BEFORE THE KANSAS CORPORATION COMMISSION
OF THE STATE OF KANSAS

In the Matter of the Petition of Evergy Kansas Central, Inc., Evergy Kansas South, Inc., and Evergy Metro, Inc. for Determination of the Ratemaking Principles and Treatment that Will Apply to the Recovery in Rates of the Cost to be Incurred for Certain Electric Generation Facilities Under K.S.A. 66-1239.	)	Docket No. 25-EKCE-207-PRE

DIRECT TESTIMONY OF WILLIAM "NICK" JONES ON

BEHALF OF THE COUNCIL FOR THE NEW ENERGY ECONOMICS

PUBLIC VERSION

March 14, 2025

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I. INTRODUCTION

Q: Please state your name and business address.

A: Nick Jones. 1121 Military Cutoff Road, Suite C #205, Wilmington, NC 28405.

Q: By whom are you employed and in what capacity?

A: I am employed by the Council for the New Energy Economics (NEE) as Utility Economics Senior Analyst.

Q: On whose behalf are you testifying?

A: I am testifying on behalf of NEE.

Q: Please describe your educational background.

A: I completed the liberal arts program at Deep Springs College before earning my BA in economics and statistics from the University of Michigan, Dearborn.

Q: Please describe your professional background.

A: Prior to joining NEE, I was an energy analyst for BTU Analytics – an energy market data and research firm which was purchased by FactSet during my tenure. I contributed to providing a variety of forecasting and analysis services, including consulting on valuations of pipelines and other energy infrastructure for some of the world's largest energy companies and asset managers. Among other responsibilities, I built the firm's model for forecasting power sector fuel demand. I also helped spin up the firm's first research team dedicated to 'energy transition' markets. Some projects under that team

included building financial models of new asset types and analyzing regulatory risk associated with emerging technologies like carbon capture. In 2024, I started with NEE in the senior analyst role. Since then, I have contributed to testimony and comments in a variety of regulatory venues, including proceedings in Kansas, Missouri, and Georgia. I also served as lead author on NEE's first research report which addressed the risks of natural gas for power utilities. My curriculum vitae is included as Exhibit WJ-1 to my Direct Testimony.

Q: What is the purpose of your testimony?

A: The purpose of my testimony is for NEE to explain that Evergy[1] has not demonstrated the proposed Viola and McNew gas plants to be necessary under a resource plan optimized for efficiency, reasonableness, and reliability – criteria that the predetermination statute names for consideration.[2] The Company has not adequately represented the probable cost of natural gas, which calls into question the plants' cost-efficiency. The inadequacy of both the Company's natural gas forecast and fuel supply plan could expose ratepayers to unreasonable risk. If fuel costs are ultimately greater than Evergy has forecasted, which is probable, it will significantly increase the burden of these plants on Kansas ratepayers. My testimony demonstrates this risk and the potential cost of fuel through an analysis of revenue requirements and rate impacts. Lastly, I will explain that other resource types may hold distinct advantages in reliability as compared to Evergy's proposal.

[1] "Evergy" or "the Company" refers collectively to the Applicant, Evergy Kansas Central, Inc., Evergy Kansas South, Inc., and Evergy Metro, Inc.
[2] KAN. STAT. ANN. § 66-1239(c)(3).

My testimony presents an alternative which addresses the above concerns while delivering additional benefits. Specifically, I propose that Evergy Kansas Central (EKC) reduce its planned net-ownership in the McNew plant and pursue concurrent deployment of battery energy storage. This proposal would allow for greater efficiency – with lower capital costs, lower operating costs, and lower impacts on retail rates. In addition, it would reduce fuel requirements and therefore ensure a more reasonable exposure to fuel market risks. Lastly, it would maintain or potentially improve system reliability through diversifying the Company's fleet of dispatchable capacity. Evergy has not considered such an alternative plan under updated cost assumptions, and as such, Evergy has not demonstrated that its preferred plan is more efficient, reasonable, or reliable than this proposal or similar alternatives. Finally, adding capacity through new or revised renewable energy subscription programs could yield further opportunities to reduce reliance on natural gas and therefore reduce fuel costs and related risks for the general ratepayer.

Q: Please provide a summary of your recommendations to the Kansas Corporation Commission in this proceeding.

A: I ask that the Commission evaluate the proposed resources according to a higher natural gas forecast than the mid-case forecast which Evergy has provided. I ask that the Commission critically consider Evergy's fuel supply plan in its current form and deem it inadequate for protecting ratepayers from unreasonable risk. I ask that the Commission include fuel costs when evaluating the impacts of Evergy's proposed plants – to which end I have provided analysis. I recommend that Evergy commit to

adding battery storage capacity as a substitute for a portion of planned natural gas capacity in order to minimize cost and risks for ratepayers. Lastly, I recommend that Evergy consider the potential to expand customer subscription programs as one means of funding incremental renewable projects which will also help to minimize fuel costs and risks for ratepayers.

II. THE COMMISSION SHOULD EVALUATE THE PROPOSED RESOURCES ACCORDING TO A HIGHER NATURAL GAS FORECAST THAN EVERGY HAS PROVIDED

Q: Why is the Company's natural gas forecast and its underlying methodology material to this predetermination proceeding?

A: Forecasting natural gas prices is a necessary step in evaluating the efficiency and reasonableness of the Company's preferred plan against alternative portfolios with varying fuel requirements. A faulty forecast would misstate the fuel costs of the various plans and hinder the ability of the Commission in evaluating their relative efficiencies. An inadequate forecast also can undercut efforts to measure and manage risk by underappreciating the range of potential outcomes.

NEE alleged in Evergy's 2024 Triennial IRP that the Company's natural gas forecasting methodology was inadequate and could bias forecasts to underestimate future fuel costs and discount risk.[3] NEE and Evergy were not able to reach resolution on this point in the 2024 IRP. The Commission has stated that in this predetermination

[3] Kansas Corporation Commission (KCC) Docket No. 24-EKCE-387-CPL, *Comments of the Council for The New Energy Economics*, pp. 18-23 (Oct. 14, 2024).

it will consider the alleged deficiencies in the Company's natural gas forecasting methodology where it is relevant.[4]

It is relevant and necessary to consider the costs of natural gas in assessing the cost-efficiency of Evergy's proposed natural gas power plants, and therefore it is also relevant and necessary to consider the strengths and biases of methods used to forecast those costs. It is also relevant to assess whether Evergy has properly analyzed the risks related to these fuel costs in determining whether the Company's proposal is reasonable, which also requires reviewing the forecast and methodology used to analyze those risks. As discussed herein, there are reasons to be skeptical of the Company's natural gas forecast and errors in that forecast would be consequential in evaluating this application.

Q: In the 2024 Triennial IRP, New Energy Economics alleged a deficiency in Evergy's natural gas forecasting methodology. Please summarize how Evergy's forecasting methodology is deficient.

A: As NEE commented in the 2024 Triennial IRP, Evergy's mid-case natural gas forecast is out of line with historical realized costs.[5] The Company's high-case scenario is better aligned with historical costs yet underweighted in analysis. There are multiple contributing reasons for the forecast being biased toward underestimating fuel costs. This testimony addresses two factors in the context of Evergy's specific fuel supply plans for the Viola and McNew plants:

[4] KCC Docket No. 24-EKCE-387-CPL, *Order Finding Evergy's 2024 IRP Complied with Requirements of Capital Plan Framework*, ¶ 18 (Jan. 30, 2025).
[5] KCC Docket No. 24-EKCE-387-CPL NEE Comments at 20-23.

1. First is the Company's use of the Henry Hub national price benchmark, which discounts the regional market dynamics that can often inflate the price of delivered fuel. In its comments on the 2024 Triennial IRP, NEE explained that natural gas power plants in Kansas have consistently paid rates high above Henry Hub during winter weather events.[6] Further, Evergy has paid inflated costs even where supply and transport contracts would have seemingly derisked their fuel costs.

2. Secondly, Evergy forecasts prices on a monthly cadence, which discounts the potential for short-term fluctuations to raise costs during periods of peak demand. Recent published work from NEE, which will be discussed in greater detail below, shows that short-term spikes are becoming more common and can have outsized effects on average realized fuel costs. These short-term price spikes have also likely influenced Evergy's historical fuel costs.

Q: Has Evergy made any updates to the natural gas price forecast since the 2024 Triennial IRP was submitted?

A: No. Evergy's forecast remains unchanged in the analysis presented in this docket.[7]

Q: Is there any data that would evidence that the alleged deficiencies cause the natural gas methodology to be biased toward under-forecasting prices?

A: Yes. By looking backward and comparing previous forecasts to actual historical prices and historical costs, there is evidence that suggests a tendency toward underestimation

[6] *Id.*
[7] *See* Exhibit WJ-2, Evergy response to discovery request (DR) NEE-1.

of fuel prices. NEE identified this issue for the Company's forecast included in the 2021 Triennial IRP. Importantly, the Company describes the methodology used in both 2021 and 2024 similarly, with both relying on aggregated forecasts from many of the same external sources.[8] In its 2024 Triennial IRP, Evergy described methodological improvements to its natural gas price forecasting. However, this discussion centers on updates to its method of setting high- and low-case scenarios. Based on this information, I assume the mid-case methodology has remained mostly consistent from 2021 to 2024, and therefore, also consistent with the Company's analysis presented in this docket.

Comparing the forecast from the 2021 Triennial IRP to actual values, it is evident that Evergy's methodology not only underestimated fuel prices but did so to a radical degree. From 2021 to 2024, Henry Hub averaged roughly 40% above Evergy's annualized mid-case.[9] Delivered costs per MMbtu averaged roughly 90% above Evergy's annualized mid-case during the same period.[10] During these years, the Company's natural gas supply cost roughly $168 M more than the value of this fuel under the prices forecasted in the 2021 IRP.[11] Costs related to transport would explain

[8] While the 2021 forecasting methodology was not described at length in the Kansas docket, the Company did describe their methodology in their 2021 IRP materials submitted to the Missouri Public Service Commission, which I take to be the same methodology used in Kansas. *See* Missouri Public Service Commission (PSC) Docket No. EO-2021-0035, *Supply-Side Resource Analysis*, p. 45 (Apr. 30, 2021). Accessible at: https://www.efis.psc.mo.gov/Document/Display/355903.

[9] Energy Information Administration/Thomson Reuters, Henry Hub Natural Gas Spot Price. Accessible at: https://www.eia.gov/dnav/ng/hist/rngwhhdm.htm; *see also* KCC Docket No. 19-KCPE-096-CPL, *2022 Annual Update*, p. 32, Table 23 (Jun. 10, 2022).

[10] Energy Information Administration, Form EIA-923 Detailed Data Schedule 2. Accessible at: https://www.eia.gov/electricity/data/eia923/; KCC Docket No. 19-KCPE-096-CPL, Annual Update at 32, Table 23. Note: Delivered cost data was available through August 2024 at the time of data analysis.

[11] *Id*.

a minority portion of this discrepancy, but overall the additional costs are indicative of under-forecasted fuel prices and a lack of effective risk management strategies.

Though the underlying methodology is assumed to be unchanged, the forecast produced for the 2024 IRP has shifted upward from the 2021 IRP forecast. Yet, as NEE noted in comments on the 2024 IRP, the updated mid-case forecast still sits below average prices and costs from recent years. Evaluating the inaccuracy of the past forecast and the disjoint between recent history and the current forecast, it is reasonable to conclude that the updated mid-case is likely to understate the costs of natural gas. As NEE explained in its 2024 Triennial IRP comments, the Company's current high-case forecast appears more reasonable when compared against recent history.

Q: What are the potential consequences of a deficient natural gas forecasting methodology or a faulty forecast for this proceeding?

A: The Company's forecasting and scenario analysis methodologies could lead to an understating of the probable net-present-value revenue requirement (NPVRR) impact of new natural gas plants and therefore an over-selection of natural gas plants in preferred portfolios. Fuel and related costs are generally the largest operational costs for baseload power plants, making them consequential in determining the ultimate cost of the energy produced.

The question of fuel costs is particularly consequential in this case with recent developments that have significantly altered a range of other input values used for resource modeling and which could lead to models producing a different set of lowest-cost portfolios than those selected in the 2024 IRP. Some of these developments are

acknowledged by Evergy and some are not. They include inflation in the capital cost for combined cycle gas turbine (CCGT) plants,[12] potential exacerbation of that inflation caused by new tariffs,[13] the new expectation of increased load growth,[14] and the reduction in capital costs associated with other resource types like batteries. The current period is uniquely dynamic and emerging conditions necessitate a re-evaluation of the Viola and McNew plants against alternative resource options. Indeed, Evergy's own modeling has shown that updating several of these above-mentioned inputs has shifted models toward selecting different resources, including more battery energy storage.[15] If natural gas forecasts were also updated, it could substantively impact model output.

Q: Besides the methodological issues described above, are there other reasons to doubt Evergy's mid-case natural gas forecast?

A: Yes. In addition to methodological issues, recent market developments have rendered Evergy's forecast outdated. As Evergy has acknowledged, the 2024 Triennial IRP was prepared before the marketplace had begun fully appreciating the potential scale of load growth from AI and related data centers.[16]

The anticipation of this new load has led to a national surge of interest in new natural gas plants.[17] This surge will have knock-on effects; one such effect is the inflated prices and longer lead times for CCGT equipment, to which Evergy has

[12] KCC Docket No. 25-EKCE-207-PRE, *Testimony of J Kyle Olson*, p. 28 (Nov. 6, 2024); KCC Docket No. 25-EKCE-207-PRE, *Testimony of Cody VandeVelde*, p. 23 (Nov. 6, 2024).
[13] KCC Docket No. 25-EKCE-207-PRE, *Supplemental Testimony of Jason Humphrey*, p. 8 (Feb. 14, 2025).
[14] KCC Docket No. 25-EKCE-207-PRE, *Testimony of Darrin Ives*, p. 27 (Nov. 6, 2024).
[15] VandeVelde Direct at 25.
[16] KCC Docket No. 25-EKCE-207-PRE, *Application for Determination of Ratemaking Principles and Treatment*, p. 19 (Nov. 6, 2024); Ives Direct at 27; VandeVelde Direct at 19.
[17] FactSet, "Natural gas power plant applications surged in 2024" (Jan. 7, 2025). Accessible at: https://insight.factset.com/natural-gas-power-plant-applications-surged-in-2024.

provided evidence in this proceeding.[18] Logical consistency would require that, if the rush to build new gas plants is enough to inflate the price of equipment, the rush will also be enough to inflate the cost of fuel once these plants are built. More natural gas plants will result in more demand for natural gas which means fuel prices will rise.

Also potentially contributing to increased demand, recent national regulatory changes have encouraged greater development of natural gas power plants and Liquified Natural Gas (LNG) export facilities while slowing the development of other energy resources like wind power. These changes are expected to increase national demand for natural gas.

Thus, even if the Commission does not agree that Evergy's forecasting methodology is deficient, the forecast produced for the 2024 IRP should clearly be revised upward to best reflect the current marketplace.

Q: In this docket, has Evergy modeled the cost of proposed plants under alternative scenarios with higher natural gas forecasts?

A: No. The Company has stated that only the mid-case scenario was used in updated resource modeling submitted with Cody VandeVelde's testimony.[19] Evergy did not consider how an alternative natural gas forecast might change resource selection.

[18] Olson Direct at 28, Exhibit JKO-6 at 1.
[19] *See* Exhibit WJ-2, Evergy response to DR NEE-2.

Q: If the Company's natural gas forecast and forecasting methodology are deficient, what does it mean for measuring and managing the risks associated with fuel markets?

A: Reasonably managing risk depends on projecting potential outcomes and measuring their potential effects, without methodological bias. If the mid-case forecast is biased, the range of high- and low-case scenarios is also likely to be biased. Here, the Company's mid-case forecast is likely to prove too low. The Company's high-case forecast, as NEE described in IRP comments, is closer to recent historical fuel costs than the mid-case forecast.[20] This implies that there remains upside potential – that future fuel costs could not only meet but exceed recent historical costs – which is not captured by the Company's range of scenarios. This could lead the risk for ratepayers to be understated by scenario analysis presented in the IRP – particularly as the high-case forecast was weighted at just 15% probability.[21]

In modeling the need for the Viola and McNew plants under updated cost assumptions, Evergy has not considered any fuel-price scenarios other than the mid-case forecast presented in their 2024 IRP.[22] Nor have alternative price-scenarios been considered in modeling the rate impacts of these plants.[23] This means that Evergy has made no measurement of the specific fuel market risks presented in this docket. Lacking this analysis, there is no metric to assess the reasonableness of the risk

[20] KCC Docket No. 24-EKCE-387-CPL, NEE Comments at 18-23.
[21] KCC Docket No. 24-EKCE-387-CPL, *Vol. 5 Integrated Resource Plan and Risk Analysis*, p. 32 (May 17, 2024).
[22] *See* Exhibit WJ-2, Evergy response to DR NEE-2.
[23] *Id*. at Evergy discovery response to DR NEE-4.

exposure represented or the adequacy of risk management strategies employed in the Company's fuel supply plan.

III. THE COMMISSION SHOULD CONSIDER EVERGY'S FUEL SUPPLY PLAN INADEQUATE FOR MINIMIZING RISK TO RATEPAYERS

Q: Why is Evergy's fuel supply plan important to consider in this proceeding?

A: Where natural gas forecasts may understate probable fuel costs and potential risk, the Company's fuel supply plan provides an opportunity to manage risks and minimize unforeseen costs. The fuel supply plan in large part determines if exposure to market risks can be kept at a reasonable level.

Q: Does the Company's specific plan for procuring natural gas for the Viola and McNew CCGT plants effectively address concerns regarding fuel costs?

A: The specific plan for procuring natural gas presented in testimony from J. Kyle Olson and discovery responses is not sufficient to demonstrate that ratepayers will be protected against short-term volatility and the potential for long-term increases in fuel costs. The stated supply plan — to purchase natural gas in a similar manner as how Evergy purchases coal today[24] — fails to appreciate challenges specific to the natural gas market.

Natural gas cannot be easily stockpiled on site, as is common practice for coal. Nor can natural gas be delivered through multiple modes of transport, as can be done for coal. Nor is natural gas marketed almost exclusively to the power sector, as is the case for thermal coal. In contrast to coal markets, natural gas markets rely on

[24] Olson Direct at 31.

centralized storage and delivery to end-users via pipelines. This combination of factors makes natural gas a 'just-in-time' fuel for which the timing and volume of deliveries must coincide exactly with the needs of the power plant. Therefore, procuring natural gas inherently requires more sophisticated methods and leaves less room for error than procuring coal. The reliance of natural gas on intricate pipeline networks creates the possibility of unexpected market shocks and even reliability risks caused by pipeline congestion or outages. Also distinguishing it from coal, natural gas is widely used across multiple sectors, adding complexity and unpredictability to the market. Lastly, the United States' capacity for exports has grown rapidly in recent years and is poised to grow further with new LNG terminals. This means that international markets are increasingly drawing supply from the US market, exposing domestic gas buyers to higher prices.

All of these factors help to explain why natural gas prices are definitively more volatile and difficult to predict than coal prices. A reasonable supply plan for natural gas, therefore, inherently requires more robust risk management strategies than that for coal.

Q: Are any plants currently operated by the Company comparable to the proposed plants?

A: Yes. Though Evergy witness Olson describes the proposed CCGT plants as differing fundamentally from Evergy's existing natural gas fleet,[25] the Commission should consider precedent for Evergy's natural gas procurement practices at a similar plant –

[25] *Id.*

the Hawthorn Station in Kansas City, Missouri. At Hawthorn, Evergy Metro has operated a 313 MW combined-cycle unit for 27 years, alongside a 569 MW coal steam unit with natural gas co-firing capability and two 82 MW simple cycle natural gas units.[26] While the simple cycle units presumably act as peakers, the combined-cycle and co-fired steam units would conventionally be considered baseload resources, similar to the proposed plants.

Q: How can historical procurement data from the Hawthorn plant be compared to the procurement plan for the proposed combined-cycle plants?

A: In public data from the Energy Information Administration, natural gas purchases for the entire complex are reported in aggregate. However, data on gas consumption is reported by generator type, revealing that the majority of natural gas purchased for Hawthorn Station is consumed by the combined-cycle and coal/gas co-fired steam plant.[27] As both of these units would be expected to operate as baseload generation, historical costs at Hawthorn provide insight into how Evergy has managed natural gas procurement for baseload generation.

Furthermore, Hawthorn reports receiving 100% of its gas supply via firm transport for the last 17 years[28] – the entirety of data analyzed for this testimony. Firm transport is provided to Hawthorn by the Southern Star gas pipeline. During the period from June 2022 through July 2024, 100% of gas purchased for Hawthorn was reported

[26] Energy Information Administration, Form EIA-860 M Detailed Data Schedule 3 'Generator Data.' Accessible at: https://www.eia.gov/electricity/data/eia860/.
[27] Energy Information Administration, Form EIA-923 Detailed Data Schedule 2. Accessible at: https://www.eia.gov/electricity/data/eia923/.
[28] *Id*.

as being bought on advanced contracts.[29] Therefore, in addition to partial similarities in plant characteristics, gas procurement for Hawthorn during that 26-month period appears to employ risk management strategies similar to what is proposed for the Viola and McNew plants. This means that the historical data from Hawthorn is an indicator for the likely effectiveness of the proposed strategies moving forward.

Q: Has the Company successfully managed risks and costs in procuring natural gas for the Hawthorn complex?

A: No. The Company's management of natural gas procurement at Hawthorn has neither protected ratepayers from sustained increases in fuel costs nor short-term price spikes.

To supply natural gas generators at Hawthorn, the Company has generally paid more than was forecasted. At the outset, it is important to note that though the onset of war in Ukraine destabilized domestic energy markets,[30] markets had mostly stabilized by early 2023. My period of analysis for Hawthorn's gas purchases runs from June 2022 through July 2024, a period which only partially overlaps with the effects of this destabilization. In addition, macro-level price shocks like that caused by the war in Ukraine are a component of the market risks which 'high-case' natural gas forecasts ought to capture. During my period of analysis, when Hawthorn was utilizing both firm transport and advanced contracts to purchase natural gas, the plant paid an average delivered cost of $3.84 per MMbtu.[31] This is roughly 40% more than the Company's

[29] *Id*.
[30] Energy Information Administration, "Energy commodity prices in 2022 showed effects of Russia's full-scale invasion of Ukraine" (Jan. 3, 2023). Accessible at: https://www.eia.gov/todayinenergy/detail.php?id=55059.
[31] Energy Information Administration, Form EIA-923 Detailed Data Schedule 2. Accessible at: https://www.eia.gov/electricity/data/eia923/.

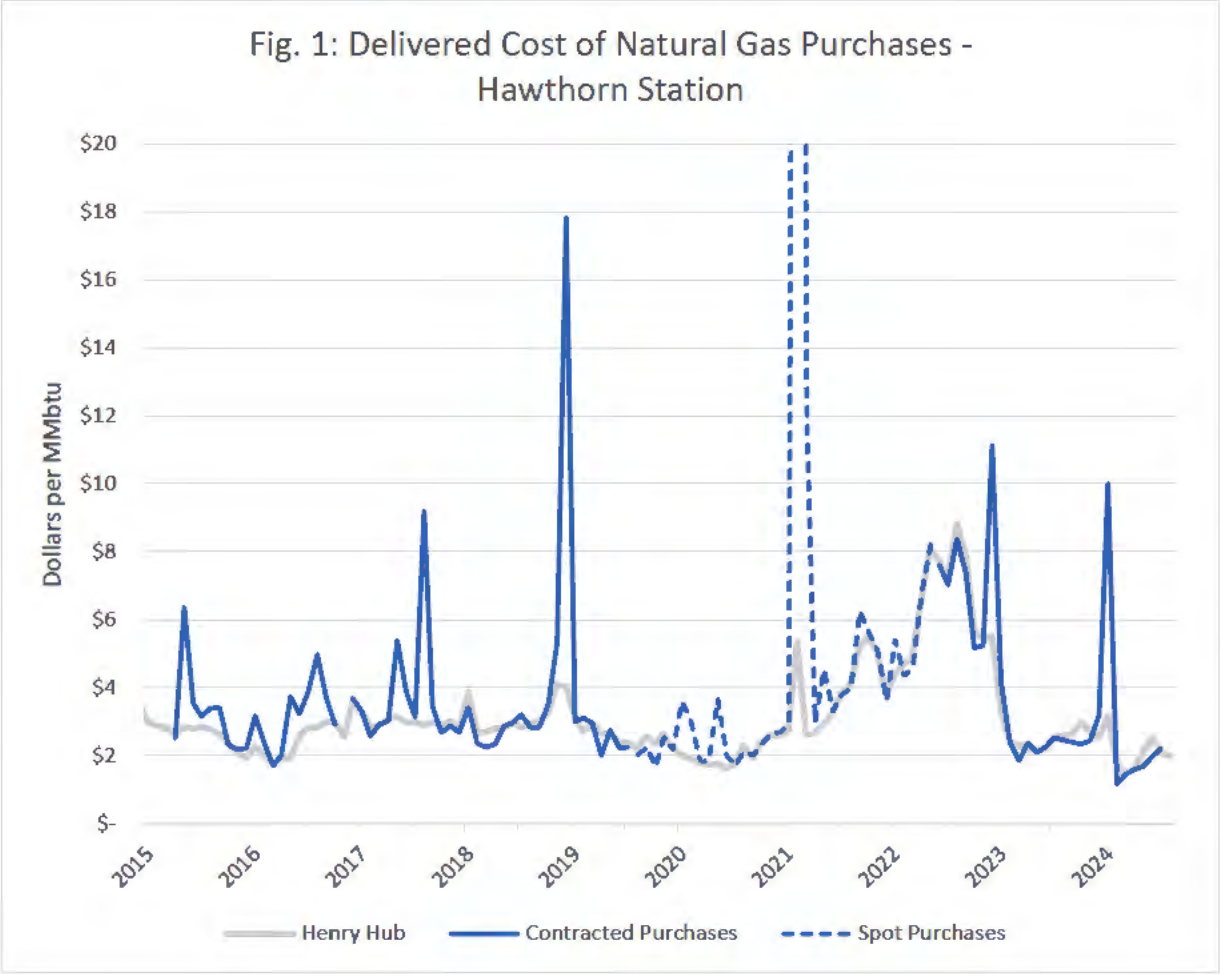
mid-case and 15% more than the Company's high-case price forecasts for 2022-2024 as presented in its 2021 Triennial IRP.[32] I note here that, though advanced contracts can protect against price fluctuations, such contracts are also sometimes arranged with variable pricing which makes them less protective against market risks. While transport charges are included in delivered fuel costs and can explain a part of the discrepancy, maximum fees for firm transport reservations on the pipeline which supplies Hawthorn sat below $0.22 per MMbtu during that period[33] – a rate which could likely only account for a minority of the discrepancy. Because Evergy has held a firm transport subscription for Hawthorn over several decades, the actual transportation fees would be expected to be an even smaller portion of the discrepancy between forecasted prices and delivered costs. Evaluated on a multi-year horizon, it is clear that Evergy's procurement strategy did not succeed in keeping long-term costs to a level anticipated in its resource planning.

Contributing to the higher-than-forecasted costs are periodic price spikes which can greatly raise the long-run average cost of fuel. Notably, these spikes can occur outside of macro-level market events, like the effects of the war in Ukraine described above. Short-term price shocks often occur during months with extreme weather events, when power plant operators compete for fuel supply on constrained pipeline systems to serve peak electrical load. In the case of cold weather events, local gas distributors are also fully utilizing their subscribed transport capacity, which can contribute to strained infrastructure and elevated regional pricing. Even when gas

[32] KCC Docket No. 19-KCPE-096-CPL, Annual Update at 32, Table 23.
[33] Southern Star Central Gas Pipeline, April 2022 Rate Card – Full Sheet (Jun. 6, 2022). Accessible at: https://csi.southernstar.com/infoPosting/api/Posting/GetPostingDocument?p=141112&b=70.

supply has been pre-arranged by contract, some contract designs may not effectively cap costs. To illustrate, even with contracted supply and firm transportation, fuel costs at Hawthorn averaged $11.13 per MMbtu during December 2022 and $10.00 per MMbtu during January 2024,[34] both months which saw particularly extreme cold from winter storms.

Figure 1: Delivered Cost of Natural Gas Purchases - Hawthorn Station[35]



[34] Energy Information Administration, Form EIA-923 Detailed Data Schedule 2. Accessible at: https://www.eia.gov/electricity/data/eia923/.

[35] *Id.*; Energy Information Administration/Thomson Reuters, Henry Hub Natural Gas Spot Price. Accessible at: https://www.eia.gov/dnav/ng/hist/rngwhhdm.htm.

These short-term spikes could become more common in the future, as recent NEE research on gas markets has found that natural gas prices have become increasingly prone to sudden upward movements.[36] Factors likely contributing to this trend include the increase of natural gas power plants which operate as 'must-run' facilities in peak load events, the price insensitivity of power plant operators who can generally pass-through fuel costs to retail rates, the price insensitivity of local gas distributors who also pass through fuel costs to retail rates, and the growing influence on gas prices by high-margin LNG exporters. In analyzing regions where the power sector drives natural gas prices, NEE has found that delivered costs tend to be highest during the times when power plants consume the most fuel. As this correlation grows, it makes periods of peak demand disproportionately expensive and compounds the effect of short-term price spikes on ratepayer bills.

Evergy's forecasting methodology does not incorporate costs related to these spikes, nor does the current description of its fuel procurement strategy demonstrate that ratepayers will be protected from such costs.

Q: Aside from Hawthorn, what has your analysis shown concerning Evergy's record of procuring natural gas?

A: High heat-rate simple cycle plants have historically made up the bulk of the gas fleet Evergy operates. As these plants have generally operated at low capacity factors, it is to be expected that the Company has maintained procurement flexibility by using

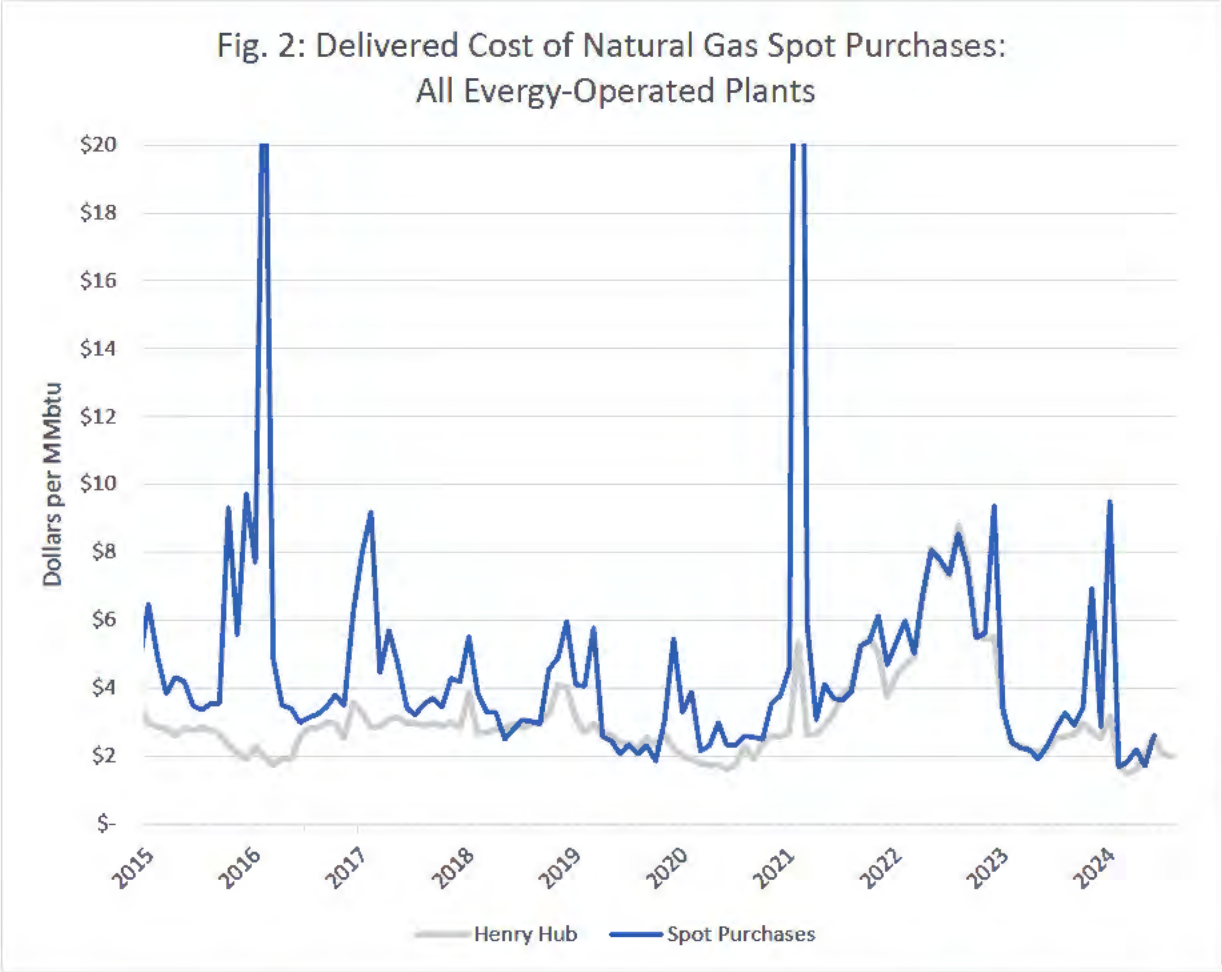
[36] New Energy Economics, "Consumers face greater risk as electric utilities double down on natural gas." Accessible at: https://newenergyeconomics.org/consumers-face-greater-risk-as-electric-utilities-double-down-on-natural-gas/.

primarily spot purchases. However, spot purchases clearly expose Evergy to the risk of high prices, particularly during extreme weather events. NEE performed analysis of the Company's historical fuel costs associated with spot purchases, across the whole of the Company's tri-state gas fleet, to measure the risk of relying on spot purchases in future procurement plans. As shown in Figure 2, Evergy's spot purchases have been subject to frequent spikes in delivered cost, often much higher than average monthly prices at Henry Hub.[37] These spikes have been pernicious, driving delivered costs to high levels even when national prices are stable or even relatively low. Note specifically that the weighted monthly averages spiked above $8 per MMbtu in three of the four most recent winters for which data is available, including the winter of 2023-2024 when national prices were low. When compared to Figure 1, which only shows deliveries to Hawthorn, the Company's fleet-wide spot purchases of natural gas differ in that their unit costs tend to more frequently be higher than monthly averages at Henry Hub. Taken on a longer term, from the beginning of 2021 to the end of available data in mid-2024, Evergy spent in excess of $207 M on spot-purchased natural gas to supply its fleet.[38] At $5.44 per MMbtu during this period, the average unit cost of these spot purchases was roughly double the average of annual prices forecasted for 2021-2024 under Evergy's mid-case and 65% higher than Evergy's high-case from the 2021 Triennial IRP.[39] In absolute values, this means that Evergy's spot purchases cost

[37] Energy Information Administration, Form EIA-923 Detailed Data Schedule 2. Accessible at: https://www.eia.gov/electricity/data/eia923/; Energy Information Administration/Thomson Reuters, Henry Hub Natural Gas Spot Price. Accessible at: https://www.eia.gov/dnav/ng/hist/rngwhhdm.htm.
[38] Energy Information Administration, Form EIA-923 Detailed Data Schedule 2. Accessible at: https://www.eia.gov/electricity/data/eia923/.
[39] *Id*.; KCC Docket No. 19-KCPE-096-CPL, *Annual Update* at 32, Table 23.

roughly between $80 M and $100 M more than they would have according to the Company's forecast during this period.[40]

Figure 2: Delivered Cost of Natural Gas Spot Purchases - All Evergy-Operated Plants[41]



Q: As the Company develops a fuel procurement plan for the proposed plants, is it likely that the declared strategies will effectively control fuel costs and minimize risks?

[40] *Id.*

[41] Energy Information Administration, Form EIA-923 Detailed Data Schedule 2. Accessible at: https://www.eia.gov/electricity/data/eia923/; Energy Information Administration/Thomson Reuters, Henry Hub Natural Gas Spot Price. Accessible at: https://www.eia.gov/dnav/ng/hist/rngwhhdm.htm.

A: No. Though Evergy has not provided a definite procurement plan, the strategies currently under consideration do not adequately control costs or minimize risks over short-term or long-term horizons. Aside from the promise of firm transport,[42] descriptions of the plan being developed are generally non-committal. A range of possible strategies are being evaluated, [redacted] However, the described options appear likely to leave ratepayers risk-exposed, potentially to a large degree.

[redacted]

[42] Olson Direct at 31.
[43] *See* Exhibit WJ-2, Evergy response to DR NEE-3.
[44] *Id.*
[45] Olson Direct at 31.
[46] *See* Exhibit WJ-2, Evergy response to DR NEE-3.
[47] *Id.*

[redacted]

[48] *Id*.
[49] *Id*.

[redacted] NEE has attested elsewhere that major financial institutions are willing to provide quotes on multi-year hedges for planned power plants, potentially even covering the full book life of a plant.[51]

[redacted] Importantly, such quotes also provide an opportunity for the Company to benchmark its own natural gas forecast against risk-adjusted forecasts produced by expert commodity analysts. This should contribute to a more accurate price forecast.

Q: Because there is not yet a definite procurement plan, how do you suggest the Commission assess the reasonableness of risk exposure and risk management associated with the proposed plants?

A: Lacking a definite and clearly differentiated procurement plan, it is reasonable to assume that Evergy's ultimate approach to procurement will reflect practices of those

[50] Olson Direct at 32.
[51] North Carolina Utility Commission Docket No. e-100, sub 19, *Testimony of R. Brent Alderfer and Ivan Urlaub on behalf of Clean Energy Buyers Association*, p. 47 (May 28, 2024).

the Company has employed very recently at the Hawthorn plant or its gas fleet at large. As demonstrated, those strategies have not successfully controlled fuel costs and have not maintained risk exposure to a reasonable level.

IV. THE COMMISSION SHOULD EVALUATE IMPACTS ON REVENUE REQUIREMENTS AND RETAIL RATES WITH FUEL COSTS INCLUDED

Q: Why should the Commission consider fuel costs in assessing rate impacts of the proposed plants?

A: Though not included in base rates, fuel costs will ultimately be a large part of how the proposed plants impact customer bills through the Retail Energy Cost Adjustment (RECA) mechanism. Fuel costs and associated market risks are material to determining whether the proposed plants are cost-efficient and whether their level of exposure to market risks is reasonable. This is particularly true when comparing the proposed plants to potential alternative resources which would not require fuel. [redacted]

Failing to analyze the effect of fuel costs could understate the net-cost of these plants for ratepayers, particularly in the event of fuel costs exceeding expectations. As described in this testimony, many factors could drive fuel costs up to or beyond Evergy's high-case gas price scenario. It is critical that the Commission be able to review the full extent to which these specific plants would be expected to impact retail rates and the market risk exposure they represent, including from fuel costs. [redacted]

[52] Exhibit WJ-2, Evergy response to DR CURB-24.

[redacted]

Q: Please briefly describe the methodology used in producing these new RIA results.

A: To measure the effect of fuel costs, it is necessary to measure against a baseline cost that would otherwise be expected for fuel or purchased power. I assume that, without the start of the new plants, the Company's current average cost for fuel and purchased power would be maintained.

In its most recent Kansas rate case, Evergy has declared that company-wide costs of these types were $0.0203 per KWh or $20.30 per MWh in 2023.[53] I take this to be an adequate proxy for the RECA rate. I consider that carrying this rate forward is a conservative modeling assumption because the Company's generation mix is forecasted to shift from thermal generation toward renewable generation, which should allow a reduction in RECA between now and 2029.

I then calculated the per MWh costs of fuel for each proposed CCGT plant according to annualized versions of the Company's natural gas forecasts, the stated heat rate for the proposed plants, the capacity factor used in the Company's RIA workpaper, and an assumed $0.30 per MMbtu firm transport reservation, roughly in line with posted FTS tariffs from regional pipelines.[54] [redacted]

[53] KCC Docket No. 25-EKCE-294-RTS, Joint Application – 2023 Form 10-K at 12.
[54] Note: Southern Star used as an example due to its use at Hawthorn. *See* Southern Star Central Gas Pipeline, FERC Gas Tariff (Feb. 28, 2023). Accessible at: https://csimain.southernstar.com/EBBPostingDocs/other/TariffShark/tariff.pdf#toolbar=1&nameddest=ftssftrates.

[redacted] I then took the difference between the per MWh fuel cost for each plant and the $20.30 per MWh baseline in order to find the net impact of fuel costs related to these plants.

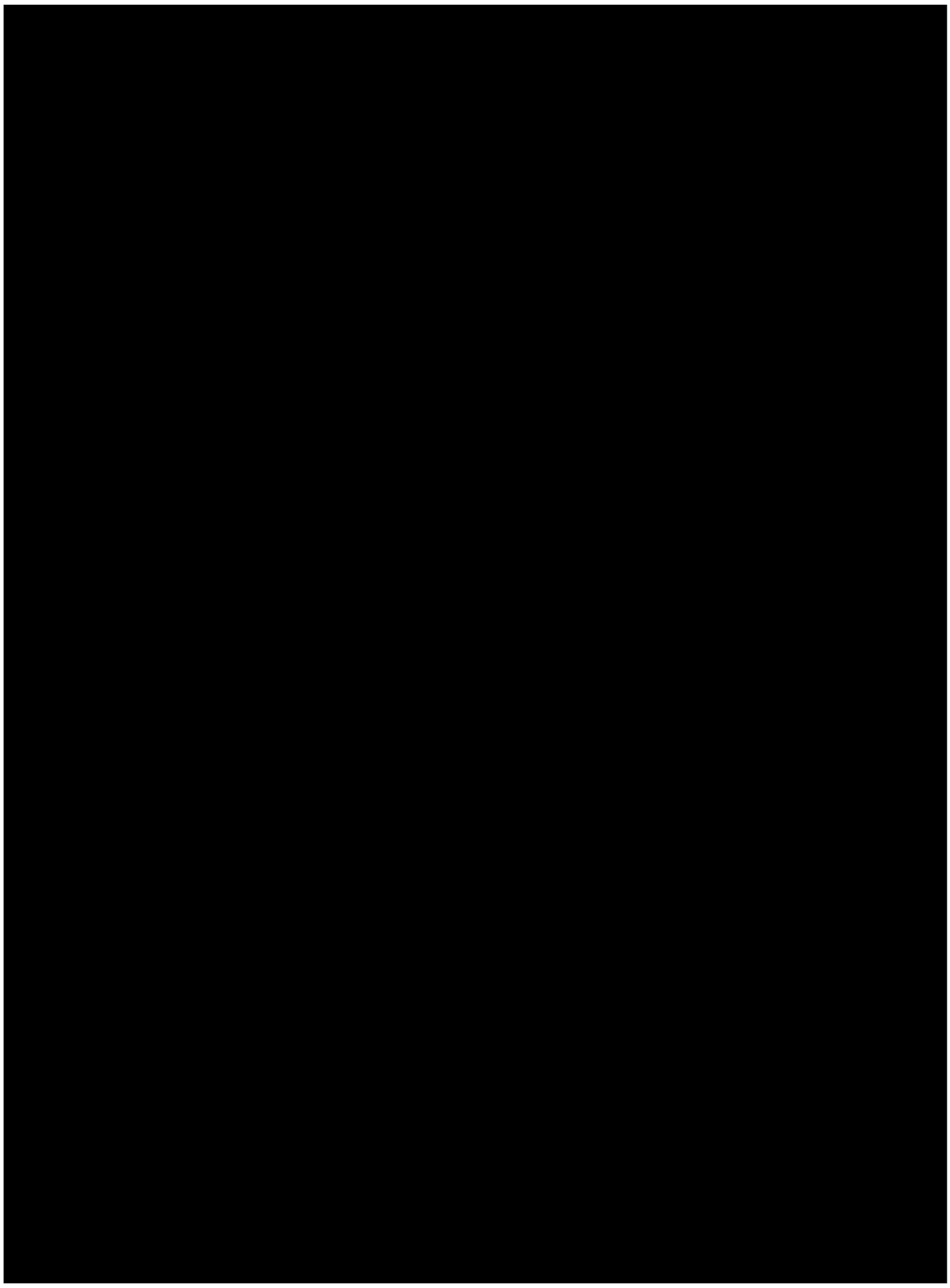
Q: What were the modeled fuel costs for the plants and how did this compare with the baseline RECA assumption?

A: [redacted]

Q: In your analysis, how much could fuel costs contribute to the ultimate rate impacts associated with these two plants?

A: [redacted]

[55] *See* Exhibit WJ-2, Evergy response to DR NEE-3.



[redacted]

Q: Both your RIA and the Company's RIA are premised on the same capacity factor. Did you model fuel costs for capacity factors that resulted from the Company's resource models?

A: Yes. I computed 10-year NPVRR impact of modeled fuel consumption for these plants using the modeling output provided by Evergy. Evaluating this model output, [redacted] I determined that calculating rate impacts of fuel for each plant's respective first year of operation was less meaningful than calculating a cumulative revenue requirement over the first several years of operation. This better captures the expected cost of fuel for ratepayers during normal plant operations in the Company's resource model. My chosen horizon, from 2025-2034, captures just the 10-year NPVRR impact of cumulative fuel costs for the first five years of operations at Viola and the first four years of operations at McNew. By deflating these costs to today's NPV, I avoid overstating the impact of fuel

[56] *See* Exhibit WJ-2, Evergy response to DR KIC 1-26.

costs in comparison to the Company's portfolio cost analysis. The Company's assumed weighted-average cost of capital (WACC) was used as the discount rate in this analysis, again to maintain consistency with the Company's portfolio cost analysis.

[redacted]

Q: How should the Commission interpret your analysis on rate impacts in reaching a decision on this application?

A: My intention in analyzing rate impacts and revenue requirements for this docket is to demonstrate that there are other resources and strategies, not adequately modeled in the IRP, which Evergy could use as substitutes or complements to the proposed combined cycle plants. [redacted] The Commission should consider impacts on ratepayers with fuel costs fully accounted for, particularly when comparing the proposed resource to alternatives which may not directly require fuel. Doing so casts doubt on whether ratepayer interests are best served by this application in its current form. In the remainder of this testimony, I will present a pathway which could allow

the Company to reduce fuel costs and related risk by enhancing its portfolio of zero-fuel resources and reducing its net ownership of the proposed CCGT plants.

V. EVERGY SHOULD COMMIT TO ADDING BATTERY STORAGE CAPACITY AS A SUBSTITUTE FOR A PORTION OF PLANNED NATURAL GAS CAPACITY

Q: Why is the consideration of alternative resources material in this docket?

A: NEE has contended that the natural gas forecasting methodology used in designing the Company's preferred portfolio is inadequate, understating probable costs and market risks. The Commission has acknowledged that discussion of these topics may be material to this docket.[57] Considering alternatives, which may lessen the fuel costs and associated risks, could therefore also be material.

Additionally, as discussed above, the dynamism of current market conditions has meant that many fundamental assumptions of modeling produced in the IRP process may now be obsolete. Besides fuel costs, these include the capital costs of various resource types, such as combined cycle plants and battery storage. As the Commission considers potential pathways for reducing fuel costs and associated risks, it may be necessary to re-evaluate resource selection under updated fuel cost and capital cost assumptions.

[57] KCC Docket No. 24-EKCE-387-CPL,Order at ¶ 18.

Q: Are there alternatives to the proposed CCGT plants which could meet capacity need without increasing ratepayer exposure to risk in the natural gas market?

A: Yes. Battery Energy Storage Systems (BESS) are a clear alternative. While BESS are not a one-to-one substitute for gas generation, they can be dispatched nearly instantaneously to meet peak load. Beyond providing quick-ramp, dispatchable capacity, BESS can also provide ancillary services and help smooth intermittent renewable generation to reduce curtailments and better utilize transmission. Not requiring a direct fuel supply also means that BESS are unaffected by service outages on gas pipelines or upstream interruptions in gas production, two risks to the reliability of natural gas plants. For all of these reasons, a strong case can be made that BESS not only contribute to meeting capacity needs but that, as part of a diversified portfolio, they support system resilience in ways that other resources cannot.[58]

BESS are also advantaged in their modular, zero-fuel, and zero-emissions characteristics which mean they can be more easily sited, more easily permitted, and more easily constructed than natural gas plants. [redacted] Lastly and of direct relevance to the preceding testimony, the inclusion of BESS in portfolios reduces ratepayer exposure to commodity fuel markets.

[58] Utility Dive, "Using energy storage to bridge gaps in gas-electric coordination." Accessible at: https://www.utilitydive.com/news/gas-electric-coordination-energy-storage-acp-zalewski/739341/.
[59] *See* Exhibit WJ-2, Evergy response to DR KMEA-2.

Q: Can BESS economically compete with new gas capacity?

A: Yes. BESS capital costs have fallen steadily in recent years which, combined with investment tax credits, allow their upfront capital costs to rival thermal plants. The National Renewable Energy Laboratory (NREL) published a moderate-case CAPEX estimate of $1938 per KW for four-hour duration BESS in 2024.[60] Compare this to Evergy's estimated CAPEX for the Viola plant at [redacted].[61] As battery technology continues to mature, costs are expected to decline further. NREL's moderate-case forecast shows a 25% decline by 2030, with CAPEX modeled to be $1451 per KW in that year for four-hour duration BESS.[62] Goldman Sachs recently published research showing that lithium battery prices in other industries could fall by 42% between 2024 and 2030.[63]

Of course, these modeled estimates are not as reliable as real-world RFP bids. [redacted]

[60] National Renewable Energy Laboratory (NREL), Electricity Annual Technology Baseline (ATB) Data. Accessible at: https://atb.nrel.gov/electricity/2024/data.
[61] Olson Direct at 26.
[62] NREL, Electricity Annual Technology Baseline (ATB) Data.
[63] Goldman Sachs, "Electric vehicle battery prices are expected to fall almost 50% by 2026." Accessible at: https://www.goldmansachs.com/insights/articles/electric-vehicle-battery-prices-are-expected-to-fall-almost-50-percent-by-2025.
[64] *See* Exhibit WJ-2, Evergy response to DR KMEA-2.
[65] *Id*. at Evergy response to DRs NEE-5 and NRDC-15.

[redacted] Additionally, swapping 150 MW of combined cycle capacity for BESS would mean that EKC's need for firm natural gas transport could be reduced. Assuming a $0.30 per MMbtu tariff rate, this would represent an additional [redacted] in savings, making the total levelized reduction in cost of ownership of [redacted] per year.

Q: Has Evergy thoroughly considered BESS as an alternative to the proposed plants?

A: BESS are included as an expansion option in the Company's resource modeling but have not yet been added to the preferred portfolio.[68] NEE's view, expressed in comments on Evergy's 2024 Triennial IRP, is that specific modeling practices have biased resource models toward understating the benefits of BESS.[69] We are encouraged by Evergy's willingness to reach resolution on some of these concerns. We are further encouraged to see that updated resource modeling presented in this docket has selected BESS capacity, with additions beginning in 2031.[70] We take this as a positive sign that (1) Evergy may have begun updating modeling practices to better consider BESS, (2) updated capital cost assumptions support our case for greater BESS deployment, and

[66] *Id*. at Evergy response to DR KMEA-2.
[67] Exhibit WJ-2, Evergy response to DR CURB-24.
[68] VandeVelde Direct at 25.
[69] KCC Docket No. 24-EKCE-387-CPL, NEE Comments at 28-29.
[70] VandeVelde Direct at 25.

(3) future iterations of the Company's preferred portfolio will include BESS to a greater degree.

Despite this progress, arbitrary limits may still be biasing models toward selecting natural gas capacity rather than BESS. Namely, Evergy may not have considered EKC taking net ownership shares of less than 50% in the plants proposed in this docket. My recommendation, for instance, is that EKC's net ownership in the McNew plant could be reduced to just 227 MW – a 32% share in the plant, representing a 125 MW reduction from the current plan – with the Utility instead investing capital in a 150 MW BESS facility to be built concurrently. This would increase EKC's nameplate capacity by 25 MW while, as I will show, reducing costs and risk associated with the natural gas projects. [redacted]

Given current market conditions, it is reasonable to conclude that Evergy could readily find a joint venture partner interested in purchasing outstanding equity created by a reduction in EKC's net-ownership of the proposed plants. Replacing the planned gas capacity with BESS would reduce EKC ratepayers' exposure to natural gas fuel costs and associated risks while maintaining total capital outlay at or below the level entailed by this application.

Q: Why have you chosen to focus on the McNew plant in presenting this alternative proposal?

A: I have chosen to focus on the McNew plant, as opposed to a recommendation that would impact the Viola plant or both plants, because McNew is planned to have a later groundbreaking date and a later in-service date than Viola. Given this additional time, there ought to be more flexibility for Evergy to act on these recommendations without necessarily causing delays or undue obstacles for the project.

Q: Including fuel costs, can you provide an estimate of the potential savings if EKC reduced its net ownership in the proposed McNew plant and instead invested in a 150 MW BESS facility?

A: Yes. I can model the savings related to fuel costs by making several assumptions with regards to the cost of power used to charge BESS. I assume that BESS can be charged during off-peak hours or times when power from renewable resources is abundant, potentially even at risk of being curtailed otherwise. I therefore assign an average cost of charging at $10 per MWh. For reference, this is roughly the average of the bottom

third of hourly lambda rates in SPP since 2021.[71] In other words, if the BESS facility is assumed to charge less than a third of the time, it could be possible to incur average costs below $10 per MWh.

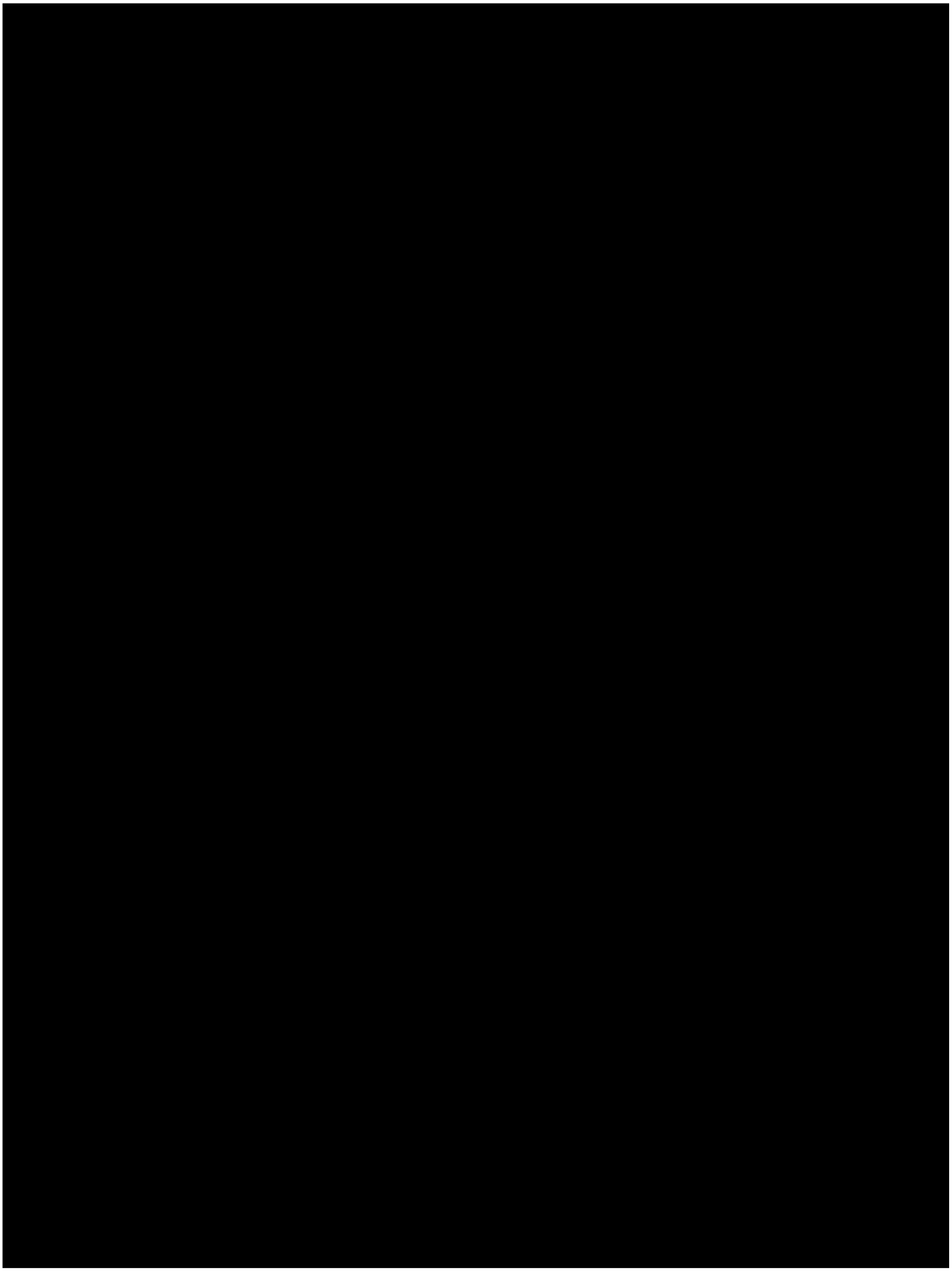
In contrast, the McNew plant during its first operational year would be modeled to incur average direct fuel costs around [redacted] in 2030 under Evergy's mid-case natural gas forecast and [redacted] under Evergy's high-case. For each MWh that the BESS system dispatched instead of the McNew plant, I would therefore expect an average net-savings between [redacted]

Further assuming that a 150 MW BESS facility would maintain a capacity factor near 10%, I would model that it dispatches 131,400 MWh per year, representing up to [redacted] in 2030 in net savings at Evergy's high-case natural gas price.

To further calculate the specific revenue requirements and rate impacts of BESS versus gas capacity, several assumptions must be made to fill in financial values that Evergy has not provided. My calculations are premised on conservative-case projections by NREL [redacted] For instance, I assume a total gross CAPEX of around $190 M for a 150 MW BESS plant after investment tax credits. I also assume a 20-year book life for BESS. Finally, I assume a fixed OPEX of around $7 M. When assembled into a rough financial model, these assumptions result in estimated annual revenue requirements that are both cautious [redacted]

[71] Catalyst Cooperative/FERC, Balancing Authority Area System Lambda Data. Accessible at: https://data.catalyst.coop/ferc714_xbrl/balancing_authority_area_system_lambda_data_and_description_of_economic_dispatch_02_6_duration.

Despite providing a higher nameplate capacity, swapping 125 MW of combined cycle capacity for 150 MW of BESS capacity would allow for savings in capital costs as well as fuel costs. [redacted] Savings would be expected to remain persistent in subsequent years, particularly as natural gas prices are forecasted to increase and drive higher savings from avoided fuel use.



[redacted]

Q: Referencing your earlier RIA results, what would such an alternative plan mean for the overall rate impacts with fuel costs included?

A: [redacted]

To conclude my analysis of BESS, my alternative plan would aim to keep overall capacity additions slightly above Evergy's preferred portfolio while shifting a portion of the net-owned capacity at the McNew CCGT plant toward a new BESS plant to be in-service by 2030. Based on my modeling, such a plan would likely result in

both reduced CAPEX and reduced fuel costs, consequently allowing for lower impacts on both base rates and RECA rates.

Importantly, the reduction in fuel consumption would also reduce exposure to risks in commodity fuels markets, such as those illustrated in earlier sections of this testimony. Reliability would likely be maintained and potentially even be improved through diversifying EKC's fleet of dispatchable resources. I acknowledge that such a plan would require further vetting to determine that it is practical and advantageous to EKC ratepayers. The specific balance of BESS and natural gas capacity may have to be optimized for both cost and reliability through iterative modeling. With that said, I present an alternative here not to conclusively assert that it is the optimal solution, but rather to show that Evergy has not demonstrated the benefits of its own proposal over realistic potential alternatives such as this one.

VI. EVERGY SHOULD EVALUATE THE POTENTIAL FOR EXPANDED CUSTOMER SUBSCRIPTION PROGRAMS TO FUND INCREMENTAL RENEWABLE PROJECTS AS A RISK-MINIMIZING COMPLEMENT FOR NEW NATURAL GAS GENERATION

Q: Why have you cited customer-subscribed renewable capacity as another recommended alternative to the proposed plants?

A: With careful program design, customer subscription programs allow large customers to offset the cost of installing new renewable capacity. By leveraging these customers' particular preference for clean energy and their demand for these programs, utilities can potentially add capacity at a lower net-cost than other resources. While the addition of more renewable capacity does not eliminate the need for new dispatchable resources,

it would reduce the call on thermal plants to generate and therefore directly reduce fuel costs and exposure to fuel market risk.

Q: What evidence is there that more demand exists for these types of programs?

A: [redacted] This sampling, coupled with the findings of broader market intelligence,[73] strongly suggests that demand exists for these types of programs. [redacted]

Q: How can Evergy ensure that the potential of customer subscription programs is fully considered?

A: I advise that Evergy commit to engaging in a stakeholder process to consult with large customers and industry experts in designing a program or set of programs that would better leverage these customers' interest in renewable energy and willingness to underwrite associated costs. With due consideration, Evergy can increase renewable

[72] *See* Exhibit WJ-2, Evergy response to DR NEE-6.
[73] Wood Mackenzie, "Gridlock: the demand dilemma facing the US power industry." Accessible at: https://www.woodmac.com/horizons/gridlock-demand-dilemma-facing-us-power-industry/.

resources in its preferred portfolio while reducing the exposure of general ratepayers to fuel costs and associated market risks.

VII. CONCLUSION

Q: What is your conclusion and recommendation to the Commission?

A: The ultimate cost of Evergy's proposed CCGT plants will heavily depend on the cost of natural gas – meaning that their impact on retail rates will be subject to the risks of a notoriously volatile and unpredictable market. I have shown evidence that the Company's previous forecast of natural gas prices has fallen fall below historical costs and its current forecast is likely to fall significantly below future costs. This will make the proposed plants more expensive for Kansas ratepayers than Evergy has presented here. At the same time, alternative resource portfolios allow the opportunity to minimize the costs and risks associated with fuel procurement. Such an alternative can be pursued in a way that also reduces initial capital costs and potentially even improves reliability. The strongest and most affordable path forward is one that best diversifies Kansas' energy market.

To summarize my recommendations, I ask that the Commission critically review Evergy's price forecasts to consider if they adequately predict fuel costs and measure risks in the fuel market. Secondly, I ask that the Commission consider if the Company's fuel supply plan is likely to successfully minimize those risks. Thirdly, I ask that the Commission evaluate the efficiency and reasonableness of Evergy's proposal by reviewing my analysis of the impact on revenue requirements and retail rates with fuel costs included. I then ask that the Commission compare those results

with alternative plans that would be less dependent on natural gas. I recommend that Evergy reduce its net-ownership in the planned natural gas capacity, instead investing in BESS. I also recommend that Evergy engage stakeholders to expand customer subscription programs which could help defray the cost of increased renewable deployment. In both cases, by diversifying energy sources without increasing capital outlay, ratepayers would be better protected against high fuel costs and risky commodity markets.

Q: Does this conclude your testimony?

A: Yes.

VERIFICATION

STATE OF COLORADO)
) ss:
COUNTY OF Jefferson)

I, William Jones, being first duly sworn upon my oath state that I am a Senior Utilities Economics Analyst with the Council for the New Energy Economics; that I have read and am familiar with the foregoing document and attest that the statements therein are true and correct to the best of my knowledge, information, and belief under the penalties of perjury.

William Jones

SUBSCRIBED AND SWORN to before me on this 12 day of March, 2025.

Notary Public

My Commission expires: May 20 2026

JEPIA SUE CULPEPPER
NOTARY PUBLIC - STATE OF COLORADO
NOTARY ID 20224020459
MY COMMISSION EXPIRES MAY 20, 2026

nick.jones@newenergyeconomics.org

W. NICK JONES

Education:

University of Michigan B.A. — GPA 3.91

Deep Springs College A.A. — GPA 3.80

Professional Experience:

New Energy Economics

Utility Economics Senior Analyst — 2024 - present

- *Contributing to testimony and comments on regulatory proceedings in multiple states*
- *Writing reports on emerging energy market themes, including natural gas risks for power utilities*
- *Building organizational data resources and research capacity*

BTU Analytics - a FactSet Company

Energy Transition Analyst — 2022 - 2024

- *Researched infrastructure development and market conditions underlying low-carbon energy*
- *Created modeling tools including project cash flow models and unit cost models*
- *Wrote reports and presented findings to clients at global energy producers and investors*
- *Spearheaded analysis on risks and opportunities in IRA legislation and EPA proposals*

Energy Analyst — 2021 - 2022

- *Built and maintained power-system forecasting models*
- *Analyzed and forecasted markets for a variety of energy commodities including natural gas and power*
- *Contributed to and published flagship monthly upstream oil & gas report*
- *Consulted on asset valuation for global energy producers and investors*

Skills:

Investment Research — *Quantitatively and qualitatively assessing new tech and evolving markets*

Statistical Modeling — *Using regression and monte carlo to forecast behavior of complex systems*

Financial Modeling — *Estimating project costs, projecting cash flows, conducting sensitivity analysis*

Technical Proficiency — *Excel, Python (NLP, pandas), SQL, R, GIS*

Community Engagement:

Telluride Association — *Applicant Interviewer*

UM - Dearborn Data Science Association — *Professional Development Coordinator*

Detroit Men's Practice Group — *Founding Member, Facilitator*

Deep Springs Alumni Association — *Class Chair*

Deep Springs College Student Body — *Communications Chair, Body Secretary*

White Papers [Click title for link]:

CONSUMERS FACE GREATER RISK AS ELECTRIC UTILITIES DOUBLE DOWN ON NATURAL GAS

CO2 PIPELINES STRUGGLE TO NAVIGATE REGULATORY RISK

evergy

Evergy Kansas Central
Case Name: 2025 EKC Predetermination
Case Number: 25-EKCE-207-PRE

Requestor Greenwald Alissa -
Response Provided February 24, 2025

Question:NEE-1
Please Respond to the Information Request detailed below.

Since the 2024 IRP process, has any revision been made to fuel cost modeling inputs which were used to derive cost estimates presented in this docket? If so, please provide the updated input values.

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: PUBLIC
Statement: This response is Public. No Confidential Statement is needed.

Response:
No changes were made to fuel price/cost inputs. However, heat rates for the turbines were updated, which would change the amount of fuel needed per unit of power generated, and max capacity was updated which could change the total fuel cost. Additionally, the cost of firm NG transport is calculated based on the total fuel needed at max capacity and that number would change and is included in fixed cost/revenue requirement inputs.

Information provided by:
Kelli Merwald, Sr. Mgr. Fundamental Analysis
Attachment(s):

Verification:

I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

evergy

Evergy Kansas Central
Case Name: 2025 EKC Predetermination
Case Number: 25-EKCE-207-PRE

Requestor Greenwald Alissa -
Response Provided February 24, 2025

Question:NEE-2
Please Respond to the Information Request detailed below.

Referring to the Direct Testimony of Cody VandeVelde at page 24, Evergy attests that the two combined cycle natural gas plants would still be selected in updated capacity modeling runs, even when capital costs are updated to reflect current estimates. Assuming this statement refers to base-case scenario analysis, please answer the following:

a. Were the new inputs tested against alternative scenarios?

b. If alternative scenarios were tested, were the gas plants still selected in resource modeling for high-case gas price scenarios?

c. Please provide updated PVRR output for modeled portfolios across all scenarios after combined cycle CAPEX had been adjusted to reflect current estimates from EPC results.

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: PUBLIC
Statement: This response is Public. No Confidential Statement is needed.

Response:

a. No
b. n/a
c. n/a – see KCC-4 for updated NPVRR of plans run for 2024 IRP.

Information provided by:
Cody VandeVelde, Sr. Dir. Strategy & Long-term Planning

Attachment(s):

Verification:

I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

evergy

Evergy Kansas Central
Case Name: 2025 EKC Predetermination
Case Number: 25-EKCE-207-PRE

Requestor Greenwald Alissa -
Response Provided February 27, 2025

Question:NEE-3
CONFIDENTIAL

Please Respond to the Information Request detailed below.

[redacted]

evergy

[redacted]

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: CONFIDENTIAL

[redacted]

[redacted]

Information provided by:
Mauricio Guevara, Lead Natural Gas Buyer

Attachment(s):

Verification:
I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

evergy

Evergy Kansas Central
Case Name: 2025 EKC Predetermination
Case Number: 25-EKCE-207-PRE

Requestor Greenwald Alissa -
Response Provided February 24, 2025

Question:NEE-4
CONFIDENTIAL

Please Respond to the Information Request detailed below.

The rate impact analysis presented by witness Ronald Klote excludes fuel costs, as supported by the workpapers labeled 'CONF_Viola and McNew CCGT_KS Central_Model_10.23.24' and 'CONF_Impact for Revenue Requirement Gas Plant KS Sky CWIP.'

a. Please explain why fuel costs were excluded from this analysis.
b. Please provide rate impact analysis for the proposed plants which does include fuel costs across low-, base-, and high-case gas price scenarios.

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: PUBLIC
Statement: This response is Public. No Confidential Statement is needed.

Response:

a. Evergy has not performed a fuel costs analysis on these plants as there are too many complex variables that can change between now and when these plants are placed in service. Fuel costs and revenues flow through the RECA mechanism and we have not modeled the inputs/outputs for what flows through the RECA. Only capital and O&M costs which impact base rates were included in the base rate impact analysis.
b. A fuel costs rate analysis has not been performed.

Information provided by: Robin Allacher

Attachment(s):

Verification:

I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

evergy

Evergy Kansas Central
Case Name: 2025 EKC Predetermination
Case Number: 25-EKCE-207-PRE

Requestor Greenwald Alissa -
Response Provided February 24, 2025

Question:NEE-5
CONFIDENTIAL

Please Respond to the Information Request detailed below.

[redacted]

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: CONFIDENTIAL

[redacted]

evergy

[redacted]

Information provided by:

(a) Damon Rea – Renewables Project Manager
(b) Jason Humphrey, Vice President Development

Attachment(s):

Verification:

I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

Evergy Kansas Central
Case Name: 2025 EKC Predetermination
Case Number: 25-EKCE-207-PRE

Requestor Greenwald Alissa -
Response Provided February 24, 2025

Question:NEE-6
CONFIDENTIAL

[redacted]

evergy

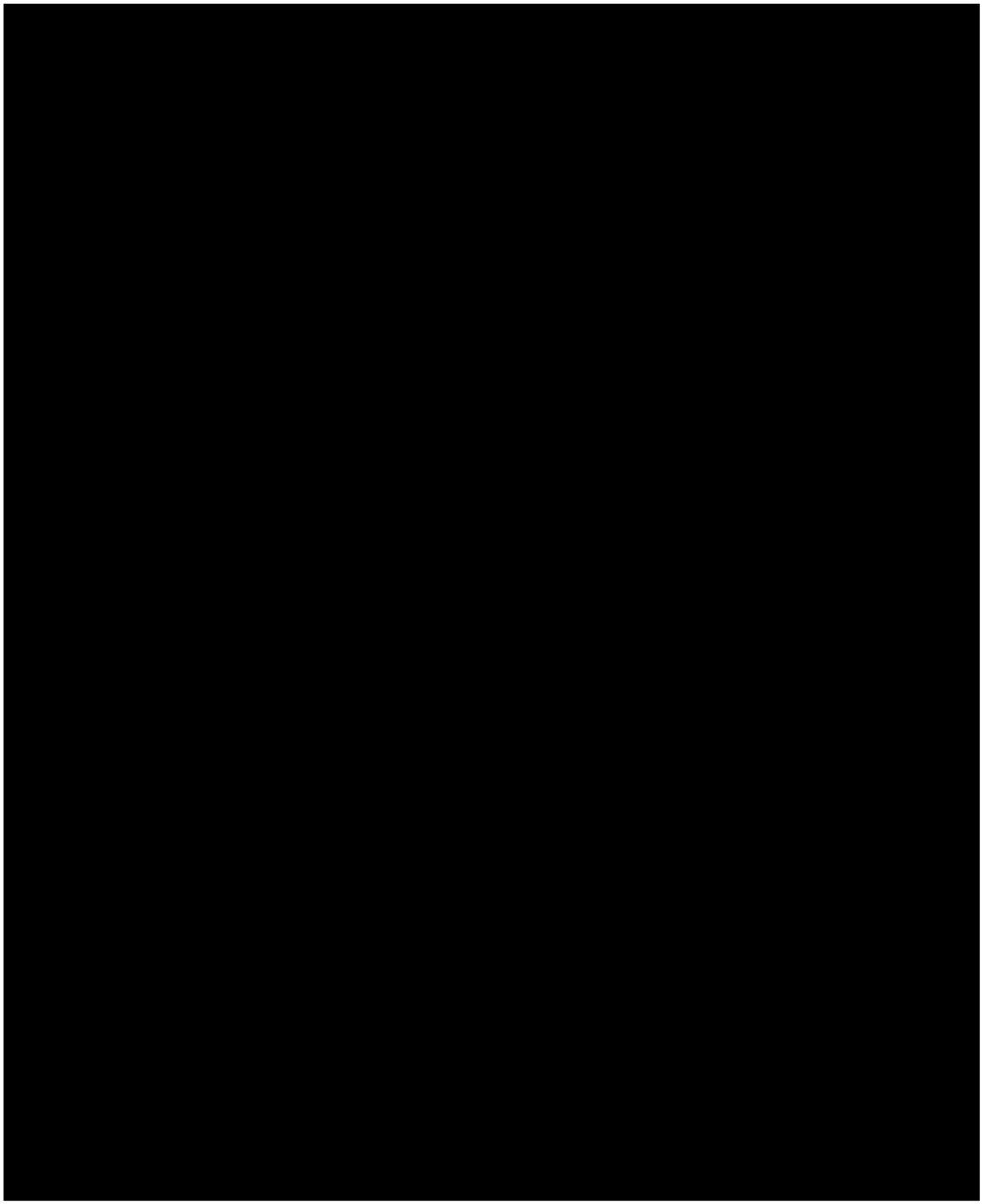
[redacted]

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: CONFIDENTIAL

[redacted]

evergy



[redacted]

Information provided by:
Kevin Brannan, Sr. Manager, DER Products & Services
Cody VandeVelde, Sr. Dir. Strategy & Long-term Planning

Attachment(s):

Verification:
I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

evergy

Evergy Kansas Central
Case Name: 2025 EKC Predetermination
Case Number: 25-EKCE-207-PRE

Requestor Prince Darren -
Response Provided December 10, 2024

Question:KMEA-2
To the extent not already provided, functional electronic copies of all workpapers relied upon to support the Application and supporting testimonies in MS Excel format with all formulas and inputs intact. This request should be read to also include all exhibits to the Application and accompanying testimonies in their entirety.

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: CONFIDENTIAL

[redacted]

Verification:

I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

evergy

Evergy Kansas Central
Case Name: 2025 EKC Predetermination
Case Number: 25-EKCE-207-PRE

Requestor Titus Robert -
Response Provided February 10, 2025

Question:NRDC-15
RE: Discovery Provided to Others

Please Respond to the Information Request detailed below.

[redacted]

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: CONFIDENTIAL

[redacted]

Information provided by:

Damon Rea – Renewables Project Manager

Attachment(s):

Verification:

I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

evergy

Evergy Kansas Central
Case Name: 2025 EKC Predetermination
Case Number: 25-EKCE-207-PRE

Requestor Zakoura James -
Response Provided December 23, 2024

Question:KIC-1-26
RE: Discovery Provided to Others
Please Respond to the Information Request detailed below.

Provide an estimate, by month, for years 1 through 5 of the following, commencing with the first month of commercial operation of each of the 2 proposed natural gas electric generation facilities.:

(a) the estimated monthly electric energy production and

(b) Peak Day use.

RESPONSE: (do not edit or delete this line or anything above this)

Confidentiality: CONFIDENTIAL

[redacted]

evergy

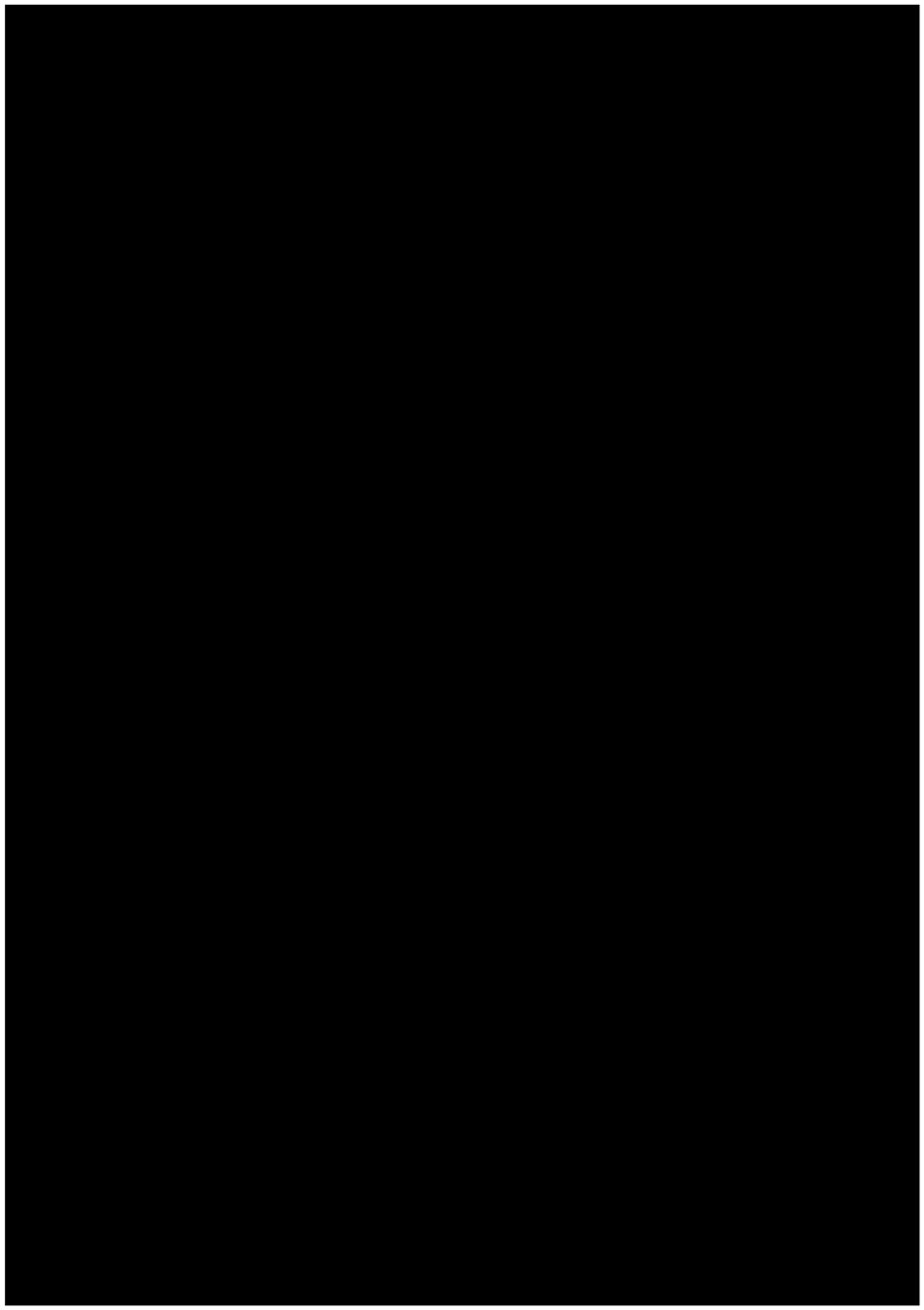
[redacted]

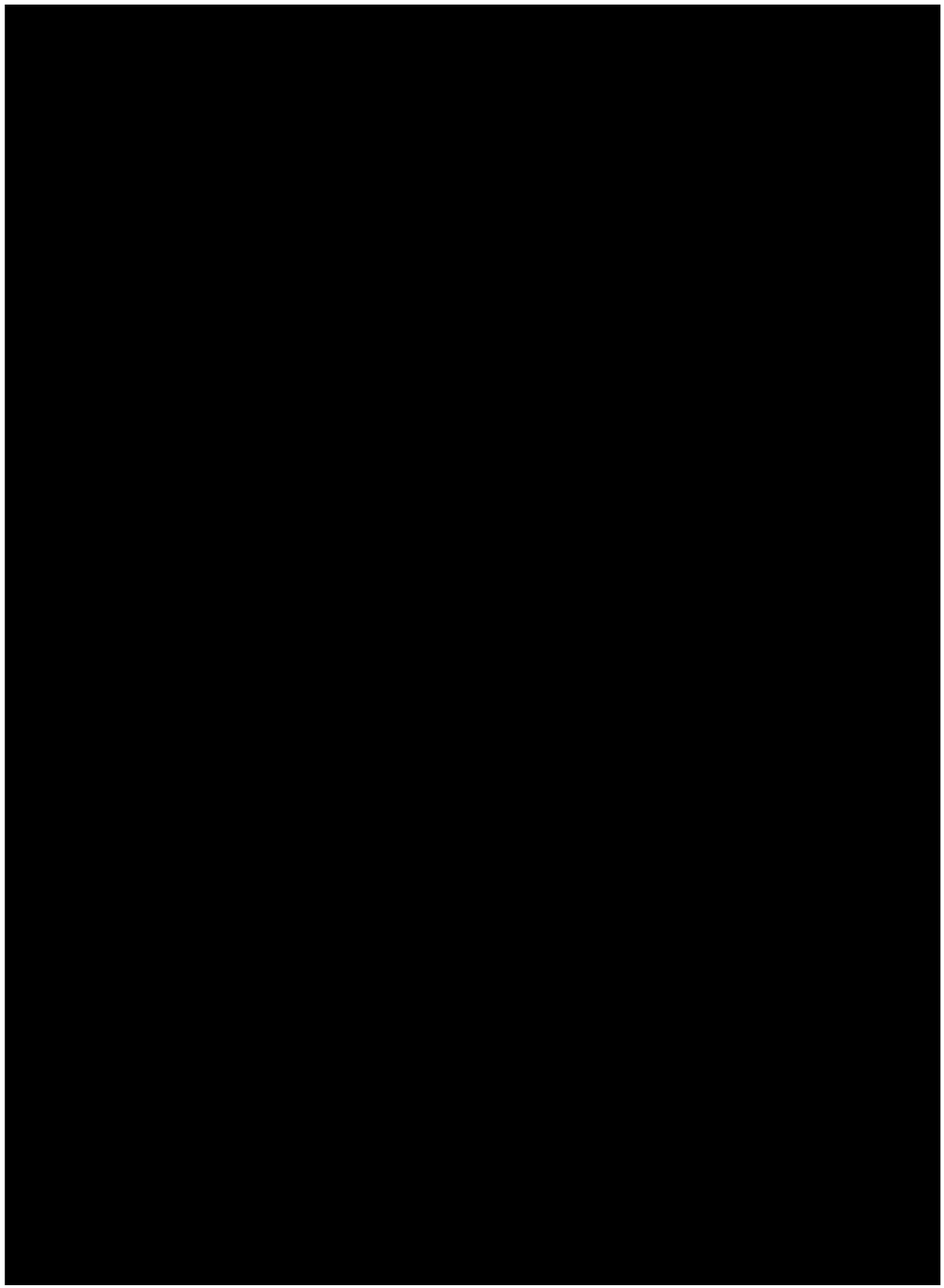
Information provided by:
Greg Reesor, Lead Energy Resource Analyst
Attachment(s):
KIC-1-26_Conf_MFKSC AAAB Build CC Data

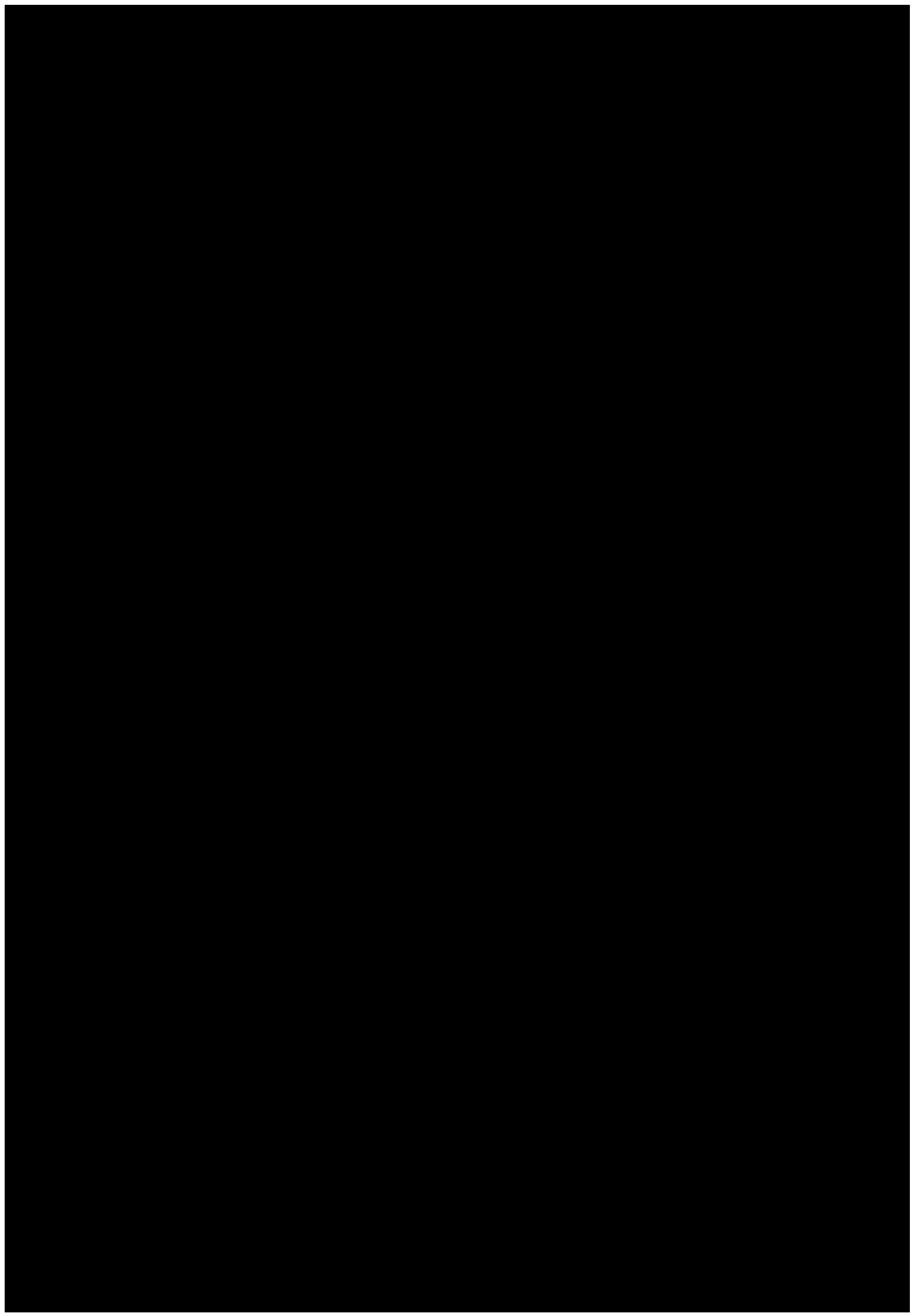
Verification:
I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

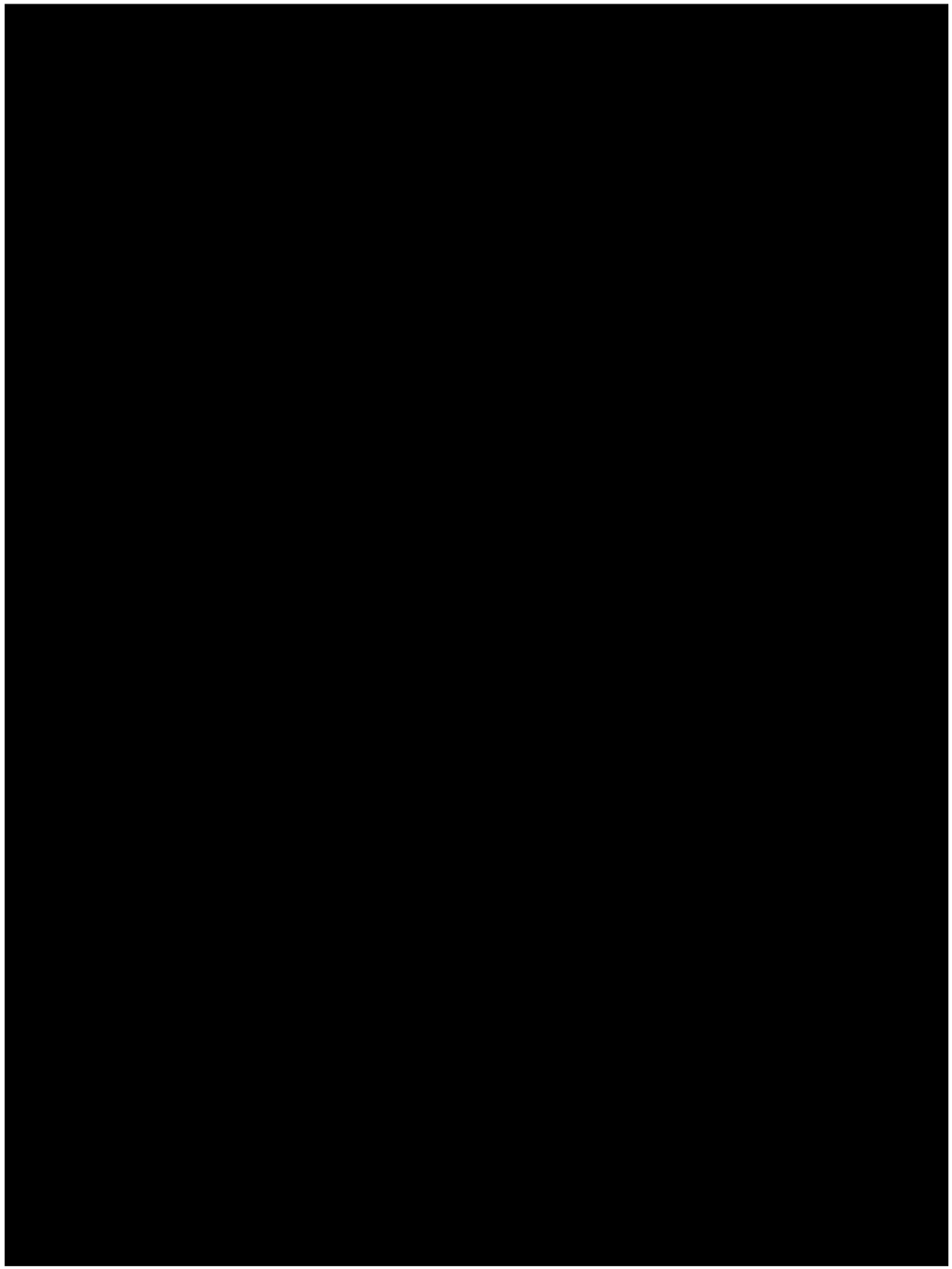
Signature /s/ *Brad Lutz*
Director Regulatory Affairs

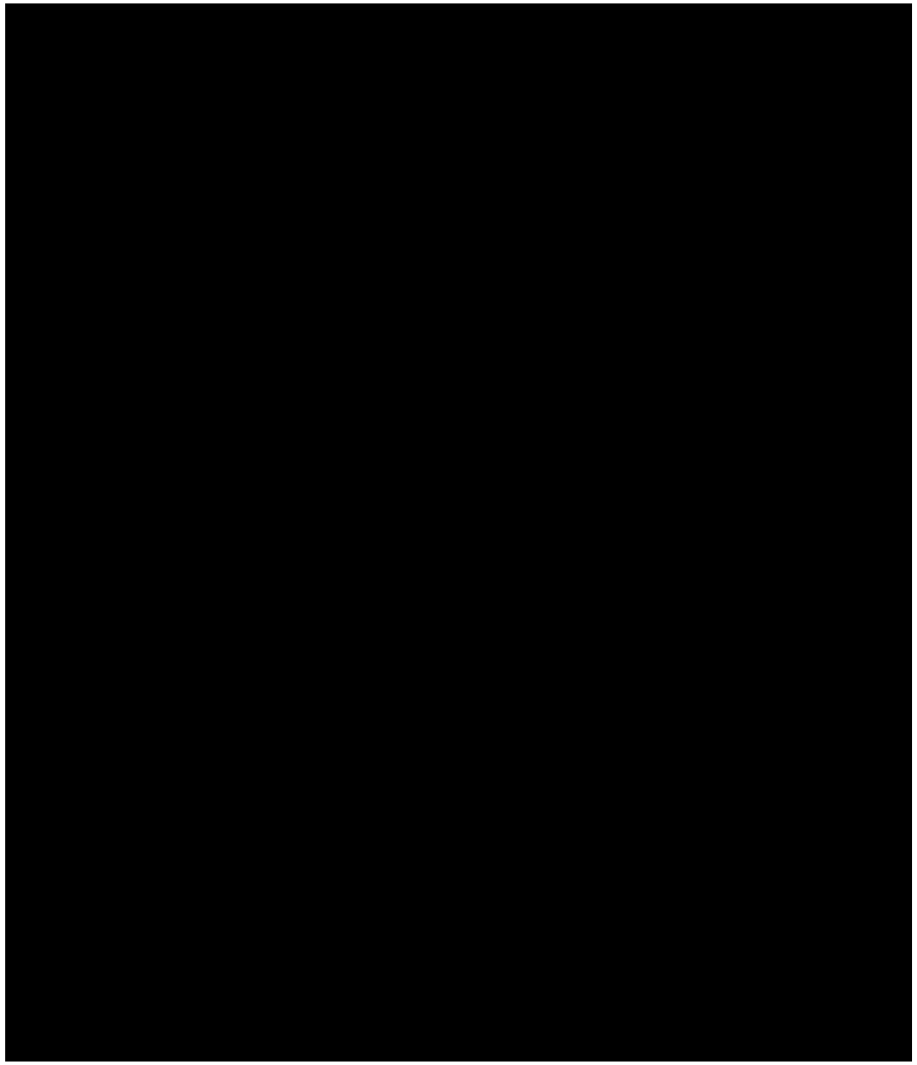
[redacted]











evergy

Evergy Kansas Central
Case Name: 2025 EKC Predetermination
Case Number: 25-EKCE-207-PRE

Requestor Astrab Joseph -
Response Provided February 24, 2025

Question:CURB-24

[redacted]

RESPONSE: (do not edit or delete this line or anything above this)

[redacted]

[redacted]

Information provided by: John M. Grace; Sr. Dir. Corporate Planning and Financial Performance

Attachment(s):
CURB-24_CONF_Viola and McNew CCGT_KS Central_Model_02.06.25

Verification:
I have read the Information Request and answer thereto and find answer to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signature /s/ *Brad Lutz*
Director Regulatory Affairs

***Excerpt of CONF CURB-24_CONF_Viola and McNew CCGT_KS Central_Model_02.06.25 - excel file has been excerpted due to the voluminous nature of the file.**