supply chain delivers gas hour by hour. Explain whether natural gas generation is still reliable even in the face of worldwide natural gas shortages and price increases.

Response 16a. To the extent that the United States retains enough gas supply to service its domestic needs, then natural gas generation should be very reliable. If the United States does not require that sufficient natural gas be retained for its domestic use, then natural gas generation will be affected and will be at risk.

Request 16b. EKPC states that coal is inventoried on site and is not as susceptible to supply chain interruptions. Compare and contrast the reliability of coal generation, natural gas generation, and renewable generation (e.g. solar power, hydroelectric power, wind power, etc.)

Response 16b. All of the generation types stated in the question are reliable resources so long as they have available fuel. Coal has historically been stock piled at the plant in such a manner as to be able to withstand short-term supply chain interruptions. EKPC has never run out of coal for its plants. Natural gas is delivered in real time, so long as there are no pipeline interruptions. EKPC has not experienced significant pipeline availability issues. A few maintenance issues have arisen from time to time at the Smith site but that plant is connected to two different pipelines, so it can be switched as needed. Additionally, fuel oil is onsite as a back up to all Smith units, except Units 9 and 10, and to all Bluegrass units. Reliability is in good shape at both plants. The SEPA hydropower purchase is dependent on water supply. It is generally reliable and can be stored behind the dams. However, during drought conditions there can be issues with having adequate water supplies or during dam maintenance as experienced a few years ago at Wolf Creek Dam. Solar is very reliable so long as the sun is shining, it is directly dependent on the real time irradiance. Dependability in output suffers because of no control over fuel supply. The same is true of wind, the generators are directly dependent on wind supply. The wind does not tend to blow during extreme peak conditions.

Request 16c. EKPC asserts that gas generation plants compete with "natural gas heating load" for supply in the winter, which causes prices to rise. Confirm that the "natural gas heating

load" is referring to customers who are directly utilizing natural gas for space and water heating. If not, explain what is meant by "natural gas heating load."

Response 16c. Yes, natural gas heating load is referring to customers who are directly utilizing natural gas for space and water heating.

Request 16d. EKPC states that except for Smith 9 and 10, EKPC's gas generating units have dual fuel capability and fuel oil reserves on site. Compare and contrast the positives and negatives of using natural gas versus fuel oil in the gas generating units, including expense and reliability. Explain also whether any pending EPA regulation could affect the cost viability of utilizing oil firing.

Response 16d. Natural gas is cleaner burning and more efficient in the units, it is most generally less expensive than burning fuel oil. However, the units are capable of burning the fuel oil which increases the reliability of the plant. EKPC's Title V air permits allow for the burning of fuel oil in its coal-fired units and on a limited basis in natural gas fired units with the exception of Smith Units 9 and 10. EKPC stays current with the environmental regulations and will work with the Kentucky Energy and Environmental Cabinet agencies should the EPA put forth rules impacting the use of fuel oil or object to its Title V air permit renewals or modifications.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 17
RESPONSIBLE PARTY: Julia J. Tucker

Request 17. Refer to the Company's response to the Attorney General's First Request, Item 9. EKPC asserts that "[i]f there are not adequate resources, or the resources do not have a firm fuel supply at a known price, EKPC will consider purchasing from the forward markets to hedge the maximum price that its owner-members might have to pay for energy."

Request 17a. Explain in detail what would cause EKPC not to have adequate resources.

Response 17a. A forced outage of a unit could cause EKPC to not have adequate resources. Only an unplanned, unexpected condition would result in not having adequate resources.

Request 17b. Explain whether EKPC has encountered not having a firm fuel supply at a known price in the past year.

Response 17b. EKPC burns natural gas in its combustion turbine units. EKPC has not historically purchased natural gas on a forward basis. Combustion turbines are used to provide

peaking power, so their use is not as predictable as baseload energy. When gas is purchased on a forward basis, it is delivered every day, regardless of the need for it in the units. Therefore, buying gas forward for peaking units has not been typical. EKPC has always purchased natural gas on a spot market basis as the combustion turbine units are dispatched. EKPC has recently purchased a small amount of gas on a forward basis to determine if it is advantageous in helping to hedge its energy cost exposure.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 18
RESPONSIBLE PARTY: Julia J. Tucker

Request 18. Refer to the Company's response to the Attorney General's First Request, Items 9 and 10(a). In response to Item 9, EKPC states that it hedges its energy price exposure by ensuring it has generation resources to cover its load. However, in response to Item 10, EKPC states that it only has sufficient capacity resources to meet its forecasted summer load, but not its winter load, because its winter peak is roughly 30% higher than the summer peak. EKPC further asserts that it expects to utilize Power Purchase Agreements ("PPAs") to cover the future winter period needs for a hedge against energy price exposure, and solar PPAs to meet its sustainability goals on an economic basis.

Request 18a. Provide a detailed response discussing the specific type of generation resource, contract duration, approximate price, and number of PPAs that EKPC plans to enter to cover the future winter period needs.

Response 18a. The PPA – Winter Seasonal Market resource is shown in Table 8-2 on page 163 of the IRP, with the confidential price information highlighted. EKPC expects this seasonal

PPA would be a standard contract from a market participant to supply 100 MW of firm energy at a contracted price. It is not source specific. The purchase will be made for January and February only, and purchased on an annual basis. This is not expected to be a long term contract and can be replaced with other resources as deemed appropriate.

Request 18b. Explain in detail whether the future PPAs will allow EKPC to hedge its energy price exposure in the winter by ensuring it has generation resources to cover its load.

Response 18b. When the PPA is executed, that amount of energy (100 MW) will be secured at a known, contracted price and will be contracted for firm delivery.

Request 18c. Explain whether EKPC has conducted a cost/benefit analysis to determine whether it would be more cost efficient to build its own generation versus entering into a multitude of PPAs. If a cost/benefit analysis has been conducted then provide a copy of the same. If a cost/benefit analysis has not been conducted, explain why not.

Response 18c. The IRP analysis provided an optimization of future power supply resources based on the options considered, shown in Table 8-2 on page 163. The top case results shown on page 167, all include at least one Seasonal Purchase for 100 MW in the optimized plan. The optimization analysis is a cost / benefit analysis and has been provided in the IRP.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 19
RESPONSIBLE PARTY: Julia J. Tucker

Request 19. Refer to the Company's response to the Attorney General's First Request, Item 11(b).

Request 19a. Provide an update on the negotiations for the renewable energy resources for Diageo. Ensure to include in the response an update on the PJM interconnection queue and the Department of Commerce's investigation into solar panels.

Response 19a. EKPC is in continued negotiations with a third party to provide a renewable resource to supply the Diageo request. EKPC fully expects to reach a successful conclusion. The project is in a position to finalize its ability to interconnect with PJM transmission. The Department of Commerce continues its investigation. The developer is confident it has the resources to complete the project regardless of the outcome of that investigation.

Request 19b. Explain in detail why EKPC's existing renewable energy resources, such as the Cooperative Solar Farm One, cannot fulfil the renewable energy request from Diageo.

Response 19b. Diageo has requested to be supplied from a new renewable resource, not an existing resource. Furthermore, Diageo's need is far larger than EKPC's existing solar resource.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 20
RESPONSIBLE PARTY: Tom Stachnik

Request 20. Refer to the Company's response to the Attorney General's First Request, Item 12(a). EKPC asserts that it "noticed increased scrutiny in its carbon-based generation portfolio from credit rating agencies and financial institutions." Explain this assertion in more detail, and provide the names of the specific credit rating agencies and financial institutions referred to in the statement.

Response 20. EKPC's most recent rating report from Standard and Poor's stated that "The utility relies heavily on coal for energy production, which we believe creates a potential exposure to emission-control costs. Coal resources accounted for about 60% of the EKPC's 2018 energy sources by megawatt-hour."

Teachers' (TIAA) participated in EKPC's 2014 private placement but subsequently sold its entire investment citing coal concerns. AIG similarly sold a majority of its investment as well. Both institutions declined to participate in the 2019 private placement. Furthermore, feedback from our agent banks in the 2019 transaction indicated that over two-thirds of the institutions they contacted who opted not to participate cited coal exposure as a reason.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 21
RESPONSIBLE PARTY: Scott Drake

Request 21. Refer to the Company's response to the Attorney General's First Request, Item 12(c)(ii). Explain in full detail how EKPC takes advantage of the tax credits for a solar installation through a PPA, and how those benefits inure to the members' favor.

Response 21. EKPC issues a Request for Proposal ("RFP") to multiple solar developers for a potential new solar PPA. The RFP establishes the relationship between the solar developer and EKPC. The solar developer will own the facility; making them eligible to take advantage of the federal tax credits. The federal tax credit for the solar developer ultimately lowers their costs and their bid price to supply solar power to EKPC under the resulting solar energy PPA. The End-Use Retail Member ("retail member") benefits from the lower price.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 22
RESPONSIBLE PARTY: Scott Drake

Request 22. Refer to the Company's response to the Attorney General's First Request, Item 12(e). EKPC states that it has seen upward movement on wind and solar pricing recently. Explain in detail whether EKPC will continue to add renewable energy to its portfolio in order to meet its internal sustainability goals, even if it is not a least cost resource.

Response 22. EKPC will continue to pursue its sustainability goal of 15% renewables by 2035 as long as the renewable energy pricing is economically competitive with other resources. EKPC believes the upward movement of wind and solar pricing is the result of several factors including supply chain issues. Supply chain issues and other market factors are affecting the costs of other energy resources also. Therefore, in general, solar energy resources remain competitive as an energy supply.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 23
RESPONSIBLE PARTY: Scott Drake

Request 23. Refer to the Company's response to the Attorney General's First Request, Item 12(f). The provided answer is non-responsive. As originally requested, explain in detail whether EKPC is adding new renewable energy solely to meet EKPC's internal sustainability goals, or whether the new energy is actually needed to serve its customers.

Response 23. EKPC is not adding renewable energy solely to meet the sustainability goals. Renewable resources will be added when needed to serve native load and are economically justified and after receiving any necessary approval from the Commission. The cost of solar has become, in general, competitive with other forms of new energy. Solar energy provides a price hedge against high-energy prices in the PJM market during hot summer days. However, solar energy has known limits as a capacity resource.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 24
RESPONSIBLE PARTY: Julia J. Tucker

Request 24. Refer to the Company's response to the Attorney General's First Request, Item 13.

Request 24a. Provide a detailed analysis comparing and contrasting a Simple Cycle Combustion Turbine ("SCCT") versus a Natural Gas Combined Cycle ("NGCC") being added to EKPC's future generation resources. Ensure to discuss, at a minimum: heat rates, capacity factors, carbon emissions, total estimated cost, and why EKPC determined a SCCT was a better option for a future generation resource.

Response 24a. EKPC considered both simple cycle and combined cycle combustion turbine configurations in its optimization analysis. The options considered are listed in Table 8-2 on page 163. Given the costs and operating parameters provided, the economic analysis (cost / benefit analysis) shows that a peaking resource (simple cycle combustion turbine) is more cost effective than a combined cycle combustion turbine for the EKPC system, based on those assumptions. EKPC will issue an RFP prior to constructing or purchasing any new capacity, and

it could be that specific units offered in that RFP would result in a different outcome than that shown in this analysis.

Request 24b. Discuss whether EKPC has conducted any cost-benefit analyses regarding the potential for constructing a new SCCT or NGCC on a combined basis with another utility.

Response 24b. EKPC has not conducted a cost/benefit analysis of constructing a new unit on a joint basis with another utility. It is EKPC's standard practice to solicit offers for new generation resources. Therefore, potential joint utility partnerships could be offered into the Request for Proposals (RFP) when EKPC issues an RFP for new capacity resources.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 25
RESPONSIBLE PARTY: Chris Adams

Request 25. Refer to the Company's response to the Attorney General's First Request, Item 14(b).

a. Provide more information on EKPC's participation in the SOARSTEM initiative.

b. Provide more information upon EKPC and its owner-members being nationally recognized for working with educators to design curriculum with a focus on industry.

Response 25 a-b. EKPC, through the brand Kentucky's Touchstone Energy Cooperatives ("KTEC"), has been a leading advocate in linking industry with education. Through the development of the SOARSTEM initiative,[2] as well as working hand-in-hand linking educators with the manufacturing world, KTEC has been recognized through the world's STEM education leadership as an authority on successfully implementing efforts to transform the economic trajectory of the regions served by EKPC's owner-members. EKPC Manager of Economic Development Brad Thomas was the keynote speaker at the Global STEM Leadership Alliance

[2] https://www.pltw.org/news/innovative-proposal-creates-building-blocks-for-success-in-e-kentucky#:~:text=Denver%2C%20Colo.%20%28June%2010%2C%202015%29%20-%20East%20Kentucky,to%20bring%20high-skill%2C%20high-wage%20jobs%20to%20the%20region.

Annual Conference.[3] In addition, Mr. Thomas currently serves as the Business and Industry Representative on the Executive Board of the Kentucky Department of Education's Kentucky Technology Student Association ("KYTSA").[4] KTEC is the primary sponsor of the Annual KYTSA Conference. Through the SOARSTEM program, 100 teachers across 19 of the poorest counties in Eastern Kentucky were selected to receive additional Project Lead The Way ("PLTW") STEM training, an opportunity to earn a Master's Degree, promotion via Rank Change and a National Board Certification[5] funded through dollars raised by KTEC and its partners including Morehead State University, Toyota Foundation and Appalachian Regional Commission. In addition to these development opportunities, each teacher was presented a new laptop as well as VEX Robotics[6] kits valued at more than $10,000 each to be used in classrooms to implement STEM based activities associated with PLTW curriculum. The program, upon full roll out, will provide over 80,000 students and 3,000 teachers STEM based opportunities in the classrooms. KTEC also contributes to workforce development programs in the European based FDI Alliance Magazine which targets over 500,000 C-Suite European decision makers on Foreign-Direct Investment opportunities in the United States. See attached PDF, "Response #25 - FDI ALLIANCE SPRING ISSUE BRAD THOMAS.PDF".

[3] https://www.stemleadershipalliance.org/speaker/brad-thomas/
[4] https://kentuckytsa.org/board-of-directors
[5] https://www.kentuckyliving.com/news/stem-teachers-soar
[6] https://www.vexrobotics.com/

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 26
RESPONSIBLE PARTY: Chris Adams

Request 26. Refer to the Company's response to the Attorney General's First Request, Item 14(c). Explain whether any customer class is subsidizing the customers participating in the Wholesale Renewable Energy Program – Rate H tariff ("green tariff").

Response 26. No customer class is subsidizing any other customer's participation in the Wholesale Renewable Energy Program – Rate H tariff ("green tariff"). The green tariff allows for Option A – residential participation in purchasing renewable energy certificates ("RECs") based on incremental dollar per month amounts, Option B – commercial and industrial ("C&I") participation in offsetting a portion or all of the energy consumed with energy sourced from renewable resources, and Option C – C&I participation in purchasing RECs based on a set percentage of energy consumed per month, a set dollar amount per month, or a set number of MWhs per month. Options A and C, the REC options, charge the participating retail member an incremental rate based on their participation agreements and therefore has no impact on the EKPC and owner-member base rate charges – including the base fuel charge, Fuel Adjustment Clause ("FAC") charge, or Environmental Surcharge ("ES"). Option B, the renewable energy source

option, charges the participating retail member an incremental rate based on the negotiated and contracted renewable energy rate for each participating agreement. The participating retail member is charged for the applicable owner-member tariffed rates on the monthly electric bill – including the base fuel charge, the FAC, and the ES, plus the applicable renewable energy rate. On the same monthly electric bill, the participating retail member will also receive a credit for EKPC's avoided cost of base fuel, the FAC, and the ES based on the volume of monthly delivered renewable energy. The credit is limited to the lesser of the total avoided energy cost (from the base fuel, FAC, and ES) or the PJM Locational Marginal Price ("LMP") energy price. As such, the participating retail member pays all costs resulting from their participation in the program and receives all credits due to their participation in the program. Retail members participating in the program financially affect neither EKPC nor the owner-member. Therefore, no subsidizing occurs in this program.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 27
RESPONSIBLE PARTY: Darrin W. Adams

Request 27. Refer to the Company's response to the Attorney General's First Request, Item 15(b)(i). Explain whether EKPC has contemplated and/or conducted a cost/benefit analysis of adding battery storage for the Cooperative Solar Farm One. If a cost/benefit analysis has not been conducted then explain why not. If a cost/benefit analysis has been conducted then provide copies of the same.

Response 27. EKPC has not conducted a cost/benefit analysis of adding battery storage to the Cooperative Solar Farm One facility. The primary issue that minimizes potential economic benefits of installing battery storage at this particular location is that this solar facility is connected to an EKPC distribution substation that is solely connected to the Louisville Gas & Electric/Kentucky Utilities ("LG&E/KU") transmission system. EKPC utilizes Network Integration Transmission Service ("NITS") via the LG&E/KU Open Access Transmission Tariff to deliver energy from its generation resources (including PJM market purchases) to the retail member served from this substation. The amount that EKPC pays LG&E/KU for NITS is based on the megawatt demand level of the substation at the hour of the LG&E/KU monthly peak, and

behind-the-meter generation cannot be used to offset that demand level for the calculation of the monthly charge. Therefore, EKPC receives no peak-load reduction benefit with regard to the NITS charges that are paid to LG&E/KU due to the output of the Cooperative Solar Farm One, and similarly would receive no benefits by storing energy in a battery system and time-shifting to the hour of LG&E/KU's monthly peak.

Since Cooperative Solar Farm One is connected at distribution-voltage level to a distribution substation electrically connected to the LG&E/KU transmission system, it is a behind-the-meter generation resource that is not eligible to sell directly into PJM's capacity and energy markets. An energy storage facility located at the site would be treated in the same manner. The benefit that Cooperative Solar Farm One provides to EKPC with regard to the PJM markets is that it reduces EKPC peak summer load as well as real-time energy needs, thereby incrementally decreasing EKPC's load-serving obligations. Thus, any benefit of locating energy storage at this location would provide more limited PJM market benefits than potential locations that directly connect to the EKPC transmission system and are therefore eligible for direct PJM market participation.

EKPC has been monitoring technological advancements and equipment pricing in the battery-storage market, and will continue to assess the potential benefits of battery-storage systems across our footprint, including at the Cooperative Solar Farm One.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 28
RESPONSIBLE PARTY: Julia J. Tucker

Request 28. Refer to the Company's response to the Attorney General's First Request, Item 15(b)(iii). EKPC states that the Cooperative Solar Farm One's average capacity factor since going online in late 2017 is 18%.

Request 28a. Explain in detail whether this capacity factor is normal for a solar array, or on the low end.

Response 28a. The capacity factor for EKPC's Cooperative Solar Farm One has been within the expected range based on typical solar irradiance in this region.

Request 28b. Explain whether EKPC was aware that the Cooperative Solar Farm One's average capacity factor would be 18%, or if it is lower than expected.

Response 28b. EKPC developed the economic analysis of the project based on an average capacity factor in the fifteen to twenty-five percent range.

Request 28c. Discuss whether there are any improvements that could be made to the Cooperative Solar Farm One to improve the average capacity factor.

Response 28c. The solar farm is producing as expected, no upgrades are expected at this time.

Request 28d. Explain in detail whether EKPC has encountered any issues with the solar panels overheating and producing less energy. If so, include in the response whether there is a remedy for overheated panels producing less energy. Also, include in the response how much of a reduction in energy production is caused by solar panels overheating.

Response 28d. EKPC has not encountered issues with the solar panels overheating.

Request 28e. Provide the capacity factor of the Cooperative Solar Farm One for each month of 2021 and 2022 up to the present date.

Response 28e.

Month	2021	2022
January	9%	9%
February	9%	16%
March	22%	19%
April	22%	19%
May	24%	19%
June	20%	21%
July	24%	17%
August	21%	23%
September	21%	
October	15%	
November	14%	
December	10%	
Total	18%	

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 29
RESPONSIBLE PARTY: Julia J. Tucker

Request 29. Refer to the Company's response to the Attorney General's First Request, Item 15(b)(iv). Confirm that the Cooperative Solar Farm One does not provide reliable and continuous energy to EKPC's customers. If not confirmed, explain why not.

Response 29. As stated in the referenced response, the solar farm provides reliable and continuous electricity to customers when the sun is shining. However, the solar farm does not supply reliable and continuous electricity to customers when it is night time, it is raining or snowing, or when cloud cover inhibits the absorption of the solar irradiation by the panels. The panels need sun light for fuel, when that fuel is not available, the panels cannot generate electricity.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 30
RESPONSIBLE PARTY: Craig A. Johnson

Request 30. Refer to the Company's response to the Attorney General's First Request, Item 15(b)(vi). Provide a detailed account of the mechanical failure of the invertor for the Cooperative Solar Farm One, including but not limited to, the amount of time that it took to fix the issue as well as the associated costs regarding the same.

Response 30.

Inverter #5 failed on April 23rd due to;

- Melted wiring harness
- Failed A/C capacitors
- Transformer failure

TMEIC was the original manufacturer for this equipment. The failed inverter was still under warranty. However, due to supply chain issues and parts availability the inverter was not put back in service until July 28th. The inverter being out of service impacted peak power output by approximately 1.4 gross megawatts per peak day for the duration. The out of pocket cost was negligible due to these parts being provided under warranty.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 31
RESPONSIBLE PARTY: Julia J. Tucker

Request 31. Refer to the Company's response to the Attorney General's First Request, Item 15(b)(vii). EKPC states that at the end of 2021, the average cost of energy produced from the Cooperative Solar Farm One was $43.20/MWh.

Request 31a. Provide the average cost of energy produced from the Cooperative Solar Farm One for 2022 to present date.

Response 31a. The average cost of energy produced from the Cooperative Solar Farm One for 2022 to present date is $63.75/MWh. EKPC inadvertently reported that the average cost of energy from the Cooperative Solar Farm One at the end of 2021 was $43.20/MWh, however after review, this value should have been $63.55/MWh.

Request 31b. Explain in detail how $43.20/MWh for solar energy from the Cooperative Solar Farm One compares to solar energy pricing from available PPAs, and from bids received in response to EKPC's most recent request for proposals

Response 31b. EKPC is in negotiations for a PPA based on its recent request for proposals, and therefore cannot explicitly address the offers received in that proposal. However, Cooperative Solar Farm One continues to be a reliable and reasonably priced resource. The average cost for Cooperative Solar Farm One is higher than assumed price of new utility scale solar generation as shown in Table 8-2 on page 163 of the IRP but is reasonable compared to residential and smaller scale facilities.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 32
RESPONSIBLE PARTY: Julia J. Tucker

Request 32. Refer to the Company's response to the Attorney General's First Request, Item 15(c)(i). Explain in full detail why the full output of the Glasgow plant is sold to Farmers RECC and not considered a part of EKPC's generation resources.

Response 32. The Glasgow plant was developed as a partnership between the City of Glasgow, Farmers RECC and EKPC. Farmers RECC requested that EKPC partner with it to develop the plant since EKPC had the expertise in developing and operating landfill gas units. The plant was constructed as a resource to serve the Farmers RECC load specifically.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 33
RESPONSIBLE PARTY: Julia J. Tucker

Request 33. Refer to the Company's response to the Attorney General's First Request, Item 15(c)(v).

Request 33a. Explain in detail why EKPC will not provide an estimated retirement date for each of the methane gas plants.

Response 33a. EKPC has not seen any degradation on operations from the methane gas plants. EKPC expects the plants to continue reliable operation well into the future as long as maintenance is provided and methane gas is available.

Request 33b. As originally requested, provide the estimated retirement date for each of the methane gas plants.

Response 33b. EKPC provided the depreciable life date in its original response. EKPC does not have any other date to provide.

Request 33c. Provide the average capacity factor for the methane gas plants for 2021 and 2022 to present date.

Response 33c. As provided in Response 15(c)(iii) to the Attorney General's First Request, the capacity factor for each station for 2021 is as follows:

Bavarian 75.93%

Green Valley 76.91%

Hardin 53.74%

Laurel Ridge 49.26%

Pendleton 86.81%

The capacity factor for each station for 2022 through July is as follows:

Bavarian 78.98%

Green Valley 89.45%

Hardin 56.19%

Laurel Ridge 47.32%

Pendleton 73.41%

Request 33d. Provide the average price per MWh for energy produced by the methane gas plants for 2021 and 2022 to present date.

Response 33d. The average cost for 2021 was $58.44 / MWh as provided in response 15 (c)(iv) to the Attorney General's First Request. The average cost for 2022 through July is $45.48/MW

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 34
RESPONSIBLE PARTY: Julia J. Tucker

Request 34. Refer to the Company's response to the Attorney General's First Request, Item 15(d). Explain in detail whether it would be possible and cost beneficial for EKPC to build its own hydroelectric power system instead of contracting to purchase it.

Response 34. It is not feasible for EKPC to construct a hydroelectric power system that would generate electricity for less than $15/MWh.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 35
RESPONSIBLE PARTY: Julia J. Tucker

Request 35. Refer to the Company's response to the Attorney General's First Request, Item 15(d)(ii).

Request 35a. EKPC states that the capacity factor data for the hydroelectric power units on the Cumberland River system is not available. Explain in detail why this information is not available.

Response 35a. EKPC should have stated that the information is not maintained by EKPC. There are a significant number of units in the Cumberland River System and EKPC does not maintain the data by unit. EKPC maintains the data regarding the energy received into its system, not the entire Cumberland River System.

Request 35b. Provide a detailed explanation of the process wherein EKPC receives its allocation of hydroelectric energy as a scheduled delivery on a weekly basis.

Response 35b. EKPC receives notice from SEPA stating the amount of energy expected to be available to EKPC for the upcoming week, based on the water available. EKPC then provides a schedule to SEPA of the amount of energy it would like to receive by hour of each day for the following week. SEPA confirms the schedule and works with TVA to deliver the energy. TVA schedules all of the hydro energy as a service to SEPA.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 36
RESPONSIBLE PARTY: Julia J. Tucker

Request 36. Refer to the Company's response to the Attorney General's First Request, Item 15(d)(iii). EKPC states that the current rate for the hydroelectric power that it purchases from the federal Southeastern Power Administration is $14.278/MWh. Explain in detail whether EKPC is purchasing the maximum amount of hydroelectric power allowed under this contract, and if not, explain why not.

Response 36. Yes, EKPC is purchasing the maximum amount of hydroelectric power allowed under this contract.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 37
RESPONSIBLE PARTY: Julia J. Tucker

Request 37. Refer to the Company's response to the Attorney General's First Request, Item 15(e). In its response, EKPC cites to the 2022 Integrated Resource Plan, Table 8-10. To clarify the record, confirm that the correct citation for this response should be to the Revised Table 8- 10 filed into the record by EKPC on May 17, 2022 ("Revised Table 8-10"). If not confirmed, provide the correct citation for the response.

Response 37. Yes, the response should be the Revised Table 8-10 filed into the record by EKPC on May 17, 2022.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 38
RESPONSIBLE PARTY: Julia J. Tucker

Request 38. Refer to the Revised Table 8-10.

Request 38a. EKPC stated in the responses to the Attorney General's First Request that there are no set retirement dates for its coal generation resources, and even if the depreciable life ends, it does not mean that the unit could not be operated safely and reliably well past its financial life if properly maintained. If there are no set retirement dates for EKPC's coal generation resources, explain why the forecasted generation GWh for coal declines almost every year in the Revised Table 8-10. For example, in 2022 coal is forecasted to contribute 11,406.6 GWh, 9,183.5 GWh in 2025, 7,875.5 GWh in 2033, and 7,604.9 GWh in 2036.

Response 38a. The amount of coal generation projected is based on the underlying assumptions of fuel prices and market prices. Market prices are expected to come back down in future years, based on the natural gas price projections. As such, the coal generation is not as economic and so the generation is reduced. If market prices increase faster than coal prices, then the coal generation would be expected to increase.

Request 38b. EKPC stated in the responses to the Attorney General's First Request that there are no set retirement dates for its natural gas generation resources, and even if the depreciable life ends, it does not mean that the unit could not be operated safely and reliably well past its financial life if properly maintained. If there are no set retirement dates for EKPC's natural gas generation resources, explain why the forecasted generation GWh for natural gas declines almost every year in the Revised Table 8-10. For example, in 2022 natural gas is forecasted to contribute 1,650.5 GWh, 982.4 GWh in 2025, 876.5 GWh in 2033, and 592.1 GWh in 2036.

Response 38b. Natural gas resources, like all resources, are economically dispatched based on availability and market prices. EKPC's natural gas generators are projected to run less in the future based on the price assumptions.

Request 38c. EKPC stated in the responses to the Attorney General's First Request that there are no plans to build any more solar farms in the near future. However, according to Revised Table 8-10, the forecasted solar generation GWh increases the majority of the years through 2036. For example, in 2022 solar energy generation is forecasted to contribute 13.8 GWh, 685.3 GWh in 2025, 1,766.6 GWh in 2031, and 2,418.2 GWh in 2036. If EKPC does not plan to build and own any more solar farms in the near future, explain whether all of the forecasted solar generation will come from PPAs.

Response 38c. EKPC shows solar PPAs in its future expansion plan shown in Table 8-7 on page 171 of the IRP. The projected solar generation is based on adding these solar PPAs.

Request 38d. Explain in detail whether EKPC has any reliability concerns based upon the forecasted reduction in coal and natural gas generation, which are the baseload and peaking generation resources.

Response 38d. No, EKPC has no reliability concerns based on the forecasted reductions.

Request 38e. Explain in detail whether EKPC has any reliability concerns based upon the forecasted increase in solar generation, which are intermittent, non-dispatchable generation resources.

Response 38e. EKPC plans to continue operating its traditional, dispatchable resources. Therefore, it has no reliability concerns with the level of solar generation shown in its IRP plan. EKPC does have reliability concerns if the systems around it retire all or most of their dispatchable generation and add only intermittent, non-dispatchable resources.

Request 38f. According to the Revised Table 8-10, it appears that EKPC will be short of GWh requirements for its native load every year from 2022 – 2036, even when factoring in the purchased energy. The Revised Table 8-10 also indicates that EKPC will produce less generation throughout the years of 2022 – 2036. In 2022, EKPC is forecasted to produce 13,166.2 GWh, but

by 2036 is only forecasted to produce 10,710.5 GWh of energy. However, the energy requirement for the native load is forecasted to increase from 14,421.1 GWh in 2022 to 16,802.3 GWh in 2036.

Request 38f (i). Explain how EKPC will provide the additional energy needed for its native load for each year from 2022 – 2036.

Response 38f (i). EKPC buys all of its energy from the PJM market and sales all of its generation into the market. The generation is dispatched economically. That means if EKPC's generation costs less than the market prices, then it will be dispatched to generate. If EKPC's generation costs more than the market prices, then it will not be dispatched to generate. Owner-members receive the lowest cost energy under this model. EKPC's energy needs will be met whether or not EKPC is providing the generation.

Request 38f (ii). Explain why EKPC believes it is a good decision to produce less energy throughout the years of 2022 – 2036, even though its forecasted energy requirement is set to increase by approximately 2,400 GWh.

Response 38f (ii). See Response f(i).

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 39
RESPONSIBLE PARTY: Chris Adams

Request 39. Refer to the Company's response to the Attorney General's First Request, Item 16.

a. Explain in detail why EKPC has not petitioned for, nor received, any monies associated with the Infrastructure Investment and Jobs Act.

b. Explain in detail whether EKPC plans to petition for, or receive any monies associated with the Infrastructure Investment and Jobs Act.

Response 39a-b. EKPC is participating in a working group, led by Kentucky Electric Cooperatives, that is evaluating the opportunities available to electric cooperatives within the Infrastructure Investment and Jobs Act. Recently, the Commonwealth of Kentucky released a program narrative for Kentucky's plan for state-allocated resiliency monies. See attached PDF document, "Response 39 - OEP_Sec40101d-Narrative_PublicReview.pdf". Communication from the federal government and the state of Kentucky is ongoing and program solicitations are still forthcoming. If EKPC determines that it has projects that will qualify for federal monies, EKPC will petition for those at that time.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 40
RESPONSIBLE PARTY: Denise Foster Cronin

Request 40. Refer to the Company's response to the Attorney General's First Request, Item 18(a). Provide updates to the specific FERC and PJM matters discussed in this response. Please consider this an ongoing request throughout the pendency of the case.

Response 40.

- **The FERC rulemaking at Docket AD21-10, Modernizing Electricity Market Design:**

  PJM solicited stakeholder feedback to inform the report that FERC directed the RTOs to submit in October 2022. PJM posted the written feedback stakeholders submitted as well as posted and discussed at the September 7, 2022, PJM Market Implementation Committee meeting, its current thoughts about what it will include in its report.[7] The FERC has taken no additional action in this docket. The FERC is allowing public comment on the reports

[7] PJM's presentation: https://www.pjm.com/-/media/committees-groups/committees/mic/2022/20220907/item-16a---pjm-draft-response-to-modernizing-electricity-market-design-ferc-docket.ashx
LS Power's feedback: https://www.pjm.com/-/media/committees-groups/committees/mic/2022/20220907/item-16b---ad21-10-stakeholder-feedback-ls-power.ashx
ODEC's feedback: https://www.pjm.com/-/media/committees-groups/committees/mic/2022/20220907/item-16c---ad21-10-stakeholder-feedback-odec.ashx
Constellation's feedback: https://www.pjm.com/-/media/committees-groups/committees/mic/2022/20220907/item-16d---ad21-10-stakeholder-feedback-constellation.ashx

the RTOs submit. They are due within 60 days of the reports being submitted, which would be December 2022.

- **Various PJM Stakeholder Activities Focused on Market Design Changes That May be Needed Due to Changing PJM Generation Portfolio:**
    - The PJM Resource Adequacy Senior Task Force is currently focused on potential changes to the capacity construct. The discussions are at a fairly early stage and are generally focused on Reliability Risks and Risk Drivers; Procurement Metric and Level; Performance Expectation; Qualification and Accreditation; and Obligations.
    - The Clean Attributes Procurement Senior Task Force was created to consider potential market designs for a voluntary opportunity for clean attribute procurement. That group too is at an early stage in the discussion.
    - The PJM Operating Committee undertook an effort to define reliability attributes of resources, assess whether there is a current requirement for them or a market to procure them, and determine whether a market product need be created, by which PJM stakeholder group, and by when. A table outlining the Operating Committee assessment may be found at: https://www.pjm.com/-/media/committees-groups/committees/oc/2022/20220210/20220210-item-16-reliability-products-and-service-assessment-post-meeting.ashx.

EKPC will provide an update on these matters prior to the currently scheduled hearing if it deems that there have been any material developments.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 41
RESPONSIBLE PARTY: Scott Drake

Request 41. Refer to Section 3.0, Load Forecast, page 95. The Company asserts that EKPC and its 16 owner-member cooperatives are reviewing funding opportunities resulting from the Infrastructure Investment and Jobs Act to improve electric service to its customers. Provide a detailed update on these efforts, and explain the improvements to the electric service that would occur from the funding.

Response 41. There are many categories or funding groups of money; each having their own set of rules for participation. Therefore, EKPC and its owner-members have secured the services of a consulting firm to help with understanding the guidance or rules for each funding opportunity and to help in determining the projects or programs that qualify in each pot along with grant writing services. Because funding guidance is just now being published, it is too early to identify improvements to the electric system.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 42
RESPONSIBLE PARTY: Craig A. Johnson

Request 42. Refer to the Company's response to the Attorney General's First Request, Item 21(b). EKPC asserts that Cooper Station Unit 1's depreciable life ends in 2030, but this does not mean that it has reached the end of its operational life. EKPC further states that Cooper Station 1 could be operated safely and reliably well past its financial life if properly maintained.

Request 42a. Provide the date that Cooper Station 1 was added to EKPC's generation resources.

Response 42a. The commercial operation date for Cooper Station 1 was February 9, 1965.

Request 42b. Provide an estimated timeframe that Cooper Station 1 could be operated safely, reliably, and in a cost-effective manner if properly maintained.

Response 42b. EKPC expects that each unit in question during the period that this IRP covers can be operated safely, reliably and in a cost-effective manner if properly maintained. It is

EKPC's opinion that these well-maintained assets can be operated for another twenty to thirty years in a safe, reliable and cost-effective manner.

Request 42c. Provide the average capacity factor of Cooper Station 1 for 2021 and 2022 to present date.

Response 42c. The average capacity factor of Cooper Station 1 for 2021 was 12.26 and for 2022 (thru July) was 15.88.

Request 42d. Provide the average price per MWh for energy produced by Cooper Station 1 for 2021 and 2022 to present date.

Response 42d. EKPC does not have pricing at the unit level, but instead at the plant level. The average price per MWh for energy produced by Cooper Station for 2021 was $141.19 / MWh and for 2022 (thru July) was $116.92 / MWh.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 43
RESPONSIBLE PARTY: Craig A. Johnson

Request 43. Refer to the Company's response to the Attorney General's First Request, Item 21(e). EKPC asserts that Cooper Station 2's depreciable life ends in 2030, but this does not mean that it has reached the end of its operational life. EKPC further states that Cooper Station 2 could be operated safely and reliably well past its financial life if properly maintained.

Request 43a. Provide the date that Cooper Station 2 was added to EKPC's generation resources.

Response 43a. The commercial operation date for Cooper Station 2 was October 28, 1969.

Request 43b. Provide an estimated timeframe that Cooper Station 2 could be operated safely, reliably, and in a cost-effective manner if properly maintained.

Response 43b. EKPC expects that each unit in question during the period that this IRP covers can be operated safely, reliably and in a cost-effective manner if properly maintained. It is

EKPC's opinion that these well-maintained assets can be operated for another twenty to thirty years in a safe, reliable and cost-effective manner.

Request 43c. Provide the average capacity factor of Cooper Station 2 for 2021 and 2022 to present date.

Response 43c. The average capacity factor of Cooper Station 2 for 2021 was 18.28 and for 2022 (thru July) was 28.50.

Request 43d. Provide the average price per MWh for energy produced by Cooper Station 2 for 2021 and 2022 to present date.

Response 43d. EKPC does not have pricing at the unit level, but instead at the plant level. The average price per MWh for energy produced by Cooper Station for 2021 was $141.19 / MWh and for 2022 (thru July) was $116.92 / MWh.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 44
RESPONSIBLE PARTY: Craig A. Johnson

Request 44. Refer to the Company's response to the Attorney General's First Request, Item 21(h). EKPC asserts that Spurlock Station Unit 1's depreciable life ends in 2040, but this does not mean that it has reached the end of its operational life. EKPC further states that Spurlock Station Unit 1 could be operated safely and reliably well past its financial life if properly maintained.

Request 44a. Provide the date that Spurlock Station Unit 1 was added to EKPC's generation resources.

Response 44a. The commercial operation date for Spurlock Station Unit 1 was September 1, 1977.

Request 44b. Provide an estimated timeframe that Spurlock Station Unit 1 could be operated safely, reliably, and in a cost-effective manner if properly maintained.

Response 44b. EKPC expects that each unit in question during the period that this IRP covers can be operated safely, reliably and in a cost-effective manner if properly maintained. It is EKPC's opinion that these well-maintained assets can be operated for another twenty to thirty years in a safe, reliable and cost-effective manner.

Request 44c. Provide the average capacity factor of Spurlock Station Unit 1 for 2021 and 2022 to present date.

Response 44c. The average capacity factor of Spurlock Station Unit 1 was 74.93 and for 2022 (thru July) was 66.15.

Request 44d. Provide the average price per MWh for energy produced by Spurlock Station Unit 1 for 2021 and 2022 to present date.

Response 44d. EKPC does not have pricing at the unit level, but instead at the plant level. The average price per MWh for energy produced by Spurlock Station for 2021 was $46.48 / MWh and for 2022 (thru July) was $54.04 / MWh.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 45
RESPONSIBLE PARTY: Craig A. Johnson

Request 45. Refer to the Company's response to the Attorney General's First Request, Item 21(k). EKPC asserts that Spurlock Station Unit 2's depreciable life ends in 2042, but this does not mean that it has reached the end of its operational life. EKPC further states that Spurlock Station Unit 2 could be operated safely and reliably well past its financial life if properly maintained.

Request 45a. Provide the date that Spurlock Station Unit 2 was added to EKPC's generation resources.

Response 45a. The commercial operation date for Spurlock Station Unit 2 was March 2, 1981.

Request 45b. Provide an estimated timeframe that Spurlock Station Unit 2 could be operated safely, reliably, and in a cost-effective manner if properly maintained.

Response 45b. EKPC expects that each unit in question during the period that this IRP covers can be operated safely, reliably and in a cost-effective manner if properly maintained. It is EKPC's opinion that these well-maintained assets can be operated for another twenty to thirty years in a safe, reliable and cost-effective manner.

Request 45c. Provide the average capacity factor of Spurlock Station Unit 2 for 2021 and 2022 to present date.

Response 45c. The average capacity factor of Spurlock Station Unit 2 for 2021 was 58.96 and for 2022 (thru July) was 76.14.

Request 45d. Provide the average price per MWh for energy produced by Spurlock Station 2 for 2021 and 2022 to present date.

Response 45d. EKPC does not have pricing at the unit level, but instead at the plant level. The average price per MWh for energy produced by Spurlock Station for 2021 was $46.48 / MWh and for 2022 (thru July) was $54.04 / MWh.

EAST KENTUCKY POWER COOPERATIVE, INC.
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SECOND REQUEST FOR INFORMATION RESPONSE

ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 46
RESPONSIBLE PARTY: Craig A. Johnson

Request 46. Refer to the Company's response to the Attorney General's First Request, Item 21(n). EKPC asserts that Spurlock Station Unit 3's depreciable life ends in 2045, but this does not mean that it has reached the end of its operational life. EKPC further states that Spurlock Station Unit 3 could be operated safely and reliably well past its financial life if properly maintained.

Request 46a. Provide the date that Spurlock Station Unit 3 was added to EKPC's generation resources.

Response 46a. The commercial operation date for Spurlock Station Unit 3 was March 1, 2005.

Request 46b. Provide an estimated timeframe that Spurlock Station Unit 3 could be operated safely, reliably, and in a cost-effective manner if properly maintained.

Response 46b. EKPC expects that each unit in question during the period that this IRP covers can be operated safely, reliably and in a cost-effective manner if properly maintained. It is EKPC's opinion that these well-maintained assets can be operated for another twenty to thirty years in a safe, reliable and cost-effective manner.

Request 46c. Provide the average capacity factor of Spurlock Station Unit 3 for 2021 and 2022 to present date.

Response 46c. The average capacity factor of Spurlock Station Unit 3 for 2021 was 80.29 and for 2022 (thru July) was 69.29.

Request 46d. Provide the average price per MWh for energy produced by Spurlock Station Unit 3 for 2021 and 2022 to present date.

Response 46d. EKPC does not have pricing at the unit level, but instead at the plant level. The average price per MWh for energy produced by Spurlock Station for 2021 was $46.48 / MWh and for 2022 (thru July) was $54.04 / MWh.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 47
RESPONSIBLE PARTY: Craig A. Johnson

Request 47. Refer to the Company's response to the Attorney General's First Request, Item 21(q). EKPC asserts that Spurlock Station Unit 4's depreciable life ends in 2049, but this does not mean that it has reached the end of its operational life. EKPC further states that Spurlock Station Unit 4 could be operated safely and reliably well past its financial life if properly maintained.

Request 47a. Provide the date that Spurlock Station Unit 4 was added to EKPC's generation resources.

Response 47a. The commercial operation date for Spurlock Station Unit 4 was April 1, 2009.

Request 47b. Provide an estimated timeframe that Spurlock Station Unit 4 could be operated safely, reliably, and in a cost-effective manner if properly maintained.

Response 47b. EKPC expects that each unit in question during the period that this IRP covers can be operated safely, reliably and in a cost-effective manner if properly maintained. It is EKPC's opinion that these well-maintained assets can be operated for another twenty to thirty years in a safe, reliable and cost-effective manner.

Request 47c. Provide the average capacity factor of Spurlock Station Unit 4 for 2021 and 2022 to present date.

Response 47c. The average capacity factor of Spurlock Station Unit 4 for 2021 was 83.31 and for 2022 (thru July) was 83.13.

Request 47d. Provide the average price per MWh for energy produced by Spurlock Station Unit 4 for 2021 and 2022 to present date.

Response 47d. EKPC does not have pricing at the unit level, but instead at the plant level. The average price per MWh for energy produced by Spurlock Station for 2021 was $46.48 / MWh and for 2022 (thru July) was $54.04 / MWh.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 48
RESPONSIBLE PARTY: Mark Horn

Request 48. Refer to the Company's response to the Attorney General's First Request, Item 21(s). EKPC states that the coal market is "currently tight." Explain in detail whether the tight market has caused EKPC to modify its coal purchasing practices in any way. Ensure to discuss whether EKPC is attempting to secure longer-term coal contracts.

Response 48. EKPC coal purchasing practices continue to follow established Policy, Strategy, and Procedure for all its coal generating units. Flexibility to make minor modifications to the coal purchasing practices due to market volatility, while maintaining compliance with the detailed internal controls, is an integral part of a nimble coal procurement process. EKPC's coal procurement process is designed to provide an adequate fuel resource for EKPC's generating units that will enable EKPC to continue to generate power for the lowest cost possible for its Member Systems.

EKPC has a ladder-type coal hedging policy for the current and future years to provide price stability. When spot coal was readily available at a lower price, EKPC would target the lower end of the hedge range, allowing EKPC to participate in economic opportunities

from the spot market. With the spot coal market becoming increasingly illiquid, EKPC is now targeting the upper end of the hedge range. Hedging more of the projected coal needs helps to stabilize the fuel cost in a globally volatile spot coal market.

Historically, the most common type of spot coal purchase for EKPC has been a Traditional Spot Purchase, which utilizes a fair and competitive bidding process initiated with a written or verbal Request for Proposal. In this process it may take weeks or months before a coal supply agreement is fully executed. This is not an issue when coal is readily available and there is considerable lead time prior to the beginning of the term. Currently, with time often being of the essence, coal supply agreements need to be fully executed in a timelier manner. With spot coal in limited supply and high domestic and international demand, a coal supply agreement may need to be fully executed within hours, or the coal is at risk of being sold to another party. This immediate need for spot coal has led EKPC to utilize more Emergency Spot Purchases and Test Spot Purchases to secure that coal supply in an effort to match the increased coal burn or simply to maintain physical coal inventory within the target levels.

EKPC is attempting to secure longer-term coal contracts. Contrary to the objectives of most utilities, for the last several years coal suppliers have been resistant to agree to a coal supply agreement for more than three years. Currently, any coal supply agreement with a term longer than three years is contingent on a market price reopener during the third delivery year to establish the coal price for the new term. EKPC has had success in achieving supplier diversification in an effort to mitigate coal supply risks for the coal fleet. To limit market exposure, EKPC would have multiple coal supply agreements that consisted of a mix of suppliers with a

variety in tonnage and staggered terms. The number of coal suppliers that have the capability of supplying a large quantity of tons, with the proper quality, in a short period of time has diminished. Coal market contraction, which has led to fewer coal supply proposals, has made supplier diversification more difficult. EKPC and the owner-members are committed to EKPC's coal generating units as a hedge for the energy market. EKPC is actively pursuing reasonable opportunities for longer-term coal contracts.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 49
RESPONSIBLE PARTY: Craig A. Johnson

Request 49. Refer to the Company's response to the Attorney General's First Request, Item 22(b).

Request 49a. For each of the natural gas/fuel oil generating units provide the date that each unit was added to EKPC's generation resources.

Response 49a. The commercial operation dates for the natural gas/fuel oil generating units are:

- Smith Station Unit 1- March 1, 1999
- Smith Station Unit 2- March 1, 1999
- Smith Station Unit 3- April 1, 1999
- Smith Station Unit 4- November 15, 2001
- Smith Station Unit 5- November 15, 2001
- Smith Station Unit 6- January 12, 2005
- Smith Station Unit 7- January 12, 2005

- Smith Station Unit 9- May 1, 2010
- Smith Station Unit 10- May 1, 2010
- Bluegrass Station Unit 1- December 29, 2015
- Bluegrass Station Unit 2- December 29, 2015
- Bluegrass Station Unit 3- December 29, 2015

Request 49b. Provide an estimated timeframe that each natural gas/fuel oil generating unit could be operated safely, reliably, and in a cost-effective manner if properly maintained.

Response 49b. EKPC expects that each unit in question during the period that this IRP covers can be operated safely, reliably and in a cost-effective manner if properly maintained. It is EKPC's opinion that these well-maintained assets can be operated for another fifteen to thirty years in a safe, reliable and cost-effective manner.

Request 49c. Provide the average capacity factor for each of the natural gas/fuel oil generating units for 2021 and 2022 to present date.

Response 49c. The average capacity factor for the natural gas/fuel oil generating units are:

- Smith Station Unit 1- 5.78 (2021), 10.25 (2022 thru July)
- Smith Station Unit 2- 5.18 (2021), 10.94 (2022 thru July)
- Smith Station Unit 3- 5.29 (2021), 9.55 (2022 thru July)
- Smith Station Unit 4- 6.04 (2021), 12.05 (2022 thru July)
- Smith Station Unit 5- 6.05 (2021), 11.93 (2022 thru July)
- Smith Station Unit 6- 6.87 (2021), 12.93 (2022 thru July)
- Smith Station Unit 7- 6.65 (2021), 12.51 (2022 thru July)
- Smith Station Unit 9- 14.52 (2021), 0.00 (2022 thru July)

- Smith Station Unit 10- 20.24 (2021), 20.51 (2022 thru July)
- Bluegrass Station Unit 1- 5.04 (2021), 6.68 (2022 thru July)
- Bluegrass Station Unit 2- 4.75 (2021), 6.50 (2022 thru July)
- Bluegrass Station Unit 3- 0.86 (2021), 0.47 (2022 thru July)

Request 49d. Provide the average price per MWh for energy produced by each of the natural gas/fuel oil generating units for 2021 and 2022 to present date.

Response 49d. EKPC does not have pricing at the unit level, but instead at the plant level. The average price per MWh for energy produced by Smith Station for 2021 was $134.68 / MWh and for 2022 (thru July) was $123.80 / MWh: The average price per MWh for energy produced by Bluegrass Station for 2021 was $166.31 / MWh and for 2022 (thru July) was $165.51 / MWh.

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SECOND REQUEST FOR INFORMATION RESPONSE

ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 50
RESPONSIBLE PARTY: Julia J. Tucker

Request 50. Refer to the Company's response to the Attorney General's First Request, Item 23(d). Explain in detail why EKPC does not anticipate a need to seek alternate sources of power "due to the planned rehabilitation plans for the hydro energy facilities on the Cumberland River system and expected prices."

Response 50. SEPA and the Army Corps of Engineers have rehabilitation plans that will increase the amount of available generation back to the original contract amount. EKPC does not expect to receive a reduced amount into the future. Therefore, no alternate sources are needed.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 51
RESPONSIBLE PARTY: Scott Drake

Request 51. Refer to the Company's response to the Attorney General's First Request, Item 24. EKPC asserts that the subscription rate for the Cooperative Solar Farm One has been low, and as of June 30, 2022, there are only 248 licensees, with 1,553 panels licensed. EKPC further states that the additional 32,300 solar panels are supplying energy to EKPC's owner-members.

Request 51a. Explain in detail the reason that EKPC believes the subscription rate is so low. Include in the response whether the $460 license fee for one solar panel is a factor in the low subscription rate.

Response 51a. A $460 license fee per panel is a large expenditure for many retail members, especially for the residential segment. However, there does not appear to be a sense of urgency among many potential subscribers to move to renewable resources at an added cost. Some commercial and industrial customers are showing more interest in participating in the project. However, many of those customers prefer to have a new facility that they can attest was constructed specifically for them and/or have a facility located at their site.

Request 51b. On the Cooperative Solar Farm One's website, it states that for one solar panel the license fee is $460, and it will provide $830 estimated 25-year credits to the power bill.2 Explain whether the $830 credit is an annual credit or the total credit received over the course of 25 years.

Response 51b. The $830 estimated credit is the total credit received over the term of the license, which is 25 years.

Request 51c. Explain in detail whether it is more beneficial for EKPC to have subscribers license the solar panels, or EKPC to provide the energy produced from the solar farm to the EKPC owner-members. Provide copies of all cost/benefit analyses that have been performed regarding the same.

Response 51c. When constructed, the average cost of energy from the solar facility was slightly higher than the average cost of energy supplied to the EKPC owner-members. With the recent rise in fuel prices and subsequent rise in market prices, the average cost of energy from the solar facility is equal to or less than the average cost of energy supplied to the EKPC owner-members today. Therefore, it is now economic for the solar facility to supply energy to the owner-members. However, if fuel and market prices move back down, that dynamic could once again reverse. In general, the average cost of energy from the solar facility is close to the average cost of energy supplied to the owner-members from legacy resources or the PJM market. Therefore,

there is not a significant difference in benefits to EKPC if the panel is licensed or not. No detailed analysis has been performed.

Request 51d. EKPC states that the Cooperative Solar Farm One is capable of producing up to 8.5 MW, but with the low capacity factor, provide the average amount of MW that the solar farm actually produces.

Response 51d. The low capacity factor is a reflection of the amount of time the sun irradiance can produce electricity. Sun irradiance is the fuel supply, and it is limited. When the fuel is available, the plant produces up to 8.5 MW of electricity. In 2021, the capacity factor was about 18% using 8.5MWs peak. Thus, 18% of 8.5MWs is 1.53MWs, which is the average MW production per hour.

Request 51e. Refer to the aforementioned response stating that the additional 32,300 solar panels are supplying energy to EKPC owner-members. The Attorney General asked EKPC in the First Request, Item 15(a) whether the costs associated with Cooperative Solar Farm One are passed through in the rates of EKPC and its sixteen owner-members, or whether the customers have to opt-in to pay for the solar energy. The Company responded by stating, "[t]he costs of the Cooperative Solar One are not passed on to the retail member. For a retail member to claim the energy from the facility, they must license the panel(s)." Reconcile these two responses. If the solar panels that have no subscribers are providing energy to the owner-members, how are the

sixteen owner-members not paying for the solar energy, which would ultimately be paid for by the customers? Explain the response in detail.

Response 51e. EKPC has invested in Cooperative Solar One, so the owner-members pay for that facility. As subscribers join, their upfront payment is used to retire that corresponding amount of debt from the plant. In exchange for their payment, they will receive the market value of that panel each month. The original response was indicating that customers who do not pay for a panel do not receive the market value for that panel. Only the subscribing participants receive the market value for the panels. All owner-members receive the value of the additional energy that is not subscribed at this time.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 52
RESPONSIBLE PARTY: Scott Drake

Request 52. Refer to the Company's response to the Attorney General's First Request, Item 25. Provide a detailed explanation of the "incentives" that EKPC and its owner-members provide to the Community Action Agency for implementing the CARES Low-Income Weatherization Program.

Response 52. Refer to attached PDF document, "Response #52 Exhibit CARES Program Guidelines.pdf", for a detailed explanation of the incentive provided to the Community Action Agency. These are the guidelines provided to all non-profit affordable housing agencies qualified to participate in the CARES program.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 53
RESPONSIBLE PARTY: Darrin Adams

Request 53. Refer to the Company's response to the Attorney General's First Request, Item 29. EKPC admits there is a potential for its transmission capital costs to be higher as a PJM member than as a stand-alone transmission-planning entity.

Request 53a. Provide all analyses conducted by PJM and EKPC regarding the forecasted increased transmission costs.

Response 53a. No such analysis has been performed by PJM and EKPC. As indicated in EKPC's response to the referenced prior Request Item No. 29, EKPC has determined the cost impact of those four projects that were required due to more stringent PJM criteria, but has not assessed whether those projects would have been required at a later date based on EKPC's own transmission-planning criteria. EKPC has not undertaken any analyses regarding potential future transmission needs that may arise due to PJM criteria.

Request 53b. Explain in detail whether EKPC has concerns about PJM's forecasted transmission costs.

Response 53b. As indicated, in the response to subpart a., no analysis of future incremental transmission capital costs due to PJM membership has been undertaken by EKPC.

Request 53c. With regard to forecasted transmission costs, does EKPC plan to conduct any cost/benefit analyses to determine whether it is still beneficial to stay a PJM member? If not, explain why not.

Request 53c. EKPC has no plans to conduct cost/benefit analyses with regard to forecasted transmission capital costs as a PJM member versus being a non-member of PJM. As noted in the EKPC response to the referenced prior Request Item No. 29, the incremental transmission capital costs incurred by EKPC over the first nine years as a PJM transmission owner has been relatively minor (less than $4,000,000),

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 54
RESPONSIBLE PARTY: Julie Tucker

Request 54. Explain whether EKPC, when conducting analyses for least-cost supply side resources, takes into consideration the cost of potential transmission upgrades and/or new transmission projects, including substations, which may be necessary to wheel power from the site of generation resources to available transmission interconnection points.

Response 54. Yes, EKPC takes into account all expected incremental costs associated with each alternative.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 55
RESPONSIBLE PARTY: Julie Tucker

Request 55. Refer to the Company's response to the Attorney General's First Request, Item 31.

Request 55a. Refer to Section 7.0, Plans for Existing Generating Units, pages 144 – 156. As originally requested, provide the capacity factor for each unit once all of the identified projects are completed.

Response 55a. Pages 104 through 110 of the IRP show the expected capacity factor for each of EKPC's units. The modeling assumed all projects were completed.

Request 55b. Explain in general what factors cause a fossil fuel generation resource's capacity factor to fluctuate from year to year.

Response 55b. Fuel prices and market prices cause the capacity factors to fluctuate from year to year since the units are economically dispatched.

Request 55c. Explain in general what factors cause a renewable energy generation resource's capacity factor to fluctuate from year to year.

Response 55c. Renewable energy generation capacity factors fluctuate year to year based on weather. Solar generation is directly dependent on the amount of solar irradiance throughout the year and wind generation is dependent on the amount of wind.

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ATTORNEY GENERAL'S REQUEST DATED AUGUST 30, 2022
REQUEST 56
RESPONSIBLE PARTY: Julia J. Tucker

Request 56. Refer to the Company's response to the Attorney General's First Request, Item 34. EKPC states that the "current expansion plan has an expectation of contracting for winter energy hedges during the next five years. No new construction is anticipated, in the next five years, in this Integrated Resource Plan." Provide a detailed explanation of the contracts that EKPC plans to enter during the next five years.

Response 56. See Response 18.