COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Electronic Application Of Kentucky Power Company For 1) A Certificate Of Public Convenience And Necessity To Construct A Mechanical Draft Cooling Tower At The Mitchell Plant 2) Approval Of Certain Regulatory And Accounting Treatments, And 3) All Other Required Approvals And Relief	))))))	Case No. 2026-00001

POST-HEARING BRIEF OF KENTUCKY POWER COMPANY

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EXECUTIVE SUMMARY

The Mitchell Generating Station ("Mitchell Plant," "Mitchell," or "Plant") is a valuable component of Kentucky Power Company's ("Kentucky Power" or the "Company") generation portfolio. The Mitchell Plant has provided cost-effective service to Kentucky Power's customers since the Company acquired its interest in the Plant in 2014, and will continue to do so into the future so long as the new mechanical draft cooling tower at the Unit 2 Cooling Tower is constructed. The Company evaluated the costs, risks, and operational flexibility of the reasonable alternatives to address the structural issues at the Unit 2 Cooling Tower, and there was only one clear path forward—the Mitchell Cooling Tower Project for which the Company seeks approval in this case.

The benefit to customers of the Mitchell Cooling Tower Project is enhanced and further proven by the Department of Energy's ("DOE") decision to award $51 million to offset the cost of the Project. The Mitchell Cooling Tower Project allows the Company to continue to provide reliable, cost-effective service from the Mitchell Plant to its customers.

The evidence presented in this case confirms that Kentucky Power should be granted the authority to construct the Mitchell Cooling Tower Project.

I. INTRODUCTION

Kentucky Power seeks an order from the Public Service Commission of Kentucky (the "Commission") (1) granting a Certificate of Public Convenience and Necessity ("CPCN") to (a) construct a new mechanical draft cooling tower for Unit 2 at the Mitchell Plant and (b) partially demolish and then fully demolish (when the Mitchell Plant is retired) the existing Cooling Tower at Mitchell Unit 2 (together, the "Mitchell Cooling Tower Project" or the "Project"); and (2) approving accounting treatment to establish a regulatory asset to accumulate and defer for later review and recovery of the costs of the Mitchell Cooling Tower Project.[1]

The evidence is clear that the Mitchell Cooling Tower Project is the least-cost, reasonable option available to the Company to address the structural issues at the Unit 2 Cooling Tower. It allows the Company to continue to take advantage of the capacity and energy available from Mitchell Unit 2 in a cost-effective, low-risk manner and provides an opportunity for the Company to extend the life of the Mitchell Plant beyond its currently-planned 2040 retirement date in the event it is later determined to be prudent to do so. Additionally, the Company received a $51 million award from the DOE to partially offset the cost of the Mitchell Cooling Tower Project, further reducing the cost of the Project and making it even more beneficial to customers. Accordingly, the Commission should approve the Company's application.

II. BACKGROUND

A. Kentucky Power's Stake in the Mitchell Plant

The Mitchell Plant is located approximately 12 miles south of Moundsville, West Virginia on the Ohio River.[2] Kentucky Power owns an undivided 50% interest in the Mitchell Plant, and

[1] Application at 1.
[2] *Id.* at 2.

the other 50% interest is owned by Wheeling Power Company ("Wheeling Power").[3] The Mitchell Plant is operated by Wheeling Power.[4] The Plant is comprised of two super-critical pulverized coal-fired baseload generating units. Mitchell Unit 1 has a nameplate capacity of 770 megawatts ("MW") and Mitchell Unit 2 has a nameplate capacity of 790 MW, for a total nameplate capacity of 1,560 MW.[5] Both units were placed in service in 1971.[6]

The history of Kentucky Power's interest in the Mitchell Plant began in 2011 when it was faced with costly, required investments in a different plant—Big Sandy Unit 2. To ensure compliance with the federal Clean Air Act, the Company submitted its 2011 Environmental Compliance Plan with the Commission seeking, among other things, a CPCN to retrofit Big Sandy Unit 2 with a Dry Flue Gas Desulfurization System ("DFGDS" or "Scrubber") and associated equipment.[7] The estimated cost of installing the DFGDS was approximately $940 million (nearly $1.5 billion in 2026 dollars, accounting for inflation).[8] That case proceeded through an evidentiary hearing and briefing, and every intervenor opposed installing the Scrubber on Big Sandy Unit 2 because of concerns over rate impacts to customers, which were estimated to be an increase of

[3] *Id.*
[4] *Id.*
[5] *Id.*
[6] *Id.*
[7] Application, *In the Matter of: Application Of Kentucky Power Company For Approval Of Its 2011 Environmental Compliance Plan, For Approval Of Its Amended Environmental Cost Recovery Surcharge Tariff, And For The Grant Of A Certificate Of Public Convenience And Necessity For The Construction And Acquisition Of Related Facilities*, Case No. 2011-00401 (Ky. P.S.C. Dec. 5, 2011).
[8] *Id.* at 8.

approximately 31%.[9] In response to these poignant concerns, before a final order was issued in that case, the Company withdrew its application without prejudice on May 30, 2012.[10] The Commission accepted the Company's withdrawal the very next day.[11]

Because of the opposition to the Big Sandy Unit 2 Scrubber, the inability to run the Unit without environmental compliance upgrades, and the Company's need for capacity, the Company then filed an application in 2012 for a CPCN to acquire an undivided 50% interest in the Mitchell Plant. The Mitchell Plant already had flue gas desulfurization and selective catalytic reduction systems installed to comply with the Clean Air Act.[12] In the Company's application, it conducted a thorough financial analysis of six alternatives to purchasing a 50% interest in the Mitchell Plant and the analysis showed that the acquisition of a 50% interest in Mitchell and the conversion of

[9] *See* Attorney General's Post-Hearing Brief at 4–8, *In the Matter of: Application Of Kentucky Power Company For Approval Of Its 2011 Environmental Compliance Plan, For Approval Of Its Amended Environmental Cost Recovery Surcharge Tariff, And For The Grant Of A Certificate Of Public Convenience And Necessity For The Construction And Acquisition Of Related Facilities*, Case No. 2011-00401 (Ky. P.S.C. May 11, 2012); Brief of Kentucky Industrial Utility Customers, Inc. at 5–6, *In the Matter of: Application Of Kentucky Power Company For Approval Of Its 2011 Environmental Compliance Plan, For Approval Of Its Amended Environmental Cost Recovery Surcharge Tariff, And For The Grant Of A Certificate Of Public Convenience And Necessity For The Construction And Acquisition Of Related Facilities*, Case No. 2011-00401 (Ky. P.S.C. May 14, 2012); Tom Vierheller, Beverly May, and Sierra Club's Post Hearing Brief at 5–7, *In the Matter of: Application Of Kentucky Power Company For Approval Of Its 2011 Environmental Compliance Plan, For Approval Of Its Amended Environmental Cost Recovery Surcharge Tariff, And For The Grant Of A Certificate Of Public Convenience And Necessity For The Construction And Acquisition Of Related Facilities*, Case No. 2011-00401 (Ky. P.S.C. May 11, 2012).

[10] Motion For Leave To Withdraw Application Without Prejudice, *In the Matter of: Application Of Kentucky Power Company For Approval Of Its 2011 Environmental Compliance Plan, For Approval Of Its Amended Environmental Cost Recovery Surcharge Tariff, And For The Grant Of A Certificate Of Public Convenience And Necessity For The Construction And Acquisition Of Related Facilities*, Case No. 2011-00401 (Ky. P.S.C. May 30, 2012).

[11] Order at 2, *In the Matter of: Application Of Kentucky Power Company For Approval Of Its 2011 Environmental Compliance Plan, For Approval Of Its Amended Environmental Cost Recovery Surcharge Tariff, And For The Grant Of A Certificate Of Public Convenience And Necessity For The Construction And Acquisition Of Related Facilities*, Case No. 2011-00401 (Ky. P.S.C. May 31, 2012).

[12] Application at 2, *In The Matter Of: The Application Of Kentucky Power Company For: (1) A Certificate Of Public Convenience And Necessity Authorizing The Transfer To The Company Of An Undivided Fifty Percent Interest In The Mitchell Generating Station And Associated Assets; (2) Approval Of The Assumption By Kentucky Power Company Of Certain Liabilities In Connection With The Transfer Of The Mitchell Generating Station; (3) Declaratory Rulings; (4) Deferral Of Costs Incurred In Connection With The Company's Efforts To Meet Federal Clean Air Act And Related Requirements; And (5) For All Other Required Approvals And Relief*, Case No. 2012-00578 (Ky. P.S.C. Dec. 19, 2012).

Big Sandy Unit 1 to natural gas was the least-cost alternative.[13] The Commission agreed and specifically found:

> [B]ased on our comprehensive review of the extensive record, we find that Kentucky Power has established that the proposed Mitchell acquisition is needed to address the disposition of the nearly 1078 MW Big Sandy Generating Station because the station can no longer operate as it is currently configured and be in compliance with stringent federal environmental regulations.[14]

The Commission further justified this conclusion by noting that "[t]he economic analysis showed that the Mitchell proposal, combined with the conversion of Big Sandy Unit 1 to gas, was the least-cost alternative by a wide margin."[15]

Nearly a decade after Kentucky Power took ownership of its share of Mitchell, it filed an application seeking, among other things, a CPCN authorizing the construction of environmental projects at the Mitchell Plant necessary to comply with a new set of rules—the Environmental Protection Agency's ("EPA") Coal Combustion Residuals ("CCR") Rule and Effluent Limitations Guidelines Rule.[16] The Commission, however, only approved a CPCN for the projects to comply

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[13] Weaver Direct Test. at 5–7, *In The Matter Of: The Application Of Kentucky Power Company For: (1) A Certificate Of Public Convenience And Necessity Authorizing The Transfer To The Company Of An Undivided Fifty Percent Interest In The Mitchell Generating Station And Associated Assets; (2) Approval Of The Assumption By Kentucky Power Company Of Certain Liabilities In Connection With The Transfer Of The Mitchell Generating Station; (3) Declaratory Rulings; (4) Deferral Of Costs Incurred In Connection With The Company's Efforts To Meet Federal Clean Air Act And Related Requirements; And (5) For All Other Required Approvals And Relief*, Case No. 2012-00578 (Ky. P.S.C. Dec. 19, 2012).

[14] Order at 28, *In The Matter Of: The Application Of Kentucky Power Company For: (1) A Certificate Of Public Convenience And Necessity Authorizing The Transfer To The Company Of An Undivided Fifty Percent Interest In The Mitchell Generating Station And Associated Assets; (2) Approval Of The Assumption By Kentucky Power Company Of Certain Liabilities In Connection With The Transfer Of The Mitchell Generating Station; (3) Declaratory Rulings; (4) Deferral Of Costs Incurred In Connection With The Company's Efforts To Meet Federal Clean Air Act And Related Requirements; And (5) For All Other Required Approvals And Relief*, Case No. 2012-00578 (Ky. P.S.C. Oct. 7, 2013).

[15] *Id.* at 31 (emphasis added). While there was speculation at the hearing as to whether the Company has properly maintained the Plant since its purchase, no evidence was provided supporting such a concern. *See* Pizzino Hearing Test. at 185:16–17.

[16] Application at 7–8, *In the Matter of: Electronic Application Of Kentucky Power Company For Approval Of A Certificate Of Public Convenience And Necessity For Environmental Project Construction At The Mitchell Generating Station, An Amended Environmental Compliance Plan, And Revised Environmental Surcharge Tariff Sheets*, Case No. 2021-00004 (Ky. P.S.C. Feb. 8, 2021).

with the CCR Rule.[17] Kentucky Power, therefore, made capital investments for the CCR upgrades only, which would allow the Plant to run through December 31, 2028. The Commission later clarified and confirmed that the Company's interest in the Mitchell Plant would have to terminate by December 31, 2028, as a result of the Commission's July 15, 2021 Order.[18]

In response to the Commission's order, Kentucky Power began its search for options to replace the capacity and energy from its share of the Plant. This effort began with the Company's 2023 Integrated Resource Plan ("IRP"), which evaluated the Company's capacity and energy requirements in light of the required termination of the Company's interest in the Mitchell Plant.[19] Based on the IRP, the Company issued an all-source request for proposals ("RFP") on September 22, 2023, seeking power purchase agreements ("PPA") to address the Company's capacity and energy needs.[20] As part of its review, Kentucky Power evaluated bids for PPAs associated with thermal assets.[21] This review, however, was impacted by changes in the market for thermal resources driven by two events. First, on April 25, 2024, the EPA issued the Greenhouse Gas Emissions Standards for Fossil Fuel-Fired Electric Generating Units and, because that rule would impact the costs associated with thermal generating units, the Company requested that respondents to the RFP refresh their bids. In reviewing the updated pricing, the Company saw a "sharp uptick

[17] Order at 20, 24, *In the Matter of: Electronic Application Of Kentucky Power Company For Approval Of A Certificate Of Public Convenience And Necessity For Environmental Project Construction At The Mitchell Generating Station, An Amended Environmental Compliance Plan, And Revised Environmental Surcharge Tariff Sheets*, Case No. 2021-00004 (Ky. P.S.C. July 15, 2021).
[18] Order at 6–7, *In the Matter of: Electronic Application Of Kentucky Power Company For Approval Of A Certificate Of Public Convenience And Necessity For Environmental Project Construction At The Mitchell Generating Station, An Amended Environmental Compliance Plan, And Revised Environmental Surcharge Tariff Sheets*, Case No. 2021-00004 (Ky. P.S.C. May 3, 2022).
[19] Integrated Resource Plan, *In the Matter of: Electronic 2022 Integrated Resource Planning Report Of Kentucky Power Company*, Case No. 2023-00092 (Ky. P.S.C. Mar. 20, 2023).
[20] Yetzer Direct Test. at 4, *In the Matter of: Electronic Application Of Kentucky Power Company For (1) An Order Approving The Terms And Conditions Of The Renewable Energy Purchase Agreement For Solar Energy Resources Between Kentucky Power Company And Bright Mountain Solar, LLC; (2) Authorization To Enter Into The Agreement; (3) Recovery Of Costs Through Tariff P.P.A.; (4) Approval Of Accounting Practices To Establish A Regulatory Asset; And (5) All Other Required Approvals And Relief*, Case No. 2024-00243 (Ky. P.S.C. July 31, 2024).
[21] *Id.* at 3.

in cost" from the bidders.[22] Second, capacity prices in PJM increased dramatically during the period when the Company was evaluating bids.[23] Kentucky Power entered into negotiation with one of the bidders to the RFP for the acquisition of an existing generation resource, but ultimately terminated those negotiations.[24]

Having identified no viable alternatives through the RFP, the Company sought, in Case No. 2025-00175, a CPCN authorizing the Company to make the capital investments necessary to continue receiving 50% of the capacity and energy from the Mitchell Plant after December 31, 2028.[25] At that time, a maintenance project was underway to address surface irregularities on the Mitchell Unit 2 Cooling Tower (the "Initial Repair Project"). In late July 2025, after the CPCN application was filed, the American Electric Power ("AEP") Generation Projects team determined that additional repairs would be necessary to address the Unit 2 Cooling Tower's structural needs and paused the Initial Repair Project to determine the best engineering solution and the most economic and efficient path forward to ensure the continued safe and reliable operation of Unit 2.[26] This information, along with preliminary estimates of costs of options to address the structural needs of the Unit 2 Cooling Tower, was presented to the Commission in Case No. 2025-00175.[27]

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[22] Post-Hearing Brief of Kentucky Power Company at 13, *In the Matter of: Electronic Application of Kentucky Power Company For Approval Of (1) A Certificate Of Public Convenience And Necessity To Make The Capital Investments Necessary To Continue Taking Capacity And Energy From The Mitchell Generating Station After December 31, 2028, (2) An Amended Environmental Compliance Plan, (3) Revised Environmental Surcharge Tariff Sheets, And (4) All Other Required Approvals And Relief*, Case No. 2025-00175 (Ky. P.S.C. Dec. 9, 2025) (citing Vaughan Hearing Test. at 151:9–152:7).

[23] *Id.* (citing Vaughan Hearing Test. at 152:7–20).

[24] *Id.* (citing Wolffram Hearing Test. at 67:7–11).

[25] Application at 1, *In the Matter of: Electronic Application Of Kentucky Power Company For Approval Of (1) A Certificate Of Public Convenience And Necessity To Make The Capital Investments Necessary To Continue Taking Capacity And Energy From The Mitchell Generating Station After December 31, 2028, (2) An Amended Environmental Compliance Plan, (3) Revised Environmental Surcharge Tariff Sheets, And (4) All Other Required Approvals And Relief*, Case No. 2025-00175 (Ky. P.S.C. June 30, 2025).

[26] Vaughan Supp. Test. at 2–3, *In the Matter of: Electronic Application Of Kentucky Power Company For Approval Of (1) A Certificate Of Public Convenience And Necessity To Make The Capital Investments Necessary To Continue Taking Capacity And Energy From The Mitchell Generating Station After December 31, 2028, (2) An Amended Environmental Compliance Plan, (3) Revised Environmental Surcharge Tariff Sheets, And (4) All Other Required Approvals And Relief*, Case No. 2025-00175 (Ky. P.S.C. Oct. 10, 2025).

[27] *Id.*

The Commission approved the Company's application and authorized the Company to continue to take capacity and energy from the Mitchell Plant after December 31, 2028, with this information in hand.[28]

As a result of these decisions, the Mitchell Plant has provided, is providing, and will continue to provide cost-effective electrical service for eastern Kentucky customers. And regardless of any attempt to argue otherwise, the present case is not an opportunity to relitigate the Commission's 2012, 2021, or 2025 decisions. Rather, the purpose of the instant matter is to obtain approval to construct a new cooling tower for Mitchell Unit 2 in order to allow it to continue providing reliable service at a reasonable cost to Kentucky Power's customers.

B. The Mitchell Unit 2 Cooling Tower

Both units at the Mitchell Plant operate with a closed loop water system, meaning the water used to produce steam to turn the turbines is then cooled back to water to repeat the cycle.[29] This transfer from steam to water is accomplished using the condenser and cooling tower.[30] Steam exhausted from the turbines enters the condenser where cooling water flows through bundles of tubes.[31] The units presently pump cooling water, essentially water from the Ohio River, through the condenser where it absorbs heat from the steam.[32] This cooling water is then transported into the cooling tower where it mixes with air, thus transferring heat into the atmosphere.[33] This process

[28] Order at 63, *In the Matter of: Electronic Application Of Kentucky Power Company For Approval Of (1) A Certificate Of Public Convenience And Necessity To Make The Capital Investments Necessary To Continue Taking Capacity And Energy From The Mitchell Generating Station After December 31, 2028, (2) An Amended Environmental Compliance Plan, (3) Revised Environmental Surcharge Tariff Sheets, And (4) All Other Required Approvals And Relief*, Case No. 2025-00175 (Ky. P.S.C. Dec. 30, 2025).
[29] Application at 2.
[30] *Id.*
[31] *Id.*
[32] *Id.* at 2–3.
[33] *Id.* at 3.

recovers cooled water, reducing the need to constantly resupply water to the system and eliminates the release of hot water into natural bodies of water.[34]

The Mitchell Unit 2 Cooling Tower is a reinforced concrete-and-steel hyperbolic structure approximately 376 feet tall with a 288-foot diameter.[35] Unlike the Unit 1 Cooling Tower, however, the Mitchell Unit 2 Cooling Tower has several areas of surface irregularities and deformations of the concrete shell, which have weakened the structure.[36] Due to these distortions, the concrete shell has exhibited deterioration and cracking which has not been seen on other cooling towers owned by AEP operating companies.[37] The results of the engineering analysis performed on the Unit 2 Cooling Tower's condition show reduced structural capacity that necessitates repair or replacement.[38] Moreover, the Cooling Tower is continuing to deteriorate such that it could soon become unsafe and unfit for service.[39]

Plant personnel first observed the structural anomalies in April 2016.[40] This observation prompted an initial structural engineering assessment.[41] This assessment also revealed other surface cracking and deterioration related to the anomalies.[42] A subsequent detailed engineering analysis was commissioned and conducted by a third party to determine the full extent of the issues and determine the structural stability of the Cooling Tower with recommendations for reinforcing its structural integrity.[43] This effort includes a monitoring and inspection program, which is still ongoing.[44]

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[34] *Id.*
[35] Pizzino Direct Test. at 4.
[36] *Id.*
[37] *Id.* at 4–5.
[38] *Id.* at 5.
[39] *Id.*
[40] *Id.*
[41] *Id.*
[42] *Id.*
[43] *Id.*
[44] *Id.*

The monitoring program is composed of four key elements: continuous structural monitoring, annual drone inspections, bi-annual light detection and ranging ("LiDAR") assessments, and wind weather monitoring.[45] The continuous structural monitoring involves the use of three automated laser total station survey devices strategically positioned around the Unit 2 Cooling Tower.[46] These devices measure survey prisms affixed to the Tower.[47] In total, there are 121 prisms installed on the shell which are being monitored around the clock for structural movement.[48] If any unusual movement is detected, the system promptly sends a notification to Plant personnel.[49] Additionally, the collected data is reviewed monthly by an engineer to ensure ongoing safety and structural integrity.[50]

A drone assessment involves deploying a drone around the Tower to capture images and identify areas of concrete distress conditions.[51] A three-dimensional ("3D") model of the structure is then created from the stitched-together images to assess the Tower's condition.[52] This is, and will continue to be, conducted annually.[53]

A LiDAR Assessment utilizes laser scanning equipment to produce a comprehensive 3D scan of the Tower.[54] The new scan is compared to previous scans to identify any changes in the Tower's shape.[55] This evaluation is, and will continue to be, conducted bi-annually.[56]

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[45] *Id.* at 8.
[46] *Id.*
[47] *Id.*
[48] *Id.*
[49] *Id.*
[50] *Id.*
[51] *Id.*
[52] *Id.*
[53] *Id.*
[54] *Id.*
[55] *Id.* at 8–9.
[56] *Id.* at 9.

The wind weather monitoring system consists of eight weather stations located around the Cooling Tower.[57] If excessive wind is detected, Plant personnel will be alerted. Engineers can then perform a visual inspection and complete an engineering assessment if needed.[58] Engineers will utilize the monitoring techniques described above to identify any unusual movements, signs of concrete distress such as cracking or spalling, and changes to the overall shape of the Tower.[59] Should any anomalies be detected, an engineering assessment will be conducted to evaluate the need for immediate actions or repairs.[60]

In 2024, the Company initiated the Initial Repair Project to reinforce the shell structure with the intent of restoring the structural integrity of the Cooling Tower.[61] The Initial Repair Project included a multi-step process to repair the damaged areas of concrete and reinforce the shell.[62] First, the area was to be pressure-washed with high-pressure water.[63] Next, areas of deteriorated concrete and rebar were to be repaired, and cracks were to be sealed with epoxy.[64] Once the area was repaired, a three-layered fiber reinforced cementitious matrix system ("FRCM") was to be applied to the external surface of the structure, which included 105,000 square feet of surface area.[65]

As work progressed, the amount of deterioration and cracking the AEP Generation Projects team observed was more than what was originally estimated, causing the project cost estimate to increase and the project schedule to be extended. Accordingly, in July 2025, the AEP Generation Projects team determined additional engineering solutions and repair options should be

[57] *Id.*
[58] *Id.*
[59] *Id.*
[60] *Id.*
[61] *Id.* at 5.
[62] *Id.*
[63] *Id.*
[64] *Id.*
[65] *Id.*

evaluated.[66] Work on the Initial Repair Project was halted to determine the best solution going forward by evaluating the costs, risks, and project schedule of various options.[67] This pause was necessary to identify the most economic and efficient path forward to ensure the continued safe and reliable operation of the Mitchell Plant for the Company's customers.[68]

C. The Company Prudently Considered All Alternatives and Selected the Mitchell Cooling Tower Project

The engineering review identified four potential options for the Company to address the structural needs of the Mitchell Unit 2 Cooling Tower:

- Option 1: Expand and extend the paused exterior shell reinforcement project;
- Option 2: Retire Unit 2 and partially demolish the existing cooling tower;
- Option 3: Construct a new mechanical draft cooling tower and partially demolish the existing cooling tower; or
- Option 4: Reduce the height of the existing cooling tower and continue with a reduced scope of exterior shell reinforcement.[69]

Each of these options address the structural needs of the Unit 2 Cooling Tower.[70] However, each option comes with its own set of costs, risks, benefits, and implementation timelines.[71] Option 1 would simply expand the work performed during the Initial Repair Project over the full Cooling Tower, including portions of it where the Company expected more significant deterioration. Based on the uncertainties encountered during the Initial Repair Project, Option 1 includes a high risk of cost and schedule overruns.[72] Option 2—retiring Mitchell Unit 2—would require replacing 800 MW of capacity and is prohibitively costly.[73] Option 4 presents the risks associated with Option 1, albeit for a smaller portion of the Cooling Tower, a complicated construction project to reduce

[66] *Id.* at 6.
[67] *Id.*
[68] *Id.*
[69] *Id.* at 9.
[70] *Id.* at 10.
[71] *Id.*
[72] Malone Direct Test. at 5.
[73] *Id.*

the height of the Cooling Tower while allowing it to still remain operational when complete, and a lengthy outage to complete the project.[74] The Company thoroughly considered the different options for addressing the Unit 2 Cooling Tower's structural needs and determined that building a new mechanical draft cooling tower—Option 3—was the best solution.

The four options identified following the engineering review are the only reasonable alternatives for addressing the structural needs of the Mitchell Unit 2 Cooling Tower.[75] This was confirmed during the hearing by Company Witness Pizzino in response to questions from the Chair:

> Q. If the Commission just found 191 million to be way too much and limited the amount, are there ways that you could build something that would last and be safe without going to 191 million worth of expense?
>
> A. We've looked at multiple options. There's—there really isn't—it's either you repair what we have or we build something new, and it has to be a utility-grade, same duty-type piece of equipment.
>
> Q. Can't build a temporary one, I imagine.
>
> A. I wish we could.
>
> Q. Okay. Gotcha. All right.[76]

The Company conducted an economic analysis utilizing a standard cost-of-service model so that each of the options could be compared against one another.[77] The cost-of-service model utilizes inputs regarding project cost, timing, and estimated energy margins to develop a revenue requirement over the studied time period.[78] The results from the economic analysis for the options are summarized in Table NMC-1 below and are presented on a total Plant basis (100% of the

[74] *Id.*
[75] Pizzino Direct Test. at 10.
[76] Pizzino Hearing Test. at 190:8–20.
[77] Coon Direct Test. at 5.
[78] *Id.*

Project) and, for the average annual revenue requirement, on a Kentucky Power 50% basis. The results are also contained in Exhibit NMC-1. As can be seen in Table NMC-1, the Mitchell Cooling Tower Project is the lowest cost or second-lowest cost across all measures. It also avoids the significant risk of future cost increases inherent in Option 1. Accordingly, these quantitative results, along with the qualitative considerations presented in the testimony of Company Witness Malone, demonstrate that Option 3, the Mitchell Cooling Tower Project, is the least-cost, reasonable alternative to address the structural issues at the Unit 2 Cooling Tower. The economic analysis presented to the Mitchell Operating Committee showed that, for the average residential customer using 1,206 kilowatt-hours ("kWh") per month, the monthly increase in the customer's total bill was expected to be $4.59 (or 2.3%).[79]

Table NMC-1

	Description	PV Rev Req't (TOTAL)	Avg Rev Req't (Total)	Avg Rev Req't (KPCO)
Option 1	Expanded Reinforcement	$142,480,378	$19,828,849	$9,914,424.50
Option 2	Retire Unit 2	$836,300,299	$106,317,503	$53,158,751.50
Option 3	Mitchell Cooling Tower Project	$147,235,844	$19,255,642	$9,627,821.00
Option 4	Shorten Tower	$189,471,586	$20,406,521	$10,203,260.50

The Mitchell Operating Committee convened a meeting on November 6, 2025 and, based on this analysis agreed that Option 3 was the least-cost, reasonable alternative and unanimously determined to move forward with the Mitchell Cooling Tower Project. This determination was made based on a comprehensive review of the information available, including the engineering need and the long-term operational impacts described in the testimony of Company Witness Pizzino, the scope of work and costs for the Mitchell Cooling Tower Project described in the

[79] *Id.* at 11.

testimony of Company Witness Malone, and the economic evaluation of the alternatives presented by Company Witness Coon.

D. The Company's Procurement of a DOE Award Will Further Mitigate Rate Impacts on Customers

The Company aggressively pursues federal funding opportunities that align with shared national priorities—strengthening grid reliability, supporting critical infrastructure, and minimizing costs for customers.[80] Consistent with this approach, the Mitchell Cooling Tower Project was initially submitted under the DOE competitive funding opportunity, *Restoring Reliability: Coal Recommissioning and Modernization* (DE-FOA-0003605).[81] While the Project was not ultimately selected under that specific solicitation, it was recognized as strongly aligned with DOE's broader policy objectives.[82]

In April 2026, additional federal funding authorities became available through Presidential determinations under the Defense Production Act ("DPA"), enabling the DOE to directly support projects that enhance baseload generation and strengthen domestic energy supply chains.[83] Given the clear alignment between the Mitchell Cooling Tower Project and these objectives, the DOE selected the Project for funding under its DPA authority in June 2026.[84]

The Company's proactive and well-coordinated federal engagement strategy positioned it to successfully navigate this evolving landscape and secure funding through the most effective available channel.[85] The Mitchell Cooling Tower Project's selection as one of only 13 projects

[80] Elliott Rebuttal Test. at R3.
[81] *Id.*
[82] *Id.* at R3–R4.
[83] *Id.* at R4.
[84] *Id.*
[85] *Id.*

nationwide further underscores its strategic importance and the strength of the underlying proposal.[86] As Company Witness Elliott noted during the hearing:

> You know, we're excited about this award. This is a big deal for us. If we can get $25.5 million to help toward affordability for a project that's necessary, then, you know, it's a huge win. And that's why we're going to keep pursuing these types of opportunities.[87]

The $51 million (total project) federal investment (the "Awarded Funds") will support addressing the structural needs of the Unit 2 Cooling Tower through the construction of a modern mechanical draft cooling tower.[88] This federal investment helps mitigate cost impacts for customers, and thus, by leveraging federal support, the Company is able to deliver necessary infrastructure improvements while maintaining a strong focus on affordability.[89] The Company conducted an updated economic analysis to demonstrate the impact of the Awarded Funds as summarized in Table NMC-R1, excerpted below:

[86] *Id.*
[87] Elliott Hearing Test. at 37:21–38:1.
[88] Elliott Rebuttal Test. at R4.
[89] *Id.*

Evaluated Option	PV Rev Req't (TOTAL)	Avg Rev Req't (KPCO)
Option 1	$142,480,378	$9,914,425
Option 2	$790,168,458	$50,756,182
Option 3 (25yr)	$148,924,782	$9,725,791
Option 3 (12yr)	$189,958,426	$12,206,906
Option 3 (Award 25yr)	$114,813,700	$7,509,942
Option 3 (Award 12yr)	$144,859,451	$9,361,699
Option 4	$195,843,712	$10,568,204

The updated economic analysis shows that Option 3, the Mitchell Cooling Tower Project, remains the best option from a combined cost and risk perspective to address the structural issues of the existing Unit 2 Cooling Tower. This is even true if, as incorrectly proposed by Sierra Club Witness Metz's, the useful life of the Mitchell Cooling Tower Project is artificially shortened to 12 years.[90] The evidence provided in this case demonstrates that the Mitchell Cooling Tower Project is the least-cost, reasonable alternative, best isolates customers from risk, and provides the Company with the most operational flexibility. Although Option 3 was the best option for addressing the structural needs of the Unit 2 Cooling Tower before the Company received the DOE award funds, it even further exceeds each of the other alternatives with the funds incorporated. Inclusive of the DOE award, for the average residential customer using 1,206 kWh per month, the monthly increase in the customer's total bill is expected to be $3.64 (or 1.8%).[91]

[90] Coon Rebuttal Test. at R4–R6.
[91] *Id.* at R6.

III. LEGAL STANDARDS

KRS 278.020(1) requires utilities to obtain a CPCN prior to providing utility service to or for the public, or prior to beginning construction of "any plant, equipment, property, or facility for furnishing" service to the public, except where the proposed work constitutes an extension in the ordinary course of business.

KRS 278.020(1) provides that a CPCN may be granted upon the showing of the need for the proposed action *and* the absence of wasteful duplication.[92] Need may be demonstrated by, *inter alia*, the existence of "a substantial deficiency of service facilities, beyond what could be supplied by normal improvements in the ordinary course of business."[93] Wasteful duplication is comprised of two elements: (a) excess capacity over need; or (b) excess investment in relation to productivity and efficiency to be gained from the proposed construction.[94] The absence of wasteful duplication also requires a demonstration that all reasonable alternatives were examined.[95] The fundamental principle of reasonable, least-cost alternative is embedded in such an analysis.[96] Selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.[97] All relevant factors must be balanced.[98]

[92] *Ky. Utils. Co. v. Pub. Serv. Comm'n*, 252 S.W.2d 885, 890 (Ky. 1952).
[93] *Id*.
[94] *Id*.
[95] *See* Order at 11, *In the Matter of: Joint Application Of Louisville Gas and Electric Company And Kentucky Utilities Company For A Certificate of Public Convenience and Necessity For The Construction of Transmission Facilities In Jefferson, Bullitt, Meade, and Hardin Counties, Kentucky*, Case No. 2005-00142 (Ky. P.S.C. Sept. 8, 2005).
[96] Order at 13, *In The Matter Of: Electronic Application Of Kentucky Power Company For A Certificate Of Public Convenience And Necessity To Replace And Upgrade Portions Of The Bellefonte Station In Boyd County, Kentucky (Bellefonte Station Upgrade Project)*, Case No. 2024-00343 (Ky. P.S.C. Mar. 7, 2025).
[97] *Id.*
[98] *Id.*

IV. ARGUMENT

A. The Commission Should Grant the Requested CPCN Because the Company Has Demonstrated the Need for the Mitchell Cooling Tower Project and Shown That It is Not Wastefully Duplicative

1. The Structural Issues at the Mitchell Unit 2 Cooling Tower Must Be Addressed

The Company has sufficiently demonstrated the need for the requested improvements to the Unit 2 Cooling Tower. Due to the surface irregularities and deformations of the concrete shell, continued use of the Unit 2 Cooling Tower is not an option, as it will no longer be safe or useful. Without addressing these structural issues, the Unit 2 Cooling Tower will continue to deteriorate to a point where it will no longer be safe to use, and the continued operation of Mitchell Unit 2 will be at risk.[99] Addressing the structural issues at the Unit 2 Cooling Tower is therefore necessary to ensure continued operation of Mitchell Unit 2, preventing a potential loss of up to 308 MW of accredited generation capacity from the Company's 50% interest in Mitchell Unit 2. Without the roughly 308 MW from Mitchell Unit 2, the Company would need to add 305 MW of accredited capacity to meet its requirements, and 601 MW of accredited capacity assuming a winter capacity requirement beginning in PJM planning years 2031–32.[100] Kentucky Power would have to address this need by either acquiring another source of generation or purchasing power from the market.

Efforts can be, and have been, made to maintain the structural integrity of the Unit 2 Cooling Tower, but these are insufficient as long-term solutions and do not undermine the need for the Project. Although some FRCM has been applied to the structure and some crack sealing and concrete repair have occurred, significant concerns remain about the long-term continued operation of the Cooling Tower due to the deformations, extensive cracking, and concrete

[99] Pizzino Direct Test. at 11.
[100] Wolffram Direct Test. at 8.

deterioration of the shell, all of which have reduced the structural capacity of the Cooling Tower.[101] Although the Unit 2 Cooling Tower remains in service, the safety margin is diminished, and the shell no longer reliably meets design loads.[102] Under a rare but extreme wind event, deformations and cracking could spread rapidly, requiring permanent shutdown of the Cooling Tower and Unit and, in the worst case, leading to structural failure.[103] On-going accelerated cracking and deterioration due to the deformations are expected to continue and will ultimately cause the concrete shell on the Unit 2 Cooling Tower to fail even under routine loading.[104] A thorough monitoring program has been implemented to ensure safe operation until a new cooling tower can be constructed in its place.[105]

Due to the structural anomalies of the Unit 2 Cooling Tower, its safety factors will continue to deteriorate to a point where it will no longer be useful or safe to use. Accordingly, the Company must address the structural issues at the Unit 2 Cooling Tower.

2. The Mitchell Cooling Tower Project Will Not Result in Wasteful Duplication

Constructing the Mitchell Cooling Tower Project to address the structural needs of the Unit 2 Cooling Tower does not duplicate any existing facilities and does not result in an excess of capacity beyond need, or excess investment in relation to the productivity and efficiency to be gained.[106] In fact, as explained above, there is a clear need to address the structural needs of the Mitchell Unit 2 Cooling Tower to allow that Unit to continue to serve the Company's customers,

[101] Pizzino Direct Test. at 7.
[102] *Id.*
[103] *Id.*
[104] *Id.* at 7–8.
[105] *Id.* at 8.
[106] Wolffram Direct Test. at 12.

and the Mitchell Cooling Tower Project was identified as the least-cost reasonable alternative following a thorough review of all reasonable alternatives for doing so.[107]

Kentucky Power evaluated four options for addressing the necessary requirements to the Unit 2 Cooling Tower and determined that Option 3, constructing a new mechanical draft cooling tower and partially demolishing the existing Cooling Tower, is the least-cost, reasonable alternative.[108] In conducting the Company's economic evaluation, Company Witness Coon calculated the revenue requirements for each of the reasonable alternatives to address the structural needs of the Mitchell Unit 2 Cooling Tower to come to this conclusion.[109] Moreover, the requirements to implement Option 3 have been duly considered, and the total cost set forth by the Company in this case represents the most thoughtful and stringent use of funds to construct a new mechanical draft cooling tower.[110] The Attorney General and Kentucky Industrial Utility Customers, Inc. ("KIUC"), through their witness Lane Kollen, also agreed with the Company's determination that Option 3 is the least-cost, reasonable alternative for addressing the structural issues associated with the Unit 2 Cooling Tower:[111]

> Q. Mr. Kollen, you're here testifying on behalf of both the Attorney General and the KIUC, is that correct?
>
> A. That's correct.
>
> Q. And is the position, your testimony on their behalf, that the new mechanical draft cooling tower, Option 3, is the best option presented?
>
> A. We don't oppose that, but I believe that to be true.

[107] *Id.*
[108] *See* Coon Direct Test. at 5–8.
[109] Wolffram Direct Test. at 10.
[110] Pizzino Hearing Test. at 190:8–19.
[111] Kollen Direct Test. at 4; *see also* Kollen Hearing Test. at 232:7–12.

The Mitchell Cooling Tower Project allows the Mitchell Plant to operate to its current projected retirement date of 2040.[112] Importantly, the Mitchell Cooling Tower Project also provides optionality for post-2040 operations.[113] The current Mitchell Plant manager, Company Witness Snodgrass confirmed that there is no reason to believe that with the construction of the Mitchell Cooling Tower Project the Mitchell Plant cannot operate past 2040.[114] Additionally, the Mitchell Cooling Tower Project minimizes the impact of the derate on Unit 2 and a lower risk, shorter-duration outage to tie-in the new mechanical draft cooling tower when it is commissioned.[115]

While Options 1 and 4 have similar average annual revenue requirements to the Mitchell Cooling Tower Project, they carry far more risk.[116] First, the 10-year useful lives of both Option 1 and Option 4 mean that at the end of the 10-year period, the Company would be required to incur additional, unknown costs to address the potential loss of Mitchell Unit 2.[117] Moreover, Options 1 and 4 reflect just expanding the Initial Repair Project and spending more money on a program that has experienced considerable implementation challenges already, increasing the risk of cost overruns and schedule delays as explained throughout this proceeding.[118] Company Witness Pizzino described the risks associated with Option 4, in particular, during the hearing in response to questions from the Chair:

> Q. Have you carefully thought through and been part of the team that considered whether the option of just shortening the existing tower might work?
>
> A. Yes.

[112] Wolffram Direct Test. at 10.
[113] *Id.*
[114] Snodgrass Rebuttal Test. at R7.
[115] Wolffram Direct Test. at 10.
[116] *Id.*
[117] *Id.* at 10–11.
[118] *Id.* at 11.

> Q. And your—your opinion is that it could work, but it's not the best option?
>
> A. Yes.
>
> Q. Okay. And I don't want to put words in your mouth.
>
> A. Yeah. It—it would require an extensive outage because you would have to shut the plant down for an extended period. I think it was six months. It's also pretty risky because once you start cutting the tower down, you can't stop until it's complete. And if you run into issues, you—you're going to have to get to a point where you can actually rebuild—you have to put a concrete ring on the—on the new top of the tower. That's a pretty difficult operation. You would still have to put on this FRCM coating that we were going to apply for Option 1. So that has its problems as well. So there was a lot more uncertainty with that—with that construction.[119]

The Company's thorough review of all four reasonable options demonstrates that the proposed Mitchell Cooling Tower Project is the least-cost, reasonable alternative. Moreover, as discussed above, the Company's receipt of award funds from the DOE reduce the costs associated with Option 3,[120] further setting it apart as the most economical choice for Kentucky Power's customers.

B. Kentucky Power Should Be Authorized a Return on Construction Work in Progress

The Company is requesting a return on Construction Work in Progress ("CWIP") because the Mitchell Cooling Tower Project represents a significant capital investment for Kentucky Power.[121] CWIP treatment will allow the Company to maintain financial integrity by aligning the timing of cost recovery with the Company's capital investment for the Project.[122] Furthermore,

[119] Pizzino Hearing Test. at 187:21–188:20.
[120] As noted during the hearing of this matter, the $51 million DOE award funds can only be used to complete the construction of the new mechanical draft cooling tower. Elliott Hearing Test. at 45:2–24. The Company included the new mechanical draft cooling tower in its grant application (that ultimately became the basis for the DOE awarded fund) because it reflected the clear best option for the Plant and Kentucky Power's customers. Much like in this proceeding, the Company did not provide the DOE with a menu of options for it to select from. Instead, it proposed the best solution based on its rigorous analysis of the possible alternatives.
[121] Kahn Rebuttal Test. at R8.
[122] *Id.*

CWIP treatment will lead to a more gradual rate implementation for customers.[123] The CWIP was calculated by taking the annual cumulative cash spend for the Mitchell Cooling Tower Project, multiplied by the Company's pre-tax weighted average cost of capital.[124]

Throughout filings and hearing testimony in this matter, the Parties have discussed the proper treatment for construction cost recovery. AG-KIUC Witness Kollen argues that a return on CWIP is inconsistent with the Company's "present status as an [allowance for funds used during construction ("AFUDC")] company" and diverges from the approved revenue requirement calculation for the Generation Rider.[125] The statement that Kentucky Power is currently an "AFUDC company" is misleading, as utilities are not "AFUDC Companies" or "CWIP Companies."[126] While it is true that AFUDC is calculated and included in *qualifying* construction costs, there are also construction costs that may qualify for a return on CWIP.[127] The Commission has plenary authority to grant a return on CWIP and has approved such for Kentucky Power, for example, in Case No. 2021-00004,[128] which also concerned a major construction project at Mitchell.[129]

Moreover, the Company's request to recover a return on CWIP does not deviate from the approved revenue requirement calculation for the now-approved Generation Rider.[130] The Company's Generation Rider as proposed, in settlement, and in its compliance tariff filing all

[123] *Id.*; *see also* Kahn Hearing Test. at 68:15–69:3, 89:6–12.
[124] Coon Direct Test. at 10.
[125] Kollen Direct Test. at 7.
[126] Kahn Rebuttal Test. at R6.
[127] *Id.*
[128] Order at 24–25, *In the Matter of: Electronic Application Of Kentucky Power Company For Approval Of A Certificate of Public Convenience And Necessity For Environmental Project Construction At The Mitchell Generating Station, An Amended Environmental Compliance Plan, And Revised Environmental Surcharge Tariff Sheets*, Case No. 2021-00004 (Ky. P.S.C. July 15, 2021).
[129] Kahn Rebuttal Test. at R6.
[130] *Id.* at R7.

include a return on CWIP.[131] However, in settlement the Company agreed, and the Commission ultimately approved,[132] that the Generation Rider should include an AFUDC offset for any CWIP projects that are *eligible for such an allowance*.[133] The inclusion of this language mimics the calculation of rate base and operating income in rate cases.

Importantly, if a return on CWIP is approved for the Mitchell Cooling Tower Project, then the Company would not record AFUDC.[134] Accordingly, it would be a CWIP project that is not *eligible for such an allowance*, and thus there would be no AFUDC complying with the approved Tariff Generation Rider.[135]

The Company's motivation for requesting a return on CWIP is to protect customers in two ways. First, as discussed at the hearing by Company Witness Kahn, the Company's proposed approach presents a more gradual increase for customers:

> Q. Okay. And, in fact, you state that the Company is proposing to recover a return on rate base and construction work in progress, isn't that correct?
>
> A. It is correct. The Company believes this approach is appropriate because it would employ a gradualism—gradualistic rate implementation, which Ms. Elliott and Chair Hatton were discussing previously, as opposed to Mr. Kollen's, which would have one large lump sum once the project goes into service, which is late 2028.[136]

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[131] *Id.*
[132] Order at 168, *In the Matter of: Electronic Application Of Kentucky Power Company For (1) A General Adjustment Of Its Rates For Electric Service; (2) Approval Of Tariffs And Riders; (3) Approval Of Certain Regulatory And Accounting Treatments; And (4) All Other Required Approvals And Relief*, Case No. 2025-00257 (Ky. P.S.C. Feb. 28, 2026).
[133] Because CWIP and associated AFUDC offset were already included in base rates, there was no adjustment necessary to the Generation Rider revenue requirement. Order at 163, *In the Matter of: Electronic Application Of Kentucky Power Company For (1) A General Adjustment Of Its Rates For Electric Service; (2) Approval Of Tariffs And Riders; (3) Approval Of Certain Regulatory And Accounting Treatments; And (4) All Other Required Approvals And Relief*, Case No. 2025-00257 (Ky. P.S.C. Feb. 28, 2026).
[134] Kahn Rebuttal Test. at R7.
[135] *Id.*
[136] Kahn Hearing Test. at 68:15–69:1.

The Attorney General and KIUC argue that the Company should wait to recover these costs because an economic development project may increase the Company's overall load, allowing the costs to be spread over more sales.[137] While increasing load is of vital importance to the Company and the Company is excited about the potential of several economic development projects, the timing of these projects makes it imprudent to wait and eliminate the benefits of gradualism for the Company's customers.

Second, as established in the testimony presented in this case, CWIP treatment helps to sustain the financial health of the Company.[138] A higher credit rating generally means a lower cost of debt which would result in smaller interest payments for customers, and thus an overall revenue requirement reduction.[139] The Company modeled using an AFUDC approach for these construction costs, and the year with the highest amount of construction costs, would reduce the Company's funds from operations ("FFO")/Debt ratio[140] by 0.7%.[141] Although the impact of this seems minimal, it is important to the Company and its customers, as these impacts can easily accumulate and have a more severe impact.[142]

C. Sierra Club's Arguments Against the Mitchell Cooling Tower Project Fail

Sierra Club Witness Metz set forth a number of unsupported arguments against the Company's proposal but offered no realistic solution for addressing the structural issues with the Unit 2 Cooling Tower. Instead, the Sierra Club seeks to relitigate the Commission's 2025 decision allowing the Company to extend its interest in the Mitchell Plant. These arguments offer little

[137] *Id.* at 79:12–80:3.
[138] *Id.* at 69:4–10; Kahn Rebuttal Test. at R5–6, R8.
[139] Kahn Hearing Test. at 69:11–18.
[140] FFO/Debt ratio is a metric used by rating agencies.
[141] Kahn Hearing Test. at 78:17–79:1.
[142] *Id.* at 79:2–4.

here, as this case's scope is a narrow one: whether the proposed Mechanical Draft Cooling Tower is the least-cost reasonable option for addressing the structural issues at Unit 2.

Sierra Club's efforts to rehash old issues are misplaced. The context of this case exists within multiple finite premises:

1. The Commission recently approved the Company's application in 2025-00175 to make the investments necessary to continue to take capacity and energy from the Mitchell Plant after 2028.

2. Kentucky Power filed its application in this case for the narrow purpose of seeking a CPCN for the construction of a new mechanical draft cooling tower.

3. The new mechanical draft cooling tower is necessary to address the structural needs of the existing Mitchell Unit 2 Cooling Tower.

The question of whether the Company should retire and replace Mitchell Unit 2 with another resource has already been addressed by the Commission when it concluded in Case 2025-00175 that:

> [T]he evidence presented in this case established that making the investments proposed to continue taking capacity and energy from Mitchell Plant after 2028 is the most reasonable, least cost option for serving customers based on the relative costs of the alternatives, the long-term options Mitchell Plant offers, and the risks of relying heavily on the market in the current environment.[143]

The Commission's decision in Case No. 2025-00175 was made with the knowledge that the Unit 2 Cooling Tower was in need of repairs in excess of what was contemplated by the Initial Repair Project.[144] The Company was fully transparent with the Commission in Case No. 2025-00175

[143] Order at 25, *In the Matter Of: Electronic Application Of Kentucky Power Company For Approval Of (1) A Certificate Of Public Convenience And Necessity To Make The Capital Investments Necessary To Continue Taking Capacity And Energy From The Mitchell Generating Station After December 31, 2028, (2) An Amended Environmental Compliance Plan, (3) Revised Environmental Surcharge Tariff Sheets, And (4) All Other Required Approvals And Relief*, Case No. 2025-00175 (Ky. P.S.C. Dec. 30, 2025).

[144] *See* Vaughan Supp. Test. at 2–3, *In the Matter of: Electronic Application Of Kentucky Power Company For Approval Of (1) A Certificate Of Public Convenience And Necessity To Make The Capital Investments Necessary To Continue Taking Capacity And Energy From The Mitchell Generating Station After December 31, 2028, (2) An Amended Environmental Compliance Plan, (3) Revised Environmental Surcharge Tariff Sheets, And (4) All Other Required Approvals And Relief*, Case No. 2025-00175 (Ky. P.S.C. Oct. 10, 2025).

about the structural issues at the Mitchell Unit 2 Cooling Tower, the potential cost implications of addressing those issues, and the Company's process for moving forward.

Sierra Club's argument that the Company should have used a 12-year expected life for the mechanical draft cooling tower in its economic analysis, rather than the full 25-year life, is also deficient. First, as described in Company Witness Snodgrass's Rebuttal Testimony, while the current retirement date for the Mitchell Plant is 2040, there is nothing from a Plant condition perspective that would prevent the Company from operating the Plant beyond 2040 if the Mitchell Cooling Tower Project is completed.[145] Second, using a 25-year useful life provides the Company with flexibility in the future of the Mitchell Plant beyond the timeline of the economic analysis performed in this case.[146] The mechanical draft cooling tower could inform decisions around extending the life of the Mitchell Plant.[147] Third, several of the future environmental compliance options described in Case No. 2025-00175, including the conversion of the Mitchell Plant to natural gas, would require a structurally-sound cooling tower. Finally, the Company sought to capture the qualitative impact of the new cooling tower having a longer useful life in comparison to Option 1 (expanding the Initial Repair Project) and Option 4 (reducing the height of the existing Tower), which only have 10-year useful lives.[148] This means that at the end of the 10-year period, it is likely that the Company would either incur an unknown level of capital investment to either replace the capacity from Unit 2 with a new build option (similar to Option 2), construct a replacement cooling tower (similar to Option 3), explore additional unknown fixes to the existing Cooling Tower, or be a price-taker in the market.[149]

[145] Snodgrass Rebuttal Test. at R7.
[146] Coon Direct Test. at 12.
[147] *Id.*
[148] Coon Rebuttal Test. at R8.
[149] *Id.*

The implication set forth by Sierra Club that the Company is attempting to artificially lower the net present value revenue requirement ("NPVRR") by using the expected useful life of the mechanical draft cooling tower is unfounded. The NPVRR is only one factor that the Company considered when evaluating the options, and its analysis is meant to capture the qualitative impact of the new cooling tower having a longer useful life.[150] Even using a 12-year depreciable life for Option 3, which produces a NPVRR that is $41 million higher than using a 25-year depreciable life as Ms. Metz points out, results in the second lowest NPVRR of the four options, as shown in Table NMC-R1 above.[151]

However, the NPVRR is not the only quantitative factor the Company considered when making the decision on which solution to pursue to address the Cooling Tower's structural needs.[152] Another important factor is the average annual revenue requirement, which is the amount that will actually impact customers' bills.[153] If the 12-year useful life that Ms. Metz proposes is used but the Awarded Funds are not included, the average annual revenue requirement for Kentucky Power for Options 1, 3, and 4 are all within $2.3 million of each other.[154] Including the Awarded Funds, Option 3 produces the lowest average annual revenue requirement even if using the artificially shortened 12-year useful life.[155] Notably, Ms. Metz's testimony also fails to consider the important qualitative components (including the constructability risks attendant to Options 1 and 4) that informed Kentucky Power's decision among the four reasonable options considered by the Mitchell Operating Committee.[156]

[150] *Id.*
[151] *Id.* at R9.
[152] *Id.*
[153] *Id.*
[154] *Id.*
[155] *Id.*
[156] *See id.* at R9–R10.

The Sierra Club's argument that the Company should have conducted a capacity expansion model to support its application is also misplaced. This is not a capacity addition case. The Commission duly considered and approved (approximately eight months ago) the continued use of the Mitchell Plant as a resource for the Company in Case No. 2025-00175, in which it was made aware that a capital expenditure would be needed for the Unit 2 Cooling Tower. In other words, the Commission has already decided it was most economic for the Company to stay invested in Mitchell. This present case is only about whether the Mitchell Cooling Tower Project is the lowest-cost reasonable option for addressing the structural needs of the Unit 2 Cooling Tower. The evidence shows that it is.

V. CONCLUSION

The evidence presented in this case demonstrates that the Mitchell Cooling Tower Project is the least-cost reasonable option for addressing the structural issues at the Unit 2 Cooling Tower. This option carries the least amount of risk, produces the lowest average revenue requirement, and provides the Company and its customers with operational flexibility. The award of funds from the DOE makes the Mitchell Cooling Tower Project even more beneficial to customers. The Commission should grant the Company's application.

Respectfully submitted,

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