#### BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

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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 LUCY METZ

#### **ON BEHALF OF**

#### CITIZENS' UTILITY RATEPAYER BOARD (CURB)

March 14, 2025

PUBLIC VERSION

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4.	4. The capital costs of the Viola and McNew plants have increased substantially since Evergy completed its 2024 IRP modeling and are now among the highest I have seen across the United States		
5.	5. Evergy has not demonstrated that the Viola and McNew plants are the most cost- effective resource additions to serve system needs		
	i.	Viola and McNew correspond to a 2030 CCGT addition in Evergy's updated modeling	
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#### 1. <u>INTRODUCTION AND PURPOSE OF TESTIMONY</u>

Please state your name and occupation.

1

Q

- 2 Α My name is Lucy Metz. I am an Associate at Synapse Energy Economics, Inc. 3 ("Synapse"). My business address is 485 Massachusetts Avenue, Suite 3, 4 Cambridge, Massachusetts 02139. 5 Q Please describe Synapse Energy Economics. 6 Α Synapse is a research and consulting firm specializing in energy and 7 environmental issues, including: electric generation; transmission and distribution 8 system reliability; ratemaking and rate design; electric industry restructuring and 9 market power; electricity market prices; stranded costs; efficiency; renewable 10 energy; environmental quality; and nuclear power. 11 Synapse's clients include state consumer advocates, public utilities commission 12 staff, attorneys general, environmental organizations, federal government 13 agencies, and utilities. 14 Q Please summarize your work experience and educational background. 15 Α At Synapse, I conduct analysis and write publications on a variety of topics 16 related to power plant economics and integrated resource planning. I regularly 17
- support the development of comments and testimony in litigated dockets across
  the country, including performing analyses of electric power systems using
  industry-standard models such as EnCompass and spreadsheet tools. I recently
  sponsored testimony before the Public Service Commission of Wisconsin and co-
- 21 sponsored testimony before the Georgia Public Service Commission. I have also

1		assisted in the preparation of testimony in several other jurisdictions, including
2		Florida, Indiana, Michigan, South Carolina, and Virginia.
3		I hold a Bachelor of Science in Engineering Science from Smith College. A copy
4		of my current resume is attached as Exhibit LM-1.
5	Q	On whose behalf are you testifying in this case?
6 7	Α	I am testifying on behalf of the Kansas Citizens' Utility Ratepayer Board (CURB).
8 9	Q	Have you previously testified before the Kansas Corporation Commission ("Commission")?
10	A	No, I have not previously testified before the Commission.
11	Q	What is the purpose of your testimony in this proceeding?
12	Α	The purpose of my testimony is to determine whether Evergy Kansas Central
13		("EKC" or "Company"; together with Evergy Kansas Metro, "Evergy") has
14		adequately demonstrated that its proposed resource additions meet the
15		
16		requirements of the predetermination statute in Kansas. Specifically, I focus on
		requirements of the predetermination statute in Kansas. Specifically, I focus on whether EKC has demonstrated (1) that obtaining a 50 percent share in the Viola
17		requirements of the predetermination statute in Kansas. Specifically, I focus on whether EKC has demonstrated (1) that obtaining a 50 percent share in the Viola and McNew combined cycle plants is prudent, (2) that the additions are consistent
17 18		requirements of the predetermination statute in Kansas. Specifically, I focus on whether EKC has demonstrated (1) that obtaining a 50 percent share in the Viola and McNew combined cycle plants is prudent, (2) that the additions are consistent with its most recent preferred plan and resource acquisition strategy, and (3) that
17 18 19		requirements of the predetermination statute in Kansas. Specifically, I focus on whether EKC has demonstrated (1) that obtaining a 50 percent share in the Viola and McNew combined cycle plants is prudent, (2) that the additions are consistent with its most recent preferred plan and resource acquisition strategy, and (3) that its initial definitive cost estimates are reasonable. I provide recommendations for
17 18 19 20		requirements of the predetermination statute in Kansas. Specifically, I focus on whether EKC has demonstrated (1) that obtaining a 50 percent share in the Viola and McNew combined cycle plants is prudent, (2) that the additions are consistent with its most recent preferred plan and resource acquisition strategy, and (3) that its initial definitive cost estimates are reasonable. I provide recommendations for the Company to procure alternative sources of firm capacity and energy, including
17 18 19 20 21		requirements of the predetermination statute in Kansas. Specifically, I focus on whether EKC has demonstrated (1) that obtaining a 50 percent share in the Viola and McNew combined cycle plants is prudent, (2) that the additions are consistent with its most recent preferred plan and resource acquisition strategy, and (3) that its initial definitive cost estimates are reasonable. I provide recommendations for the Company to procure alternative sources of firm capacity and energy, including battery storage and solar, to lower cost and risk for ratepayers. Finally, I
17 18 19 20 21 22		requirements of the predetermination statute in Kansas. Specifically, I focus on whether EKC has demonstrated (1) that obtaining a 50 percent share in the Viola and McNew combined cycle plants is prudent, (2) that the additions are consistent with its most recent preferred plan and resource acquisition strategy, and (3) that its initial definitive cost estimates are reasonable. I provide recommendations for the Company to procure alternative sources of firm capacity and energy, including battery storage and solar, to lower cost and risk for ratepayers. Finally, I recommend that Evergy develop a more robust process for incorporating large

1	existing ratepayers from bill increases associated with resource additions meant to
2	serve new large load customers.

- **3 Q How is your testimony structured?**
- 4 A In Section 2, I summarize my findings and recommendations for the Commission.
- In Section 3, I describe the Company's requests in this docket related to acquiring
  shares in the Viola, McNew, and Kansas Sky generating facilities.
- In Section 4, I assess the reasonableness of Evergy's cost estimates for its
  proposed resource additions relative to both the Company's prior estimates and
  costs reported by peer utilities.
- 10 In Section 5, I compare the proposed resource additions to EKC's preferred
- 11 portfolio; describe shortcomings in the Company's Integrated Resource Plan
- 12 (IRP) modeling that may have prevented it from identifying the most cost-
- effective solution for ratepayers; and outline steps Evergy Kansas Central should
  take to procure lower-cost capacity and energy to reduce or eliminate its need to
  acquire shares in the Viola and McNew plants.
- In Section 6, I recommend measures the Company should take to protect existing
  ratepayers from cost increases associated with new prospective large load
  customers and avoid delays in the retirement of its coal units as a result of load
  growth.
- 20 Q What documents do you rely upon for your analysis, findings, and
  21 observations?
- A My analysis relies primarily upon the workpapers, exhibits, and discovery
   responses provided by Evergy, as well as publicly available data.

### 2. FINDINGS AND RECOMMENDATIONS

1	Q	Please summarize your findings.
2	A	My primary findings are:
3		1. The capital costs of the Viola and McNew natural gas combined-cycle gas
4		turbines (CCGT) units have risen steeply since Evergy completed its 2024
5		IRP. Building these units now will lock ratepayers into the current high
6		cost of these assets.
7		2. The updated modeling that Evergy completed for this docket, which
8		includes higher CCGT capital costs, shows:
9		a. Reduced near-term CCGT buildout and increased battery buildout
10		compared to EKC's 2024 IRP preferred portfolio.
11		b. **
12		
13		**
14		3. Several limitations with Evergy's updated modeling likely prevented it
15		from identifying the lowest cost and lowest risk resource additions for
16		ratepayers:
17		a. Evergy did not model compliance with the Environmental
18		Protection Agency (EPA) Clean Air Act Section 111 Rules ("111
19		Rules"), so its results omit the limitations and risks posed by
20		current and future environmental regulations. After 2032, the
21		modeled capacity factor of the CCGT units **
22		**
23		b. Evergy's firm capacity rating and book life assumptions for new
24		resources bias the model towards adding gas capacity over
25		renewables.

1		c. Evergy did not model exposure to fuel price volatility, which is a
2		significant concern for CCGT additions that are projected to run at
3		high capacity factors.
4		4. Evergy Kansas Central did not robustly analyze and test the market for
5		alternatives to Viola and McNew—including batteries added at sites with
6		existing interconnection rights and additional gas conversions of coal
7		units—and therefore has not demonstrated that the CCGTs are the lowest
8		cost way to meet its capacity and energy needs.
9		5. Solar and battery additions, including the Kansas Sky project, are likely
10		lower cost than Viola and McNew, will shield ratepayers from future cost
11		risks, and can be procured incrementally. This would allow Evergy greater
12		flexibility to adapt to changing market conditions and supply chain
13		disruptions.
14		6. Large load additions in The Company's service area are one of the drivers
15		behind the Company's requests in this docket, but Evergy does not yet
16		have planning processes and tariff structures in place to protect its current
17		ratepayers from cost increases associated with these prospective large load
18		additions.
19	Q	Please summarize your recommendations.
20	A	Based on my findings, I offer the following recommendations:
21		1. The Commission should not approve Evergy Kansas Central's request for
22		predetermination of ratemaking treatment for its acquisition of a 50
23		percent share of Viola and 50 percent share of McNew.
24		2. The Commission should instruct Evergy to issue an All-Source Request
25		for Proposal (RFP), including the option for power purchase agreement
26		(PPA) resources, to see if this yields capacity and energy resources that

1		are less costly than the Viola and McNew plants. Evergy should evaluate
2		the results of the RFP based on the grid services each bid offers (e.g., firm
3		capacity or low-cost energy) **
4		**
5	3.	Evergy should focus its near-term procurement on no-regrets resource
6		additions that its updated modeling found to be economic, primarily solar
7		and battery capacity. <sup>1</sup>
8	4.	To protect its current ratepayers from the costs associated with prospective
9		large load additions, Evergy should:
10		a. Develop clear criteria for the milestone a project must reach before
11		it is included in the load forecast that Evergy uses for resource
12		planning, including requiring an executed Energy Service
13		Agreement (ESA).
14		b. Develop tariffs for large load customers that commit these
15		customers to paying their full cost of service before assets are built
16		and/or enable build-out of renewable generation to meet load. <sup>2</sup>
17		c. Plan proactively to ensure that load additions do not cause delays
18		in the retirement or conversion of coal units that are costly to
19		operate.

<sup>&</sup>lt;sup>1</sup> No-regrets resource additions are resources that will be valuable to Evergy ratepayers under a variety of potential market and regulatory futures, for example because they provide low-cost capacity and/or energy regardless of the level of future carbon regulation and fuel price volatility.

<sup>&</sup>lt;sup>2</sup> This could be achieved through Evergy's concurrent Large Load Power Service Rate Plan docket, KCC Docket No. 25-EKME-315-TAR.

#### 1 3. SUMMARY OF THE COMPANY'S PROPOSAL

#### 2 Q What is Evergy requesting in this docket?

3 Α Evergy seeks predetermination of ratemaking treatment for two CCGT units and a 4 solar array (Confidential Table 1). The two CCGT units will be co-owned by EKC and Evergy Missouri West (EMW). In this docket, Evergy Kansas Central 5 6 requests approval to obtain a 50 percent (355 MW) share in the Viola plant, which 7 is scheduled to come online in 2029, and a 50 percent (355 MW) share in the 8 McNew plant, scheduled to come online in 2030. EKC's share of the capital costs 9 for the two CCGT units is \*\* ,\*\* not including construction financing costs. 10

11 Evergy Kansas Central also seeks approval to invest \*\*

12 const ructing a 159 MW<sub>AC</sub> solar array, Kansas Sky, which would come online at

- 13 the end of 2026 and would be entirely owned by Evergy Kansas Central.
- 14

Confidential Table 1. Resource additions for which Evergy is seeking approval in this d
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Resource	Туре	Total Nameplate Capacity	Commercial Operation Date (COD)	Ownership Structure	**
Viola Generating Station	Gas combined cycle	710 MW	January 2029	50% EKC 50% EMW	
McNew Generating Station	Gas combined cycle	710 MW	January 2030	50% EKC 50% EMW	
Kansas Sky	Solar	159 MW <sub>AC</sub>	December 2026	100% EKC	**

Source: Direct testimony of Ives at 11 and 17; Application at 9–10; Confidential Supplemental Testimony of Humphrey at 6; Confidential Supplemental Testimony of Olson at 2. Cost estimates exclude Allowance for Funds Used During Construction (AFUDC).

# 4 Q What does the predetermination statute require utilities to demonstrate for 5 the Commission to grant determination of ratemaking principles and 6 treatment?

- Kansas's predetermination statute, last amended in spring 2024,<sup>3</sup> specifies that 7 Α 8 any utility seeking determination of ratemaking principles and treatment must 9 describe "how the public utility's stake in the generating facility is consistent with 10 the public utility's most recent preferred plan and resource acquisition strategy submitted to the commission."<sup>4</sup> It further specifies that the Commission may 11 12 consider whether the "utility issued a request for proposal from a wide audience of participants willing and able to meet the needs identified under the public 13 14 utility's preferred plan, and if the plan selected by the public utility is reasonable, reliable and efficient."5 15
- 16 In my testimony, I assess the extent to which Evergy has fulfilled the
- 17 requirements of the predetermination statute, with the goal of determining
- 18 whether Evergy has adequately demonstrated that the Commission should
- 19 approve the ratemaking treatment that Evergy requests.

1

<sup>&</sup>lt;sup>3</sup> HB 2527. 2024. Available at:

https://kslegislature.gov/li 2024/b2023 24/measures/HB2527/.

<sup>&</sup>lt;sup>4</sup> Kan. Stat. § 66-1239(c)(2).

<sup>&</sup>lt;sup>5</sup> Kan. Stat. § 66-1239(c)(3).

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10 9  $\infty$ 7 6 S 4  $\omega$  $\sim$ increases slightly in 2029 after Lawrence 4 (a coal steam unit) retires, and nuclear, 11 percent from wind, and the remainder from net purchases and other capacity is from coal, with an additional 25 percent from gas, 9 percent from including existing resources only. Fifty percent of the Company's accredited winter, Evergy Kansas Central does not have a capacity shortfall until 2031.6 continues increasing in the early 2030s as three additional coal units retire. In Evergy Kansas Central has a small capacity need beginning in 2026, which resource types including demand-side management (DSM), oil, and landfill gas. Figure 1 shows Evergy Kansas Central's projected summer capacity position,



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6 Evergy 2024 IRP, workpaper "KSC AAAB Plan.xlsx."

well as a performance-based accreditation adjustment.

 $\begin{array}{c} 12\\14\\15\end{array}$ 

1	Q	What factors drive Evergy Kansas Central's near-term need for capacity?
2	Α	There are three main factors that drive EKC's capacity need: load growth,
3		including from new large load customers; planned coal retirements; and changes
4		in Southwest Power Pool (SPP) reserve margin and capacity accreditation
5		requirements.
6		The base load forecast that Evergy Kansas Central used in its modeling for this
7		docket has a compound annual growth rate of 0.8 percent from 2024 to 2043. It
8		includes ************************************
9		which is scheduled to come line in spring 2025 and **
10		**7 There is a large amount of potential additional load
11		from prospective large load customers that EKC has not yet incorporated into its
12		base forecast, as I discuss further in Section 6 of my testimony.
13		Evergy Kansas Central is planning for a number of coal unit retirements (Table 2),
14		starting with the retirement of Lawrence 4 at year-end 2028 and conversion of
15		Lawrence 5 to operate on gas in 2029. Jeffrey 2 and 3 and La Cygne 1 are
16		scheduled to retire in the early 2030s, and Jeffrey 1 and La Cygne 2 are scheduled
17		to retire in 2039. Evergy hard-coded these planned retirement dates in its 2024
18		IRP (meaning that it programmed them into the model as inputs, rather than
19		allowing the model to economically optimize the retirement dates) and did not
20		change them between the 2023 and 2024 IRPs.
21		Finally, SPP is in the process of updating its methodology for firm capacity
22		accreditation and reserve margin requirements to more accurately reflect needs in

<sup>&</sup>lt;sup>7</sup> Evergy 2024 IRP, Volume 2, at 7; Direct testimony of Ives in KCC Docket No. 25-EKME-315-TAR at 13, ln. 19-21; Confidential Company response to CURB-3; Confidential Company response to KCC-2R2, "QKCC-2R2\_CONF\_Active Projects List - Redacted.xlsx."

1	a system with a higher penetration of renewables. SPP increased summer reserve
2	margin requirements to 16 percent in 2026 and also instated a winter reserve
3	margin beginning in 2026. <sup>8,9</sup> Evergy expects its summer reserve margin to
4	continue gradually increasing, reaching 19 percent in 2028, 21 percent in 2030,
5	and 22.5 percent by 2040. <sup>10</sup> SPP is also updating its methodology for assigning
6	firm capacity to resources and will use a Performance-Based Accreditation (PBA)
7	methodology for fossil resources and Effective Load Carrying Capability (ELCC)
8	framework for renewables going forward. <sup>11, 12</sup> Evergy expects both of these
9	changes to generally decrease the capacity accreditation of its existing
10	resources. <sup>13</sup>

<sup>&</sup>lt;sup>8</sup> Evergy response to CURB-7.

<sup>&</sup>lt;sup>9</sup> Southwest Power Pool. 2024. "SPP board approves new planning reserve margins to protect against high winter, summer use." August 6. Available at: <u>https://www.spp.org/news-list/spp-board-approves-new-planning-reserve-margins-toprotect-against-high-winter-summer-use/</u>.

<sup>&</sup>lt;sup>10</sup> Evergy 2024 IRP, workpaper "KSC AAAB Plan.xlsx."

<sup>&</sup>lt;sup>11</sup> Howland, E. 2024. "SPP proposes renewable, thermal resource accreditation reforms aimed at bolstering reliability." *Utility Dive*. February 27. Available at: <u>https://www.utilitydive.com/news/spp-southwest-power-resource-accreditation-reforms-reliability-ferc/708576/</u>.

<sup>&</sup>lt;sup>12</sup> Company response to CURB-7.

<sup>&</sup>lt;sup>13</sup> Company response to CURB-7.

**Total Summer** Planned **Ownership In-Service** Unit Retirement **Rated Capacity** Share Year (**MW**) Year 100% 111 1960 2028 Lawrence 4 Gas conversion Lawrence 5 100% 374 1971 2029 92% 674 1978 Jeffrey 1 2039 Jeffrey 2 92% 664 1980 2030 Jeffrey 3 92% 673 1983 2030 758 La Cygne 1 50% 1973 2032 La Cygne 2 50% 668 1977 2039

Table 2. Evergy Kansas Central coal units and planned retirement dates

Source: EIA 860, Generator and Ownership files, 2023 release; Company response to KIC-1-14.

#### 3 Q How does Evergy Kansas Central propose to close this capacity gap?

A Evergy Kansas Central's most recent IRP shows that the Company is planning to
 meet its capacity needs primarily by building new gas and solar resources,

- 6 including the Viola, McNew, and Kansas Sky resources that Evergy is requesting
- 7 predetermination for in this <u>docket</u>.

1	4.	THE CAPITAL COSTS OF THE VIOLA AND MCNEW PLANTS HAVE INCREASED
2		SUBSTANTIALLY SINCE EVERGY COMPLETED ITS 2024 IRP MODELING AND ARE
3		NOW AMONG THE HIGHEST I HAVE SEEN ACROSS THE UNITED STATES
4	Q	How have the capital costs of gas resources changed since Evergy completed
5		the analysis for its 2024 IRP?
6	A	In its 2024 IRP, Evergy estimated that the installed cost of a CCGT unit added in
7		2030 would be ** per kilowatt (kW). <sup>14</sup> Although Evergy completed the
8		2024 IRP less than a year ago, the capital costs it faces for new gas resources have
9		increased drastically. In its filing for the current docket, Evergy updated its cost
10		estimate to ** per kW of CCGT capacity, <sup>15</sup> a ** percent increase.
11		Evergy's installed cost estimates for new simple cycle combustion turbines (CT)
12		similarly increased by <b>************</b> **, from <b>*****</b> per kW in the 2024 IRP <sup>16</sup>
13		to <b>**</b> per kW in this docket. <sup>17</sup>
14	Q	What is the definitive cost estimate for Viola and McNew?
15	A	The Company's total planned investment in Viola and McNew is **
16		** for a 50 percent share in Viola and **

<sup>17</sup> percent share in McNew).<sup>18</sup> Confidential Table 3 shows the cost breakdown by

<sup>&</sup>lt;sup>14</sup> Confidential Evergy response to CURB-6, "QCURB-6\_CONF\_New Resource Cost and Performance Planning Data.xlsx."

<sup>&</sup>lt;sup>15</sup> Confidential Evergy response to CURB-6, "QCURB-6\_CONF\_New Resource Cost and Performance Updates.xlsx."

<sup>&</sup>lt;sup>16</sup> Confidential Evergy response to CURB-6, "QCURB-6\_CONF\_New Resource Cost and Performance Planning Data.xlsx."

<sup>&</sup>lt;sup>17</sup> Confidential Evergy response to CURB-6, "QCURB-6\_CONF\_New Resource Cost and Performance Updates.xlsx."

<sup>&</sup>lt;sup>18</sup> Confidential Supplemental Errata Testimony of Olson, Exhibits JKO-10 and JKO-11.

- 5 Confidential Table 3. Definitive cost estimate by project component for Viola 6 and McNew (\$M) \*\*



**\*\***Source: Confidential Olson Errata Supplemental Testimony, Exhibits JKO-10 and JKO-11. Cost estimates shown are for the entire CCGT units; EKC proposes to acquire 50 percent of each unit.

10QDoes Evergy's definitive cost estimate for Viola and McNew include all11potential costs associated with the new gas plants, including the cost of12obtaining firm gas service at the units?

3	Α	No. **	,** which will
Ť.		involve building a lateral to connect each plant to the natura	l gas system, <sup>20</sup> **
5			** <sup>21</sup> The Company

<sup>&</sup>lt;sup>19</sup> Confidential supplemental direct testimony of VandeVelde at 5.

7

8

<sup>&</sup>lt;sup>20</sup> Company response to CURB-9.

<sup>&</sup>lt;sup>21</sup> Confidential Company response to CURB-10.



<sup>&</sup>lt;sup>22</sup> Company response to CURB-9.

<sup>&</sup>lt;sup>23</sup> Confidential Company response to KCC-45.

<sup>&</sup>lt;sup>24</sup> Confidential Evergy response to CURB-6, "QCURB-6\_CONF\_New Resource Cost and Performance Planning Data.xlsx."

<sup>&</sup>lt;sup>25</sup> Direct testimony of Humphrey at 17.

<sup>&</sup>lt;sup>26</sup> Evergy response to CURB-12. The figure omits Dominion Virginia, which is the third utility that Evergy identified as a benchmark, because Dominion does not publicly release its new resource costs.

Confidential Figure 2. Comparison of Evergy's installed cost for combined-cycle and utility-scale solar with other utilities and industry-standard sources \*\*



5 Evergy explains that the reason it observed an increase in gas costs but not battery 6 costs since its 2024 IRP is the relative timing of the upward cost pressure on the 7 two resource types. Evergy observed upward pressure on renewable costs from 8 2021–2023, which were captured in the 2023 RFP results that Evergy used to 9 develop its new resource cost assumptions, and costs have since leveled out.<sup>27</sup> In 10 contrast, gas resources did not begin to experience upward cost pressure until late 11 2022, and costs have continued to increase ever since.<sup>28</sup>

### Confidential Table 4. Evergy estimate of the installed cost for CCs, CTs, and batteries added in 2030 (2030\$) \*\*

	2024 IRP	Nov 2024 Pi F	redetermination Filing	Feb 2025 Supplemental Filing			
Resource Type	Installed cost (\$/kW)	Installed cost (\$/kW)	Percent increase relative to 2024 IRP	Installed cost (\$/kW)	Percent increase relative to 2024 IRP		
CC							
CT							
Battery storage							

14 \*\* Sources: Confidential Evergy response to CURB-6, "QCURB-6\_CONF\_New Resource Cost and 15 Performance Updates.xlsx" and "QCURB-6\_CONF\_New Resource Cost and Performance Planning

16 Data.xlsx"; Evergy response to KCC-1R, "Q\_KCC-1\_Updated Rankings Feb25 Costs.xlsx."

17

As I discuss in more detail below, EKC \*\*

18 19

<sup>27</sup> Company response to CURB-18.

<sup>28</sup> Company response to CURB-18.



<sup>&</sup>lt;sup>29</sup> Confidential supplemental testimony of Humphrey at 6.

<sup>&</sup>lt;sup>30</sup> Confidential direct testimony of Carlson at 20.

<sup>&</sup>lt;sup>31</sup> Confidential Company response to CURB-6, "QCURB-6\_CONF\_New Resource Cost and Performance Planning Data.xlsx."

### 1 5. EVERGY HAS NOT DEMONSTRATED THAT THE VIOLA AND MCNEW PLANTS ARE THE 2 MOST COST-EFFECTIVE RESOURCE ADDITIONS TO SERVE SYSTEM NEEDS

*i.* Viola and McNew correspond to a 2030 CCGT addition in Evergy's updated
 *modeling*

### 5 Q What is Evergy Kansas Central's most recent preferred portfolio and 6 resource acquisition strategy?

A Evergy published its most recent IRP in May 2024. Because of changing resource
costs (especially gas plants), the 2024 IRP modeling results no longer accurately
reflect the new resource costs that Evergy faces. To account for this impact,
Evergy updated its modeling for this docket by re-optimizing one of its scenarios
from the 2024 IRP with updated costs for new CCGT and CT resources.<sup>32</sup>

### 12 Q Did Evergy Kansas Central update its preferred portfolio based on its 13 updated modeling results?

14ANo. Evergy Kansas Central has not updated its preferred portfolio based on its15new modeling results, and it states that it is continuing to pursue the resource16acquisition plan from the 2024 IRP.<sup>33</sup> It is unclear what the current lowest cost17and lowest risk portfolio is for Evergy Kansas Central, especially since18transparency into the updated modeling for this docket was limited. Unlike in an19IRP, there was no opportunity for stakeholder engagement during the modeling20process, and Evergy has not published its updated modeling results publicly.<sup>34</sup>

<sup>&</sup>lt;sup>32</sup> Company response to CURB-26.

<sup>&</sup>lt;sup>33</sup> Company response to CURB-15.

<sup>&</sup>lt;sup>34</sup> Company response to CURB-15.

Since Evergy only re-optimized one portfolio, there is no way to determine if the
 updated modeling results are the best option for ratepayers compared to
 alternative portfolios of resource additions. Given the cost increases in CCGTs
 since the 2024 IRP, it is concerning that Evergy Kansas Central continues blindly
 pursuing the 2024 IRP preferred plan. With changing market conditions, this is no
 longer in ratepayers' best interests.

### 7 Q How did the updated gas costs change the modeling results relative to the 8 original IRP preferred portfolio?

9 A Table 5 shows resource additions in the original IRP compared to the updated
 10 modeling. In the updated modeling, between today and 2030, the model adds 750
 11 MW of solar capacity and 710 MW of CCGT capacity. It then adds 450 MW of
 12 battery storage and an additional 150 MW of solar over the following two years.

13 Relative to the older IRP modeling, the updated modeling delays the addition of 14 the first CCGT capacity and replaces some of the incremental CCGT capacity 15 with battery storage. The preferred portfolio from the original IRP adds 325 MW 16 of CCGT capacity in 2030 and 2031 and an additional 650 MW in 2032. With the 17 updated costs, the model selects approximately half as much CCGT capacity during this timeframe, adding only 710 MW of gas in 2030. The model then adds 18 19 300 MW of batteries in 2031 and 150 MW in 2032, along with a 440 MW CT in 20 2033.

Both the IRP and updated modeling show that solar is an economic resource
addition for Evergy Kansas Central. Both sets of modeling results add 750 MW of
solar capacity by 2030. The updated modeling selects the solar slightly earlier,
indicating that solar becomes even more valuable on the system as the cost of gas
resources increases. The updated modeling also relies on near-term battery

- 1 storage additions in 2031–2032, \*\*
- 2

\*\*, as I discuss in more

3 detail below.<sup>35</sup>

### Table 5. Resource additions in the Evergy Kansas Central 2024 IRP preferred portfolio and the updated modeling from this docket

		0	riginal IR	Р			Upda	ated Mode	ling	1
Year	Wind	Solar	Battery	CT	CC	Wind	Solar	Battery	CT	CC
2027	1	150		-	-	-	150		-   < -	-
2028	-	300	-	-		ţ	300	-		-
2029		150	-	-	325		300	-		-
2030		150	-	-	325	-	-	-		710
2031	4	-	-	-	650	-		300	-	
2032	-	300	9	-	-		150	150	- <u>-</u> -	<u>.</u>
2033	÷.	300	-		-	-		-	440	-
2034-2043	450	600	(- ) -	830	1,300	150	1,650		440	1,420
Total	450	1,950	-	830	2,600	150	2,550	450	880	2,130

6 Source: 2024 Integrated Resource Plan, Volume 6 at 2; Direct testimony of Vandevelde at 25.

## 7 Q Do Evergy Kansas Central's proposed resource additions match the results 8 of its updated modeling?

A Together, the 50 percent share in Viola and 50 percent share in McNew that
 Evergy Kansas Central proposes to acquire correspond to the 710 MW CCGT that
 the model selected in 2030 in the updated modeling. Viola is scheduled to come
 online one year earlier than Evergy Kansas Central ratepayers need it, in 2029
 rather than 2030. Unlike the original IRP modeling, the updated modeling did not
 find that it was economic for Evergy Kansas Central to add CCGT capacity in
 2029. Kansas Sky corresponds to the 150 MW of solar added in 2027.

<sup>&</sup>lt;sup>35</sup> Confidential Company response to CURB-13.

# 1ii. Various limitations likely prevented Evergy's IRP modeling from identifying the2most cost-effective option for ratepayers

## 3 Q Do you have any concerns with the process Evergy used to develop its 4 updated modeling for this docket?

5 A Yes. I am concerned that the updated modeling fails to capture the forward-going
6 risk to ratepayers of increased cost from environmental regulation and fuel price
7 volatility, overstates the firm capacity accreditation and book life of new gas
8 resources, and does not include the full range of replacement resource options
9 available to Evergy Kansas Central—including battery storage located at coal
10 plant sites and/or additional coal-to-gas conversions.

### 11 Q How did Evergy model compliance with carbon regulations in its IRP and in 12 the updated modeling it completed for this docket?

13AThe EPA published the final 111 Rules in May 2024, the same month that Evergy14finalized its 2024 IRP. As a result, the IRP includes the draft rules only, and15Evergy modeled the rules in only one of its scenarios. Evergy did not re-optimize16that scenario when it updated its modeling for the current docket, so the updated17modeling completely omits the 111 Rules.<sup>36</sup>

## 18 Q How would modeling the 111 Rules have affected Evergy's updated modeling 19 for this docket?

- 20 A The 111 Rules place constraints on existing coal resources and new gas builds.
- 21 Most relevant to this docket, the rules require that newly built gas generators must

<sup>&</sup>lt;sup>36</sup> Company response to CURB-29.



<sup>&</sup>lt;sup>37</sup> Company response to CURB-29.

<sup>&</sup>lt;sup>38</sup> Company response to KCC-11.

Confidential Figure 3. Capacity factor of gas CCGT added in 2030 from updated IRP modeling \*\*



Source: Confidential supplemental workpaper of VandeVelde, "CONF\_KSC Predet 2\_13 costs Plan.xlsx."

#### How does this utilization compare to the capacity factor allowed under the 6 Q 7 111 Rules?

8	Α	**
9		** in the updated modeling (Confidential Figure
10		3). This means that the model likely overstates the long-term economic value of
11		the CCGT addition. With future environmental regulations, Evergy Kansas
12		Central ratepayers will be locked into paying for an expensive combined-cycle
13		resource that cannot be used as an energy resource.
14		The current U.S. political climate suggests that the 111 Rules may be repealed in
15		their current form. But while prior administrations have weakened the programs
16		designed by their predecessors under Section 111 of the Clean Air Act, they have

1 2

3

1 nonetheless acknowledged a continuing duty to implement some form of federal carbon regulation.<sup>39</sup> Given that some level of carbon regulation is likely at the 2 3 federal level during the modeled study period, the current 111 Rules serve as a reasonable proxy for the effect of future carbon regulations, which substantially 4 5 increase the cost of dispatching and operating carbon-emitting resources.

6

Q

#### Did Evergy model exposure to fuel price volatility?

7 Α No, Evergy did not model fuel price volatility. It did evaluate a high and low gas 8 price forecast as part of its modeling, but even there, the scenarios with a high gas 9 price forecast didn't factor strongly into its results. Specifically, for each of its 13 10 scenarios, Evergy conducted 27 different iterations by varying gas prices, carbon 11 dioxide prices, and construction costs. Every then weighted each of the 27 runs 12 based on probabilities (the IRP says they are based on "business judgement of subject-matter experts"<sup>40</sup>). The nine high gas price runs were assigned only a 15 13 14 percent weighting, meaning they had a smaller impact on the revenue requirement 15 calculations than the remaining scenarios with low and mid gas price forecasts, which received 85 percent weighting. Additionally, the Company's gas price 16 17 forecasts do not appear to capture important seasonal dynamics in gas prices, 18 including higher gas prices in the winter months, which have been consistently observed in recent years.41 19

20 Additionally, volatility is different than sustained higher gas prices. Volatility can 21 be incorporated into an IRP using stochastic analysis that relies on historical load

<sup>&</sup>lt;sup>39</sup> See generally Repeal of the Clean Power Plan; Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units; Revisions to Emission Guidelines Implementing Regulations, 84 Fed. Reg. 32520 (July 8, 2019).

<sup>&</sup>lt;sup>40</sup> Evergy 2024 IRP, Volume 5, Page 31.

<sup>&</sup>lt;sup>41</sup> Based on EIA 923 fuel receipts.

and weather data. Understanding the risks of fuel price volatility is particularly
 important when a utility is planning to substantially increase its reliance on gas
 generation as part of its future resource plan, as is the case for Evergy.

4 Q Explain the risks posed to ratepayers by fuel price volatility.

5 Α High reliance on gas resources can expose ratepayers to fuel price volatility for 6 which ratepayers cannot plan. Gas is a global commodity, which means that both 7 domestic and global market forces can impact the price and demand for the 8 resource. After roughly doubling from 2019 to 2023, North American liquid 9 natural gas export capacity is projected to double again by 2028, from current 10 levels of 11.4 billion cubic feet (Bcf) per day to more than 24 Bcf per day in 2028.<sup>42</sup> To put this in perspective, U.S. total gas consumption in 2023 averaged 11 roughly 89 Bcf per day.<sup>43</sup> The global market consumption effect on prices in the 12 13 United States will continue to increase significantly over even just the next few 14 years.

When the market is constrained and prices spike, those costs are passed directly to ratepayers. This happened in 2022 when Russia invaded Ukraine and European gas customers turned increasingly to U.S. gas. This drove up domestic gas prices, and those high costs were passed on directly to ratepayers. For example, DTE Electric Company in Michigan filed its 2022 Fuel Reconciliation Docket and noted that gas spending was 74 percent higher than planned. As a result, DTE

<sup>&</sup>lt;sup>42</sup> Victoria Zaretskaya, U.S. Energy Information Administration, "North America's LNG export capacity is on track to more than double by 2028." (December 30, 2028), available at: https://www.eia.gov/todayinenergy/detail.php?id=64128.

<sup>&</sup>lt;sup>43</sup> U.S. Energy Information Administration, "Natural Gas Consumption by End Use," February 2025) available at: https://www.eia.gov/dnav/ng/ng\_cons\_sum\_dcu\_nus\_a.htm.

requested recover an additional \$154 million for 2022 fuel costs alone.<sup>44</sup> Absent
 action from the Michigan Commission, DTE and its shareholders are not
 impacted by these gas price spikes—these costs are entirely passed on to
 ratepayers.

5 A similar phenomenon occurred in Kansas, where Evergy Kansas Central's Retail 6 Energy Cost Adjustment (RECA), the rate adjustment that it uses to recover fuel 7 costs, spiked in 2022 (Figure 4). The average RECA value in 2022 was 63 percent higher than the average value over the four years prior, largely because of the 8 increase in gas prices that began in June 2021.45 This same effect could occur 9 again in the future, and the impact on ratepayers will be more severe if a larger 10 11 percentage of Evergy's total generation mix comes from gas. In the updated 12 modeling Evergy completed for this docket, the percentage of its average hourly generation from gas rises from \*\* 13

14 \*\*<sup>46</sup> This level of fuel price exposure leaves ratepayers at significant risk of 15 cost increases as a result of fuel price volatility. Evergy should take this risk into 16 account in its IRP modeling and in planning its future resource mix. Reducing its 17 reliance on fossil resources is the best way to protect its ratepayers from future 18 price volatility risks.

<sup>&</sup>lt;sup>44</sup> DTE Elec. Co. 2023. *Exhibit A-7*. Mich. Pub. Serv. Comm'n Docket No. E-21051. March 31, 2023.

<sup>&</sup>lt;sup>45</sup> Direct testimony of Meitner in KCC Docket No. 22-EKCE-447-ACA at 4.

<sup>&</sup>lt;sup>46</sup> Confidential supplemental workpaper of VandeVelde, "CONF\_KSC Predet 2\_13 costs Plan.xlsx."





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Source: Evergy. 2025. "Rate Riders and Adjustments." Available at: <u>https://www.evergy.com/manage-account/rate-information-link/how-rates-are-set/rate-overviews/rate-riders-and-adjustments.</u>

### 6 Q How does Evergy calculate firm capacity accreditations for new resource 7 additions?

Evergy uses the ELCC<sup>47</sup> metric to determine capacity accreditation for solar, 8 Α 9 wind, and battery storage. Evergy relied on SPP's study-which looked at how 10 ELCC value changes as resource penetration increases on the system-for its 11 2024 IRP. The study found that ELCC values for solar are expected to drop 12 substantially over time in the summer (less so in the winter, as the capacity value 13 of solar is already quite low in the winter). For wind, ELCC values are expected to drop very gradually over time, and for battery storage, ELCC values are 14 expected to drop steadily in both the summer and winter.<sup>48</sup> 15

<sup>&</sup>lt;sup>47</sup> ELCC measure how well a resource's output aligns with peak, and therefore how much a given resource can contribute to meeting peak load.

<sup>&</sup>lt;sup>48</sup> Evergy 2024 IRP, Volume 5 at 14-17.

1		In contrast, for thermal resources, Evergy stated that new CCGT, CT, and small
2		modular reactor resources were accredited at their full capacity with the
3		assumption that the PBA and accredited capacity adjustments would remain
4		constant in the future. <sup>49</sup> It is not clear based on Evergy's discovery in the current
5		docket or its response to stakeholder feedback in the 2024 IRP whether the
6		Company is accurately de-rating new gas resources to reflect their actual likely
7		performance. In the EKC's workpapers filed in this docket, which show its
8		PLEXOS modeling outputs, Evergy assigned the new CCGT resource a firm
9		capacity of **
10		
11		**5'
12		This is concerning because over-accrediting thermal resources relative to
13		renewables will result in the model perceiving more value from thermal resource
14		than renewables. No resource is available 100 percent of the time, and it is critical
15		for Evergy to accurately calculate capacity de-ratings based on actual unit
16		performance (for existing resources) or based on class averages across SPP for
17		new resources.
18	Q	What assumptions does Evergy use about the book life of new resource
19		options?
20	A	Evergy's book life and depreciation assumptions for new resources are shown in

- 21 Table 6 below. These assumptions are important because they determine how
- 22 ratepayers will pay for a resource. For assets with long book lives, Evergy incurs

<sup>&</sup>lt;sup>49</sup> Evergy Response to CURB-25.

<sup>&</sup>lt;sup>50</sup> Confidential supplemental workpaper of VandeVelde, "CONF\_KSC Predet 2\_13 costs Plan.xlsx."

1	(depreciates) less of the cost in the near term, and therefore the resource's total
2	net present value is lower than for an equivalent resource with a shorter book life.
3	For wind resources, the book life Evergy uses is shorter than industry-standard
4	values such as those in the National Renewable Energy Laboratory Annual
5	Technology Baseline (ATB) (19.72 years for Evergy vs. 30 years for the ATB).
6	For gas resources, the book life Evergy uses is longer than industry-standard
7	values (41.93 years for Evergy vs. 30 years for the ATB). This makes wind
8	resources appear more costly and gas resources less costly in Evergy's modeling
9	than they would be under industry-standard book life assumptions.

Plant	Book Life (Years)	Annual Depreciation (%)
Coal	33.9	2.95%
Gas	41.93	2.38%
Wind	19.72	5.07%
Solar	30	3.33%
Storage	20	5%
Nuclear	50.16	1.99%

Table 6. Book life assumptions for new resources

11 Source: Company response to KIC 5-5.

12 The Company's assumptions around gas price volatility, capacity accreditation,

13 and book life together result in natural gas resources appearing less costly, less

14 risky, and more valuable than they would under more reasonable industry-

- 15 standard assumptions. Evergy's use of these assumptions biases the model in
- 16 favor of new gas resources.

### 1QDid Evergy allow the model to optimize coal-to-gas conversions and coal2retirement dates?

3 Α No. Evergy hard-coded the coal retirement and conversion dates in the model, 4 meaning that it programmed them into the model as inputs, rather than allowing 5 the model to economically optimize when to retire or convert the units. Every determined what retirement dates to program into the model based on an analysis 6 that it completed for its 2023 IRP and re-used in its 2024 IRP.<sup>51</sup> Knowing how 7 much CCGT costs have risen since that time, Evergy should reevaluate whether 8 9 an additional coal-to-gas conversion could enable it to avoid investment in the Viola and McNew units, given how expensive they are, and procure alternate, 10 11 lower-cost resource additions instead.

12 The retiring coal units also provide an opportunity for Evergy to reuse its existing 13 interconnection rights to add battery storage, which would help reduce project 14 lead time and cost. Evergy estimates that batteries added at a site where the 15 Company already has interconnection rights (such as the site of a retiring coal 16 unit) could have lead times \*\*

17 for resources without existing interconnection rights.<sup>52</sup>

### 18 Q How would Evergy's modeling have changed if it corrected the shortcomings 19 discussed above?

A If Evergy had fully accounted for the risks of future environmental regulation and
 fuel price volatility, accurately accredited new gas resources, and analyzed
 alternative resource options such as batteries located at existing coal sites or coal to-gas conversions, it is likely that the model would not have selected the 2030

<sup>&</sup>lt;sup>51</sup> Company response to CURB-5.

<sup>&</sup>lt;sup>52</sup> Confidential Company response to CURB-8.

1			CCGT. While Evergy has demonstrated that its proposed resource additions are
2			generally consistent with its updated modeling (although Viola comes online one
3			year earlier than needed), it has not shown that its preferred portfolio is
4			"reasonable, reliable, and efficient" as the predetermination statute requires.
5		iii.	Evergy should issue an all-source RFP to see if it can reduce or eliminate its
6			need for the two new CCGTs
7	Q		Overall, are the Viola and McNew plants likely the lowest cost and lowest
8			risk resource additions available to Evergy Kansas Central?
9	A		No. Moving ahead with the Viola and McNew plants will lock ratepayers into
10			paying for costly assets that will expose them to future risks. It does not make
11			sense to invest in these assets given how much gas resource costs have escalated
12			over the past year. Instead, The Company should work to procure alternative
13			resource options, such as battery or CT capacity paired with solar and wind.
14	Q		How should Evergy identify alternative resource additions?
15	A		Evergy should issue another All-Source RFP as soon as possible and should
16			evaluate responses based on the grid services each resource would provide (e.g.,
17			firm capacity or low-cost energy), not based on resource type. Evergy noted in
18			discovery **
19			
20			** <sup>53,54</sup> This is not best practice—Evergy should consider
21			batteries as an alternative to gas resources if the batteries can provide the same

 <sup>&</sup>lt;sup>53</sup> Confidential Evergy response to CURB-13.
 <sup>54</sup> Confidential Evergy response to CURB-20.

firm capacity that a gas resource would. Issuing another RFP will also act as a
 valuable signal to the market that Evergy is interested in procuring battery
 capacity, encouraging developers to site more projects within Evergy's service
 area.

### 5 Q Does Evergy Kansas Central have enough time to procure alternative 6 resource additions?

7 Α Yes. EKC's updated modeling does not add CCGT capacity until 2030, so the 8 Company still has five years to seek alternative capacity resources. It does not 9 need to rush to build these expensive CCGTs now. Evergy estimates that its project lead time for new resources is generally **\*\*\*\*\*\*\*\*\*\*\*\***\*\*, but it can add 10 certain resources, such as batteries at an existing interconnection site, in \*\* 11 \*\*<sup>55</sup> In contrast to the CCGTs, battery resources can be procured 12 13 incrementally, allowing Evergy to take advantage of future cost declines and ramp 14 up its level of procurement when costs fall. This will also help protect Evergy 15 ratepayers from cost increases caused by market disruptions, including the threat 16 of aluminum and steel tariffs that the Company discusses in its supplemental testimony.<sup>56</sup> 17



<sup>&</sup>lt;sup>55</sup> Confidential Company response to CURB-8.

<sup>&</sup>lt;sup>56</sup> Supplemental testimony of Humphrey at 8.
1	**
2	**
3	Evergy should also continue to monitor the cost of new wind (including PPA
4	wind) available to it. Wind has historically been an economic resource addition
5	and currently comprises approximately 35 percent of Evergy Kansas Central's
6	average hourly generation mix. <sup>57</sup> However, based on its 2023 RFP results, Evergy
7	projects that wind capital costs **
8	result, the 2024 IRP preferred plan includes only limited wind additions over the
9	study period, <sup>59</sup> so existing PPAs expire without being replaced, and wind
10	comprises only 14 percent of the average hourly resource mix by 2043. <sup>60</sup> This is a
11	break from historical trends, and Evergy should keep an eye on the market to see
12	if prices fall back to their <b>*********</b> ***************************
13	wind capacity again.

<sup>&</sup>lt;sup>57</sup> Evergy 2024 IRP, workpaper "KSC AAAB Plan.xlsx."

 <sup>&</sup>lt;sup>58</sup> Confidential Company response to CURB-6, "QCURB-6\_CONF\_New Resource Cost and Performance Planning Data.xlsx."
 <sup>59</sup> 2024 Integrated Resource Plan, Volume 6 at 2.

<sup>&</sup>lt;sup>60</sup> Evergy 2024 IRP, workpaper "KSC AAAB Plan.xlsx."



<sup>&</sup>lt;sup>61</sup> Confidential Company response to CURB-3.

<sup>&</sup>lt;sup>62</sup> Confidential Evergy response to KCC-2R2, "QKCC-2R2\_CONF\_Active Projects List.xlsx."

<sup>&</sup>lt;sup>63</sup> Confidential Evergy response to KCC-2R2, "QKCC-2R2\_CONF\_Active Projects List.xlsx."



Confidential Figure 5. Evergy Kansas Central pipeline of prospective large load customers \*\*

# 6 Q How are large load additions relevant to the Company's predetermination 7 requests this docket?

Source: Confidential Evergy response to KCC-2R2, "QKCC-2R2\_CONF\_Active Projects List.xlsx."

8 A To the extent the Panasonic facility adds to Evergy Kansas Central's capacity need, it is part of the reason Evergy Kansas Central is requesting approval for the 9 10 Viola and McNew plants. The increased resource needs attributable to the facility 11 can be seen by comparing Evergy Kansas Central's preferred portfolio in the 2023 12 IRP to the 2024 IRP, which was the first IRP to include the Panasonic facility. 13 The preferred portfolio from the 2023 IRP included 1,050 MW of solar and 1,042 MW of gas additions between 2026 and 2032, while the 2024 IRP included the 14 same amount of solar and an additional 258 MW of gas capacity.<sup>64</sup> The Company 15 16 explains that this acceleration of resource additions was "driven largely by higher

12

3 4

5

<sup>&</sup>lt;sup>64</sup> Direct testimony of VandeVelde at 15.

1		forecasted load growth from economic development" in the 2024 IRP,65
2		presumably a reference to the <b>********</b> ****************************
3		Panasonic facility.
4		While Evergy Kansas Central currently has enough resources to serve the
5		Panasonic facility's needs (given that the facility is scheduled to come online in
6		spring 2025 <sup>66</sup> ), the incremental load from the facility does increase Evergy
7		Kansas Central's need to add capacity in the future as its coal plants retire,
8		whereas in the absence of the load, Evergy Kansas Central would have had excess
9		capacity and could have retired the coal capacity with fewer replacement resource
10		additions. In addition, the size of The Company's pipeline of large load customers
11		suggests that the Panasonic facility is the first of many potential future load
12		additions (see Confidential Figure 5). Establishing clear processes for the addition
13		of these customers now will protect Evergy's existing ratepayers going forward.
14	Q	Is constructing new CCGTs an effective method for serving prospective large
15		load customers?
16	Α	No. Many of these customers have clean energy commitments and are not
17		interested in being served with fossil generation. Evergy is aware of this and
18		**
19		67

65 Ibid.

<sup>&</sup>lt;sup>66</sup> Direct testimony of Ives in KCC Docket No. 25-EKME-315-TAR at 13, ln 19-21.

<sup>&</sup>lt;sup>67</sup> Confidential Company response to NEE-6.
<sup>68</sup> Confidential Company response to CURB-32.

1		**
2		**69
3		Even customers without explicit clean energy commitments will be more likely to
4		locate in Kansas if there is consistently low-cost electricity available to them.
5		Industry trends suggest that clean energy resources—including solar, wind, and
6		battery storage—will be the lowest cost source of energy going forward, not gas
7		resources.
8	Q	What risks do prospective large load customers pose to Evergy's existing
9		ratepayers?
10	Α	Load growth from large load customers, and in particular data centers, poses several
11		risks to all other ratepayers-both in scenarios where the load materializes, as well
12		as in scenarios where it does not.
13		First, there is the risk of Evergy building out large amounts of resources for
14		prospective customer load that may not materialize fully or at all. If Evergy builds
15		new generation resources for load that does not materialize then all ratepayers are
16		left paying for unneeded assets.
17		Second, even if the load does materialize, large generation and transmission
18		build-out can increase system costs for all ratepayers under current tariff
19		structures. This can result from increases in energy and capacity market prices,
20		additional transmission and gas infrastructure investments, and general cost-

<sup>&</sup>lt;sup>69</sup> Confidential Company response to NEE-6.

shifting if rates and tariffs are not set up correctly to have data center customers
 cover their full incremental cost of service.<sup>70</sup>

## 3 Q What is Evergy's current process for deciding which large load customers 4 should be included in its load forecast?

5 Α Evergy does not have a well-defined process for deciding which large load 6 customers to include in its resource planning load forecast. The Company divides 7 prospective customers into five categories based on the level of assurance that the 8 project will move forward: Building, Ready to build, Actively Working, and In Queue.<sup>71</sup> Evergy states that "only projects that have committed to locating in 9 Evergy's service area" are included in the load forecast that it uses in its IRP.<sup>72</sup> 10 However, Evergy does not appear to have a clear set of criteria for determining 11 12 whether a customer has made this commitment. Evergy states that if it \*\* 13 14

15
16
17 customer to take a certain level of electricity annually and is generally an

<sup>18</sup> appropriate milestone for constructing generation. Evergy should establish clear

<sup>&</sup>lt;sup>70</sup> A new large load customer's incremental cost includes (1) the increase in variable costs as a result of serving the load, (2) the new customer's share of the existing system's fixed costs, and (3) any new system costs (e.g., investment in new generation assets) incurred to serve the load.

<sup>&</sup>lt;sup>71</sup> Company response to CURB-4.

<sup>&</sup>lt;sup>72</sup> Company response to CURB-4.

<sup>&</sup>lt;sup>73</sup> Confidential Company response to CURB-33.

<sup>&</sup>lt;sup>74</sup> Confidential Company response to CURB-33.

criteria for which prospective customers it includes in its load forecast and should
 only procure resources for projects that have a fully executed ESA.

## 3 Q How can tariff structure protect Evergy's ratepayers from the risks posed by 4 large load additions?

- 5 A Evergy can establish tariffs designed for large load additions that protect existing 6 ratepayers from, at a minimum, incurring any incremental cost resulting from the 7 new large load customers. The Commission cannot protect existing ratepayers and 8 design fair and effective tariffs if Evergy does not first understand the incremental 9 costs and risks of serving new large load customers.
- 10 It is important the Evergy ensures tariffs are in place before resource procurement 11 for these customers takes place. A customer's willingness to enter such a tariff 12 should be a precursor for Evergy planning to serve that large load as part of its 13 resource plan. If a data center customer is not willing to receive service under a 14 tariff that shifts some of the cost and risk to the data center customer, rather than 15 placing it all on existing ratepayers, then Evergy should not be building 16 generation and transmission to meet that customer's demand. Well-designed 17 tariffs protect existing ratepayers from high system costs and incent the data 18 center customers to be more flexible.

At a minimum, understanding the full incremental system cost being imposed by new load is an important question in this docket, because it informs the costs that prospective customers will need to commit to pay when they sign ESAs. Without knowing what they will be charged, prospective customers cannot commit to signing an ESA, and Evergy will not know what load to plan for. Rate design for large load customers will be addressed in Kansas Corporation Commission

43

## Docket No. 25-EKME-315-TAR, Evergy's concurrent Large Load Power Service Rate Plan docket.

#### 3 Q What are some features common among large load tariffs?

4 **A** Some general principles for data center tariffs include:

- Requirement that load over a certain MW threshold—as measured at an
  individual facility, or across multiple facilities owned by the same company—
  be on a specific data center or similar large load customer tariff;
- Commitment to pay at a minimum the cost of incremental generation not
  needed "but for" the data center for a substantial portion of the asset life, and in
  some cases including an additional risk premium;
- Minimum take requirements/minimum monthly demand based on contracted
   capacity, minimum contract term (years), and exit fees;
- Incentive for demand response, demand flexibility, interruptible load, and
   energy efficiency, for facilities where these measures are feasible;
- Commitment to develop renewable energy resources consistent with
  jurisdictional goals as well as the customer's corporate commitments (e.g.,
  through clean energy tariffs);
- Payment of incremental costs to build out distribution, transmission, and firm
  gas infrastructure; and
- Additional investment in community, economic development, and lowincome programs.

Several recent industry and expert reports discuss these and other principles in
 more detail.<sup>75</sup>

## 3 Q Why is it important that Evergy avoid delaying the planned retirements of its 4 coal units?

- 5 Α Another potential risk associated with large load additions is that they may cause 6 Evergy to delay the retirement of its coal units. Evergy appears to be considering 7 this option, commenting that, "No final determinations have been made with 8 regard to retirements, and future IRPs will continue to evaluate the timing of retirements given changing planning dynamics."<sup>76</sup> Evergy also notes that even for 9 the coal retirements included its most recent preferred plan, it "maintains the 10 flexibility to modify the retirement date if future expectations change."77 Most of 11 12 the Company's planned retirement dates are not locked in. Based on trends I am 13 seeing elsewhere, I am concerned that they could change, especially with the 14 addition of more large load customers to the Company's base load forecast.
- Evergy's current planned retirement dates for its coal plants are based on their high operations and maintenance costs relative to the cost of building new resources.<sup>78</sup> However, if Evergy is unable to cost-effectively bring new resources online within the timeframe required to serve new load, it may turn to its legacy coal plants instead and delay retiring the units. The problem with this approach is

<sup>&</sup>lt;sup>75</sup> See, e.g., Sherwood, Stacy, Review of large load tariffs to identify safeguards and protections for existing ratepayers. Energy Futures Group prepared on behalf of Earthjustice. January 28, 2025; Winson, John D., Zimmerman, Zach, and Gramlich, Rob. Strategic industries surging: driving US power demand. Grid Strategies. December 2024.

<sup>&</sup>lt;sup>76</sup> Company response to KIC-2-5.

<sup>&</sup>lt;sup>77</sup> Company response to KIC-2-2.

<sup>&</sup>lt;sup>78</sup> Company response to CURB-5.

that new load does not change the cost of operating the coal units, and continued
reliance on coal to serve the new load will drive up total system costs. Absent
action by the Commission to ensure that the costs are fully allocated to the new
customers, existing customers will be subsidizing the cost to maintain the legacy
coal assets that, but for the new load, would be retired.

#### 6 Q What risks does Evergy face from continued reliance on coal assets?

7 Α As with gas assets, coal units pose risk to ratepayers related to fuel price volatility. 8 The coal market has seen dramatic price volatility in some parts of the United States over the past few years.<sup>79</sup> There have also been labor challenges both at the mines 9 and the railroad companies that transport the coal, as coal workers demand better 10 11 pay and have more options in the labor market. Additionally, as coal plants across 12 the United States retire and the demand for coal decreases, coal companies could 13 consolidate. Concentration of the coal supply among fewer companies means less competition, which in turn can lead to higher coal prices.<sup>80</sup> 14

- 15 Electric power sector coal consumption was down in 2023 relative to prior years
- 16 and accounted for around 15 percent of generating capacity and 16 percent of
- 17 total utility-scale generation.<sup>81</sup> Preliminary data from the U.S. Energy Information

<sup>&</sup>lt;sup>79</sup> U.S. Energy Information Administration, "Coal Markets." Available at https://www.eia.gov/coal/markets/.

<sup>&</sup>lt;sup>80</sup> Duke Energy. "Coal Retirement Analysis," available at: https://www.dukeenergy.com/-/media/pdfs/our-company/carolinas-resource-plan/appendix-f-coalretirement-study.pdf?rev=4c1c4df441a14248b2e23ba0368d9855.

<sup>&</sup>lt;sup>81</sup> U.S. Energy Information Administration, "Electricity Explained." Available at https://www.eia.gov/energyexplained/electricity/electricity-in-the-us-generation-capacity-and-sales.php.

Administration indicates that this trend continued in 2024.<sup>82</sup> This is novel because 1 coal's national market share of electric generation had been around 20 percent 2 3 each month between 2020–2022; and prior to 2020, coal had never comprised less than 20 percent of the market in any month.<sup>83</sup> Additionally, risks from increased 4 environmental regulation, as I will discuss next, could result in higher costs and 5 higher risks. Higher risk impacts not just resource planning economics but 6 company risk profiles which can lead to downgraded credit ratings, and that can 7 8 impact access to capital.

9 In addition, continued reliance on coal assets poses substantial risk of future environmental compliance costs. For example, Jeffrey units 2 and 3 will need to 10 install "high-cost" selective catalytic reduction equipment if they continue 11 operating beyond the early- to mid-2030s.<sup>84</sup> The 111 Rules place additional 12 13 limitations on the future operation of the coal units, requiring them to (1) retire before January 1, 2032, (2) retire before January 1, 2039 and co-fire with at least 14 40 percent gas starting on January 1, 2030, or (3) install carbon capture and 15 storage with at least a 90 percent capture rate by January 1, 2032.<sup>85</sup> Even if the 16 details of the 111 Rules change in the future, the coal units will continue to face 17 18 pressure from carbon regulations over the coming years. Every can protect its 19 ratepayers from unexpected cost increases by procuring zero-emissions replacement resources that enable it to retire the coal units on schedule. 20

<sup>&</sup>lt;sup>82</sup> U.S. Energy Information Administration, "Form EIA-923." Available at https://www.eia.gov/electricity/data/eia923/.

<sup>&</sup>lt;sup>83</sup> Institute for Energy Economics and Financial Analysis, "Coal Use at U.S. Power Plants Continues Downward Spiral; Full Impact on Mines to be Felt in 2024," (Nov. 2, 2023), available at: https://ieefa.org/resources/coal-use-us-power-plants-continues-downwardspiral-full-impact-mines-be-felt-2024.

<sup>&</sup>lt;sup>84</sup> Company response to CURB-30.

<sup>&</sup>lt;sup>85</sup> 89 Fed. Reg. 38,798 (May 9, 2024).

# 1QIn conclusion, what are your recommendations regarding Evergy Kansas2Central's requests for predetermination of ratemaking treatment in this3docket?

- 4 Α I recommend that the Commission should not approve Evergy Kansas Central's 5 requests for predetermination of ratemaking treatment for its acquisition of a 50 6 percent share of Viola and 50 percent share of McNew. Moving ahead with these CCGT plants will lock ratepayers into paying for costly assets that will expose 7 them to future risks from fuel price volatility and environmental regulation. In the 8 9 context of the rapid escalation in gas resource costs over the past year, Evergy has 10 not demonstrated that a resource plan involving these CCGT additions is still 11 "reasonable, reliable, and efficient," as the predetermination statute requires. 12 Instead of moving ahead with the CCGT additions, Evergy should work to 13 procure alternative resource options, such as battery or CT capacity paired with 14 solar and wind. The Company's acquisition of Kansas Sky is a positive step in 15 this direction; in contrast to Viola and McNew, Kansas Sky is a cost-effective 16 resource addition that is likely to benefit ratepayers going forward.
- 17 **Q** Does this conclude your testimony?
- 18 **A** Yes.

# **VERIFICATION**

# COMMONWEALTH OF MASSACHUSETTS

# COUNTY OF MIDDLESEX

SS:

I, Lucy Metz, being duly sworn upon her oath, deposes and states that she is a consultant for the Citizens' Utility Ratepayer Board, that she has read and is familiar with the foregoing *Direct Testimony*, and that the statements made therein are true and correct to the best of her knowledge, information, and belief.







Synapse Energy Economics I 485 Massachusetts Avenue, Suite 3 I Cambridge, MA 02139 Imetz@synapse-energy.com

#### **PROFESSIONAL EXPERIENCE**

**Synapse Energy Economics Inc.**, Cambridge, MA. *Associate* April 2023 – Present; *Research Associate*, July 2022 – April 2023

- Provides expert research, analysis, and deliverables on energy-sector issues, including electric utility resource planning and power plant economics, building decarbonization, industrial sector emissions, and state and local climate policy
- Supports the development of testimony and comments in integrated resource planning dockets, rate cases, certificates of need, and environmental compliance investment dockets across the country
- Conducts analysis using Synapse's Building Decarbonization Calculator (BDC), a stock turnover model that calculates the emissions and energy impacts of heat pump adoption
- Produces data visualization tools in R, including interactive webtool of U.S. industrial emitters
- Assists with power sector dispatch modeling using EnCompass

**Laboratory of Dr. Alexander Barron**, Department of Environmental Science and Policy, Smith College, Northampton, MA. *Research Assistant*, June 2020 – May 2022

- Co-authored paper on carbon neutrality initiatives in higher education
- Designed data visualization and analysis for USREP-ReEDS modeling of Clean Air Act policy
- Calculated CO<sub>2</sub> emissions reductions achievable under Massachusetts climate legislation and drafted white paper with results

**Co-Equal**, Washington, D.C. *Policy Intern*, February 2021 – March 2022.

- Performed analysis on a wide range of policy topics requested by members of Congress
- Finalized economic modeling study for public release and presented results
- Coordinated with research team at MIT and Co-Equal to meet policy-relevant deadlines

#### EDUCATION

Smith College, Northampton, MA

Bachelor of Science in Engineering Science, Magna Cum Laude with Highest Honors, 2022

#### SKILLS

Computer: Excel, R, EnCompass, MATLAB, Mathematica, ENERGY STAR Portfolio Manager

Languages: Spanish (proficient)

#### TESTIMONY

**Public Service Commission of Wisconsin (Docket No. 6690-UR-128)**: Surrebuttal testimony of Lucy Metz in the matter of the Application of Wisconsin Public Service Corporation for Authority to Adjust Electric and Natural Gas Rates. On behalf of Sierra Club. September 18, 2024.

**Public Service Commission of Wisconsin (Docket No. 6690-UR-128)**: Direct testimony of Lucy Metz in the matter of the Application of Wisconsin Public Service Corporation for Authority to Adjust Electric and Natural Gas Rates. On behalf of Sierra Club. August 19, 2024.

**Georgia Public Service Commission (Docket No. 55378)**: Direct Testimony of Devi Glick and Lucy Metz in re: Georgia Power Company's 2023 Integrated Resource Plan Update. On behalf of Sierra Club. February 15, 2024.

#### PUBLICATIONS

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DeLeon, S., K. Takahashi, E. Carlson, A. S. Hopkins, S. Kwok, J. Litynski, C. Mattioda, L. Metz. 2024. *Minnesota Building Decarbonization Analysis: Equitable and cost-effective pathways toward net-zero emissions for homes and businesses.* Synapse Energy Economics for Clean Heat Minnesota.

Shenstone-Harris, S., A. Zeng, L. Metz, M. Whited. 2024. *On the Road to Fleet Electrification: A Framework for Estimating Distribution System Impacts of Medium- and Heavy-Duty Vehicle Electrification.* Synapse Energy Economics for Advanced Energy United.

Eash-Gates, P., **L. Metz**, K. Schultz, S. Kwok, A. Hopkins. *Connecticut Comprehensive Energy Strategy: Buildings White Paper*. Prepared by Synapse Energy Economics for Connecticut Department of Energy and Environmental Protection. Forthcoming.

Eash-Gates, P., L. Metz, S. Kwok, K. Schultz, K. Takahashi. *Pathways for Connecticut Building Decarbonization: Analysis of Thermal Decarbonization Scenarios Aligned to the Global Warming Solutions Act.* Prepared by Synapse Energy Economics for Connecticut Department of Energy and Environmental Protection. Forthcoming.

**Metz, L.**, A. Napoleon, P. Eash-Gates. *Memo: Equity Metrics for Building Thermal Decarbonization in Connecticut.* Prepared by Synapse Energy Economics for Connecticut Department of Energy and Environmental Protection. Forthcoming.

**Metz, L.**, E. Carlson, O. Griot. 2023. *Methane Waste and Pollution State Factsheets*. Synapse Energy Economics for the Environmental Defense Fund.

Eash-Gates, P., O. Griot, A. Hopkins, **L. Metz**, E. Sinclair, J. Smith. 2023. *Coming Clean on Industrial Emissions: Challenges, Inequities, and Opportunities in U.S. Steel, Aluminum, Cement, and Coke.* Prepared by Synapse Energy Economics for Sierra Club.

Frost, J., P. Knight, S. Sharaf, **L. Metz**, and S. Kwok. 2023. *RGGI's Economic Benefits for Pennsylvania: Exploring the benefits of the Regional Greenhouse Gas Initiative*. Prepared by Synapse Energy Economics for Evergreen Collaborative.

**Metz, L.**, M. Whited, P. Rhodes, E. Carlson. 2023. *Distribution System Investments to Enable Mediumand Heavy-Duty Vehicle Electrification.* Synapse Energy Economics for the Environmental Defense Fund.

Knight, P., J. Frost, T. Fitch, E. Sinclair, J. Tabernero, O. Griot, B. Havumaki, J. Smith, **L. Metz**, S. Chavin. 2023. *TVA's Clean Energy Future: Charting a course to decarbonization in the Tennessee Valley*. Synapse Energy Economics for GridLab and Center for Biological Diversity.

Yuan, M., A. Barron, N. Selin, P. Picciano, **L. Metz**, J. Reilly, and H. Jacoby. 2022. "Meeting U.S. greenhouse gas emissions goals with the international air pollution provision of the Clean Air Act." *Environmental Research Letters* 17 (5): 054019.

Barron, A., M. Domeshek, **L. Metz**, L. Draucker, and A. Strong. 2021. "Carbon neutrality should not be the end goal: Lessons for institutional climate action from U.S. higher education." *One Earth* 4 (9): 1248–1258.

Longnecker, E., **L. Metz**, R. Miller, and A. Berke. 2021. "Probing Liquid–Liquid Phase Separation in Secondary Organic Aerosol Mimicking Solutions Using Articulated Straws." *ACS Omega* 6 (49): 33436–33442.

Figueroa, L., M. Blinder, C. Grincavitch, A. Jelinek, E. Mann, L. Merva, **L. Metz**, A. Zhao, R. Irwin, S. McArt, and L. Adler. 2019. "Bee pathogen transmission dynamics: Deposition, persistence and acquisition on flowers." *Proceedings of the Royal Society B*, 286: 20190603.

Resume updated January 2025

#### **REFERENCED DATA REQUESTS**

CURB-3*	CURB-26
CURB-4*	CURB-29
CURB-5	CURB-30
CURB-6*	CURB-32*
CURB-7	CURB-33*
CURB-8	KCC-1R
CURB-9	KCC-2R2*
CURB-10	KCC-11
CURB-12	KCC-45*
CURB-13	KIC-1-14
CURB-15	KIC-2-2
CURB-18	KIC-2-5
CURB-20	KIC-5-5
CURB-24*	KIC-6-1
CURB-25	NEE-6*

\* Denotes Confidential



Requestor Astrab Joseph -Response Provided February 03, 2025

Question:CURB-3 CONFIDENTIAL

Regarding Witness VandeVelde's workpaper titled "Conf. EKC Plan Selected with Updated NG Costs.xlsx":



<u>RESPONSE</u>: (do not edit or delete this line or anything above this)

#### Confidentiality: CONFIDENTIAL

Statement: (1) Material or documents that contain information relating directly to specific customers

**Response:** 







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).



Requestor Astrab Joseph -Response Provided January 30, 2025

Question:CURB-4 CONFIDENTIAL

Regarding the attachment that Evergy provided in response to KIC-1-17, titled

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<u>RESPONSE</u>: (do not edit or delete this line or anything above this)

#### Confidentiality: PUBLIC

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

#### **Response:**

4a) Building- These are projects that have active building happening on site. Generally, but not always, these are projects that have been publicly announced. This group is moving forward and 100% certain.



Ready To Build- These projects have a plan to serve from Evergy and can commence building. Sometimes these projects are waiting for additional pieces like funding or authorization from a parent company. This group is just waiting on final approvals from their own internally- making it a high level of certainty but not 100%.

Actively Working- There are 4 projects at a time that are actively being worked on by the Evergy team to understand the needs of the project and design a solution. This often involves Transmission, Substation and Distribution groups. In addition, we are generally meeting with them to help them understand what our rate range is likely to be. This is where we are working out any issues. The certainty here is more than 50% but that's subject to working through the details of the project.

In Queue- These are projects that have already had a high-level feasibility study done to determine whether their project is something they want to pursue further. To get into queue, each project needs four things. A signed letter of agreement, a \$200,000 deposit, a preliminary site plan and proof of site control. These projects then queue up in order to await going into the actively working group mentioned above. Certainty is lower here, but given that they have put a \$200,000 deposit down shows they are very serious.

Preliminary- These projects have received a high-level analysis of their project. Once received the project then determines if it want to enter queue. This group has a much lower certainty as they have not yet committed monetary resources to the project.'

4b) Only projects that have committed to locating in Evergy's service area would be included in the load forecast. This would either be done through a projection of the new load or accounted for in the economic forecast depending on the size of the load.

4c) Only projects that have committed to locating in Evergy's service area would have been accounted for in the IRP. Only Project 2 from this list was included in EKC's 2024 IRP load. Speculative load that may or may not locate in the service territory would not be accounted for in the load forecast IRP.

4d) Only Project 2 was include in the EKC IRP analysis submitted in this docket. New smaller loads would have been accounted for through the economic growth that is included in the load forecast. The projects listed in "Q1-17\_CONF\_Active Projects List.xlsx" are only in load forecast if those projects have committed to one of Evergy's service areas.

#### **Information provided by:**

Jason Klindt, Sr. Director of External Affairs Albert Bass, Sr. Manager Energy Forecasting and Analytics Cody VandeVelde, Sr. Dir. Strategy & Long-term Planning

#### Attachment(s):

None



#### 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).



Requestor Astrab Joseph -Response Provided February 03, 2025

Question:CURB-5

With reference to the direct testimony of Witness VandeVelde at 12, which discusses the plant retirements and gas conversions included in the 2024 IRP:

a. Please explain how Evergy chose the coal retirement and conversion dates that it included in the preferred portfolio from its 2024 IRP.

b. Please provide all documents containing analysis, presentations, or reports regarding the retirement or conversion of Lawrence 4 and 5, Jeffrey 1–3, and LaCygne 1 and 2.

#### 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) The Company tested retirement dates based on times when large, fixed cost spends could be avoided by retirement. This is consistent with the logic of picking a least-cost resource plan by determining whether new resources can meet customer needs with lower costs than the going-forward costs of keeping existing resources. The Company also considered stakeholder requests to study the impact of changes to retirement decisions. As we prepared the 2024 IRP, none of the factors that resulted in Evergy choosing the planned retirements in the 2023 IRP changed. As a result, Evergy chose to keep constant the planned retirement dates for the base 2024 IRP Preferred Plan.

Factors that have been considered, dating back to the 2021 Triennial IRPs, generally include the cost and performance risk associated with extending the life of asset beyond expected useful life or book life, the expectation of needing to install Best Available Control Technology in order to continue to operating units beyond the early-to-mid-2030's, the probability of Federal policy that could force the closure of coal facilities, and the economic viability of continuing to run the plants while considering each of these factors versus alternatives.



B) Evergy uses its IRPs to evaluate, present, and report the analysis of retirements and conversions of these plants. While the IRP's have retirement discussion throughout, please specifically reference Volume 5 Section 7 of EKC's 2024 IRP. Evergy files work papers in the IRP in order to detail and support the analysis of each alternative resource plan that evaluate different retirement scenarios.

#### 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).



Requestor Astrab Joseph -Response Provided January 31, 2025

**Ouestion**:CURB-6

With reference to the direct testimony of Witness VandeVelde at 24, which discusses the "updated IRP analysis" that Evergy completed for this docket:

a. For each of the primary resource options that Evergy included in its 2024 IRP (wind, solar, battery storage, CT, CC, etc), please provide the following data:

i. Overnight capital cost (\$/kW) in each year 2024–2043
ii. Fixed operations and maintenance in \$/kW-year
iii. Non-fuel variable operations and maintenance in \$/MWh
iv. Fuel costs
v. Heat rate if applicable
vi. Capacity factor if applicable
vii. Size of each unit in MW
viii. Annual build limits for each year 2024–2043 in MW
ix. First year the resource is available

b. Please specify which of the values from part (a) Evergy updated for this docket, and provide the updated values.

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

#### **Confidentiality:** CONFIDENTIAL

**Statement:** (3) Market analyses or other market-specific information relating to services offered in competition with others.

**Response:** 



for new resource capacity factors in IRP preferred plan.

#### **Information provided by:**

Greg Reesor, Lead Energy Resource Analyst

#### 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).



Requestor Astrab Joseph -Response Provided February 03, 2025

#### **Question:**CURB-7

With reference to the direct testimony of Witness VandeVelde at 19, "These growing needs are created by the revised resource adequacy requirements established by Southwest Power Pool, Inc. ("SPP") attributable to increased reserve margin requirements and changes in capacity accreditation standards..."

a. Please explain how Evergy anticipates that its reserve margin will change as a result of SPP's revised resource adequacy requirements.

b. Please explain how Evergy anticipates that the capacity accreditation of its resources will change as a result of SPP's revised resource adequacy requirements.

#### 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. The increasing planning reserve margin (PRM) requirement at SPP is expected to increase the future reserve margin carried at the Evergy utilities. Just a couple of years ago the SPP summer PRM requirement was 12% and in 2026 the requirement will be 16%. Indications are that the 2029 summer PRM will increase again. Additionally, the SPP has implemented a winter PRM requirement of 36% starting in winter of 2026. All these changes are expected to drive a need for incremental generation capacity needed to adequately cover the SPP requirements compared to a status quo scenario where SPP had not revised, and increased, PRM requirements.
- b. There are multiple SPP changes that Evergy expects to impact the capacity accreditation of existing and new generation resources, including: Performance Based Accreditation (PBA), Effective Load Carrying Capability (ELCC), and Fuel Assurance. PBA and Fuel Assurance impact thermal and other conventional generating resources, whereas ELCC impacts wind, solar, and energy storage resources. Each of these changes attempts to allow SPP to have a more accurate understanding of which resources will be available when needed based on past performance. PBA is expected to evaluate each unit's performance over a multi-year period and decrement accredited capacity when the unit did not perform during times of most need. Generally, the implementation of PBA is



expected to decrease the amount of accredited capacity for existing conventional generation resources. Similarly, ELCC implementation will decrease the amount of accredited capacity for Evergy's existing renewable resources. Please see the 2024 IRP Volume 5 Section 2 for more information on Evergy's expectations for resource adequacy requirements.

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).



Requestor Astrab Joseph -Response Provided January 28, 2025

<u>Question</u>:CURB-8 How long does it take for Evergy to bring online the following types of resources?

- a. PPA solar, wind, or BESS -- both paired and standalone
- b. Self-build solar
- c. Self-build wind
- d. Self-build BESS
- e. Self-built CT
- f. Self-built CC

<u>RESPONSE</u>: (do not edit or delete this line or anything above this)

#### **Confidentiality:** CONFIDENTIAL

**Statement:** (3) Market analyses or other market-specific information relating to services offered in competition with others.

**Response:** 

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Information provided by: 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).



Requestor Astrab Joseph -Response Provided January 31, 2025

#### **Question:**CURB-9

Regarding the availability of gas at the Viola and McNew plants:

a. Does Evergy plan to construct any additional gas pipeline(s) or expand the physical capacity of gas pipeline(s) to serve the Viola Plant? If so, please provide all documents, analyses, calculations, or presentations relating to such pipeline construction or upgrade.

b. Does Evergy plan to construct any additional gas pipeline(s) or expand the physical capacity
of gas pipeline(s) to serve the McNew Plant? If so, please provide all documents, analyses,
calculations, or presentations relating to such pipeline construction
or upgrade.

c. Please confirm that the cost estimates for the Viola and McNew plants provided in Witness Olson's exhibits JKO-6 and JKO-7 do not include gas infrastructure costs.

#### **<u>RESPONSE</u>**: (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, Evergy does not plan to construct any additional gas pipeline(s) or expand the physical capacity of gas pipeline(s) to serve the Viola Plant. Evergy has engaged interstate pipelines, and intrastate pipelines to discuss infrastructure upgrades necessary to connect the new CCGT facilities to the natural gas system. We do however anticipate the Interstate and Intrastate pipeline companies building a lateral from a mainline to the plant.
- b. No, Evergy does not plan to construct any additional gas pipeline(s) or expand the physical capacity of gas pipeline(s) to serve the McNew Plant. Evergy has engaged interstate pipelines, and intrastate pipelines to discuss infrastructure upgrades necessary to connect the new CCGT facilities to the natural gas system. We do however anticipate



the Interstate and Intrastate pipeline companies building a lateral from a mainline to the plant.

c. Correct, capital cost estimates do not include gas infrastructure costs. As stated in section VIII of Evergy Witness Olson's Direct Testimony, Evergy prefers to have the gas companies recover their investments via existing max tariff rates over a relatively short period of time (10-15 years). This will allow the customer to pay for the upgrades over time and would be similar to how firm transport is paid for today at existing sites. Firm transport costs were included in the IRP and IRP style supplemental analysis for this case.

#### **Information provided by:**

J Kyle Olson, Director – Conventional Generation Development Mauricio Guevara – 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).



Requestor Astrab Joseph -Response Provided January 28, 2025

<u>Question</u>:CURB-10 Regarding Evergy's fuel supply plan for the Viola and McNew plants:

a. Does Evergy anticipate having a firm gas contract for the two plants?

b. Please explain how the Company plans to contract for gas supply at each of the plants (e.g., hedge or spot market contract).

<u>RESPONSE</u>: (do not edit or delete this line or anything above this)

#### Confidentiality: CONFIDENTIAL

**Statement:** (3) Market analyses or other market-specific information relating to services offered in competition with others.

Respons	se:	
a.	,	
b.		
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#### Information provided by: Mauricio Guevara, Natural Gas Buyer

Attachment(s): NA



#### 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).



Requestor Astrab Joseph -Response Provided January 28, 2025

**Question**:CURB-12

With reference to the direct testimony of Witness Olson at 28, which states that Evergy is "continuously monitoring and reviewing other regulatory filings" to benchmark the reasonableness of EPC cost estimates for the CCGT plants.

a. Please provide a copy of the benchmarking data that Evergy has tracked, including any supporting workpapers with formulas intact and sources clearly identified.

<u>RESPONSE</u>: (do not edit or delete this line or anything above this)

#### **Confidentiality:** PUBLIC

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

#### **Response:**

Evergy is continuously monitoring and reviewing the following regulatory filings, as well as other new regulatory filings as they become available:

Entergy Texas Inc.'s Dispatchable Generation Resources CCN Filing: https://interchange.puc.texas.gov/search/filings/?ControlNumber=56693&UtilityType=A&Item Match=Equal&DocumentType=ALL (Please note the revised pricing provided in supplemental testimony on 12/16/2024)

2024 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company:

https://psc.ky.gov/pscecf/2024-00326/rick.lovekamp%40lge-ku.com/10182024014139/06-LGE\_KU\_2024\_IRP\_Volume\_I.pdf https://psc.ky.gov/pscecf/2024-00326/rick.lovekamp%40lge-ku.com/10182024014139/08-

LGE\_KU\_2024\_IRP\_Volume\_III.pdf

Virginia Electric and Power Company 2024 IRP: https://www.dominionenergy.com/-/niedia/pdfs/global/company/IRP/2024-IRP-w\_o-Appendices.pdf



**Information provided by:** J Kyle Olson, Director – Conventional Generation 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).


Requestor Astrab Joseph -Response Provided February 05, 2025

Question:CURB-13

With reference to the direct testimony of Witness Carlson at 18, which discusses the results of Evergy's 2023 RFP:

a. How did Evergy choose which of the responses to its 2023 RFP to shortlist?

b. Did Evergy move forward with any of the projects from the 2023 RFP? If yes, please specify which projects. If no, please explain why not.

c. Does Kansas Sky have a more favorable generation interconnection request queue position than the projects that submitted bids through the RFP?

d. Why didn't the Kansas Sky Project participate in Evergy's 2023 RFP?

<u>RESPONSE</u>: (do not edit or delete this line or anything above this)

#### Confidentiality: CONFIDENTIAL

**Statement:** (3) Market analyses or other market-specific information relating to services offered in competition with others.







**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).



Requestor Astrab Joseph -Response Provided February 20, 2025

#### **Ouestion**:CURB-15

With reference to the updated PLEXOS modeling that Evergy completed for this docket:

a. Please provide a list of every assumption that changed between the 2024 IRP and the updated modeling that Evergy completed for this docket.

b. Has Evergy produced an IRP update to share its updated modeling results with stakeholders? Has it produced any report synthesizing the results? If so, please provide the IRP update or report. If not, please explain why not.

**<u>RESPONSE</u>**: (do not edit or delete this line or anything above this)

#### **Confidentiality: PUBLIC**

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

#### **Response:**

This has already been provided in testimony. To support McNew and Viola, the preferred plan was re-run with capacity expansion changing only the installed costs, heat rate and max/firm capacity of the CC and CT resources consistent with turbine specs from the selected supplier and a cost refresh. To support Kansas Sky, more specific project information was substituted for the 150 MW of 2027 solar selected in the IRP with no other changes to the plan and the new NPVRR was calculated with the IRP endpoints.

No. The preferred plan was selected in the 2024 Triennial IRP. Evergy Kansas Central is taking steps to execute on the resource plan. The preferred plan has not changed. Evergy Kansas Central's modeling for this filing confirmed that it still needs firm dispatchable capacity additions in the next few years, consistent with the past two year's IRPs. Kansas Central is now at a critical decision point to ensure the projects proceed or it will not have them to meet the needs identified in the IRPs. Evergy Kansas Central expects to file an Annual Update in March or April 2025 with a more holistic view of all significant changes that have occurred in the past year (load forecast, reliability requirements, regulations, etc.).



# 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).



Requestor Astrab Joseph -Response Provided February 19, 2025

**Ouestion**:CURB-18

Regarding the direct testimony of VandeVelde at 23–24, which discusses the increase in capital costs for gas resources between when Evergy filed the 2024 IRP and today:

a. Please explain the drivers of the cost increase in more detail.

b. Did Evergy investigate why the cost for CC and CT costs increased significantly, while the cost of other resource types did not change? If yes, provide a summary of its findings. If no, explain why the Company conducted no such analysis.

c. Did Evergy reach out to the CC and CT manufacturers to figure out why costs have increased so much and to determine if the manufacturers see this trend as continuing or anticipate that costs will fall in the future? If yes, provide a summary of its findings. If no, explain why the Company didn't directly contact manufactures about the high costs it was being quoted.

d. Did Evergy reach out to any other regional utilities who are building new CCs and CTs to determine why their costs are lower than Evergy's?

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. The cost increases for Natural Gas fired generation have been experienced by the broader market, not just Evergy. This inflation is described in the direct testimony of Jason Humphrey, on pages 16-19 and in his Supplemental Direct testimony on pages 3-4. The most recently announced similar project that we are aware of is the Basin Electric project



which is a footnote to the Supplemental Direct testimony of Jason Humphrey at an announced price of ~\$2B per unit.

b. Indirectly yes. Evergy observed upward cost pressure on renewables in 2021, 2022, and 2023 as a result of increased demand due to the Inflation Reduction Act, Federal actions around anti-dumping and countervailing duties, anti-forced labor actions for Chinese solar supply, and COVID and post-COVID supply chains. This market escalated faster than the gas turbine market at the time mostly related in our estimation to supply and demand factors. Since our last all-source RFP occurred in 2023, our estimates largely captured this increase in the broader renewables and battery market.

However, the recent demand swell around firm-dispatchable power started in late 2022, continued in 2023 and 2024 and does not appear to have slowed down in 2025. This coincides with the timing that many utilities, including Evergy as evidenced by the siting and technology study that was kicked off in early 2023, began to study gas as it was becoming clear that SMRs, long-duration storage, and other firm dispatchable technologies were many years away from commercialization. This increase in demand for firm-dispatchable power also coincides with the timing of resource adequacy requirement increases at the RTOs and record-breaking capacity auction results in MISO and PJM. For references on the larger supply and demand forces please reference the footnotes in the direct and supplemental testimonies of Jason Humphrey.

c. Evergy has run a competitive process at every step of this project. The selection of advanced class machines was made on the anticipation of the lowest cost per kilowatt resource with the highest efficiency and the most flexibility for customers. The owner's engineer was selected through a competitive RFP, the gas turbine provider was selected from a competitive RFP to all major gas turbine suppliers, the generator-step-up transformers were selected through a competitive RFP and the EPC is being selected through a competitive RFP and the EPC is being selected through a competitive process and is striving for the best balance of cost, reliability, execution, long-term flexibility, and ability to meet market mission. The supply and demand forces affecting the market for firm-dispatchable power have caused prices to increase but, as evidenced by the recent pricing from Basin Electric and similar pricing from other referenced utilities, Evergy's prices are in line with or slightly better than the broader market today.

Due to these market-forces including supply and demand balance for energy and capacity projects, general and construction materials specific inflation, tariffs, and a competitive construction market broadly – not just in utility construction – there are strong risks for prices to continue to increase in the short to medium term. This anticipation is for both renewable and for conventional resources.

d. As stated above, Evergy's prices reflect or are slightly better than the broader market.



# Information provided by: Jason Humphrey, Vice President Development

Attachment(s): None

# 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).



Requestor Astrab Joseph -Response Provided February 19, 2025

Question:CURB-20

With reference to the direct testimony of Humphrey at 11, "Since no offers for firm dispatchable resources were received in the 2023 all-source RFP, Evergy has been self-developing the two sites..."

a. Did Evergy reach out to any developers directly to find out why they didn't respond to the RFP and submit bids for CCs of CTs?

b. Did Evergy consider serving its capacity need with battery storage resources that submitted bids in the RFP? Please explain why or why not.

<u>RESPONSE</u>: (do not edit or delete this line or anything above this)

## **Confidentiality: CONFIDENTIAL**

Statement: (5) Strategies employed, to be employed, or under consideration

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1



## 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).



Requestor Astrab Joseph -Response Provided February 24, 2025

Question:CURB-24

With reference to Witness Grace's workpaper, "CONF\_Viola and McNew CCGT\_KS Central\_Model\_10.23.24 w charts.xlsx"

a. Please confirm that the tabs "Viola CCGT 50% KS Central" and "McNew CCGT 50% KS Central" represent Evergy's most up-to-date estimate of the yearly revenue requirement associated with the Viola and McNew plants.

b. Please explain why the cost per kW shown in Cell E27 of these two tabs ("Viola CCGT 50% KS Central" and "McNew CCGT 50% KS Central") is different than the cost per kW that Witness Olson gives on pages 26–27 of his direct testimony.

c. Has Evergy prepared a version of this revenue requirement analysis that includes fuel costs? If so, please provide the analysis with

formulas intact. If not, please explain why not.

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

#### **Confidentiality:** CONFIDENTIAL

Statement: (7) Information concerning trade secrets, as well as private, technical, financial and business information







**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).



Requestor Astrab Joseph -Response Provided February 24, 2025

**Ouestion**:CURB-25

How did Evergy determine the firm capacity of each type of resource (existing thermal resources, solar, wind, storage, new CC, new CT, SMR, etc.) in its PLEXOS modeling?

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:**

For existing thermal resources, the current accreditation method is a capacity test. Evergy conducts tests every summer on the thermal resources in its fleet and submits the results to SPP. Evergy previously did not test resources in winter, and estimated their winter test values for the 2024 IRP. (Generally, natural gas turbines can generate higher output at lower temperatures). Evergy began testing all resources this winter. For both winter and summer accreditation, Evergy calculated the expected capacity loss from performance-based accreditation and applied it beginning in summer 2026. Because the calculations were preliminary and with limited data, Evergy applied an expected net accreditation loss due to PBA and the transition to ACAP reserve margins across the planning horizon. New CC, CT and SMR resources were accredited at their full capacity with the assumption that the PBA/ACAP adjustment would remain constant in the future. The calculations used for estimating the loss of accreditation due to PBA/ACAP were provided in workpapers with the IRP.

For existing renewable resources, accreditation was based on SPP calculations provided to Evergy using both the current method (2024-2025) and ELCC (2026+).

For new renewable resources, Evergy estimated winter and summer ELCC over time based on comparing the future resource mix developed in the Integrated Transmission Planning process to modeling results SPP has published showing the relationship between resource saturation and ELCC. Please see Volume 5, Section 1.5 for a discussion and graphics of ELCC assumptions. A workpaper was also provided with the IRP showing the calculations.



## 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).



Requestor Astrab Joseph -Response Provided February 24, 2025

**Question**:CURB-26

With reference to Witness VandVelde's workpaper, "Conf. EKC Plan Selected with Updated NG Costs."

a. Please confirm that the "Planbuilder," "SampleOutput," and "SampleOutput2" tabs contain the results of the updated PLEXOS modeling that the Company completed for this docket.

b. Did the Company model any other updated scenarios (besides "EKC Plan Selected With Updated Natural Gas") for this docket? If so, please provide output files analogous to "Planbuilder," "SampleOutput," and "SampleOutput2" for these 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:**

Yes, the SampleOutput and SampleOutput2 tabs contain modeling output. The Planbuilder is used for hardcoding plans into the model to run plans through the alternative future endpoints (high NG, high CO2, etc.) in the IRP modeling process.

The Company did not model other scenarios.

#### 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).



Requestor Astrab Joseph -Response Provided March 04, 2025

**Ouestion**:CURB-29

Regarding the 111 Rules for greenhouse gas emissions that EPA finalized in May 2024:

a. Please explain how Evergy represented the 111 Rules in its PLEXOS modeling for the 2024 IRP and for this docket.

b. What compliance pathway did Evergy model for:

- i. Existing coal units
- ii. New gas combined cycle units

iii. New gas combustion turbine units

c. If Evergy modeled carbon capture and storage as an option for any resources, please provide the cost assumptions that Evergy used (capital expenditures and operating costs) and specify which resources were eligible to install CCS.

d. If Evergy modeled hydrogen blending for any resources, please provide the cost assumptions that Evergy used (capital expenditures, operating costs, and fuel costs) and specify which resources were eligible to blend hydrogen.

e. How does Evergy plan to comply with the 111 Rules at Viola and McNew?

**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:**

Please see the 2024 IRP Volume 5, Section 15.1 for GHG modeling in the 2024 IRP. Evergy did not model GHG Rule compliance in this docket, but is updating its compliance plans in the upcoming IRP Annual Update for the rules finalized May 2024.

Evergy modeled "Best System of Emissions Reduction" for coal resources according to the retirement dates in the preferred plan and the expected rules as of the IRP filing. CCS on coal resources and hydrogen co-firing were not expected to be viable and were not modeled. CCS on natural gas resources was modeled as a carbon reduction strategy beginning in 2035. Tables 3



and 4 of Volume 5 have some CCS cost assumptions and more data is provided in the workpaper CONFIDENTIAL New Build CC\_CCS 2024 which was filed with the IRP. Evergy expects to comply with 111 Rules at new natural gas facilities by capping output to a 40% capacity factor and will include this as part of compliance plans.

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).



Requestor Astrab Joseph -Response Provided March 04, 2025

**Question**:CURB-30

With reference to Evergy's response to CURB-5, which discusses the process Evergy used to select the coal retirement and conversion dates in the 2024 IRP:

a. The Company's response states that, "As we prepared the 2024 IRP, none of the factors that resulted in Evergy choosing the planned retirements in the 2023 IRP changed." Did Evergy consider the 111 Rules (draft or finalized) as part of its 2024 IRP? Please explain why or why not.

b. Please elaborate on what Evergy means by "the probability of Federal policy that could force the closure of coal facilities." What policy is Evergy referring to?

c. Please elaborate on what Evergy means by "the expectation of needing to install Best Available Control Technology in order to continue operating units beyond the early-to-mid-2030s." What control technology does Evergy anticipate needing to install? Please specify which coal unit(s) would require this technology.

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

#### **Confidentiality: PUBLIC**

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

- a. Evergy considered the 111 Rules as part of the 2024 IRP. The high carbon scenario that was analyzed was expected to be similar to the carbon restrictions in the draft 111 rule based on what was known as the 2024 IRP was being drafted/prepared. The 111 rule was not finalized until after the IRP was filed, so the 2024 IRP did not explicitly consider the "final" rule.
- b. Evergy has historically modeled probabilities of different carbon constraint scenarios in its IRP analysis. With the finalization of the 111 Rules as referenced in this data request, there are now final rules that may force Evergy to cease utilizing coal as a fuel / force the



closure of coal facilities, force a blending of natural gas to operate in the medium-term before forced closure, or force a fuel conversion in order to operate the facility in the long-term.

c. Jeffrey units 2 and 3 are expected to have environmental regulations prompt the need for a relatively high-cost capital investment in selective catalytic reduction equipment.

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).



Requestor Astrab Joseph -Response Provided March 07, 2025

Question:CURB-32	
CONFIDENTIAL	
With reference to Evergy's response to CURB-3,	
15	
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<u>RESPONSE</u>: (do not edit or delete this line or anything above this)

# Confidentiality: CONFIDENTIAL

Statement: (1) Material or documents that contain information relating directly to specific customers





# **Information provided by:** Brad Lutz

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).



Requestor Astrab Joseph -Response Provided March 05, 2025

Question:CURB-33 CONFIDENTIAL

With reference to Evergy's response to CURB-4(b), which states,

a. How does Evergy determine which projects are

Please explain in detail what actions a customer must take for Evergy to make this determination.

b. Does Evergy require projects to have a signed Energy Service Agreement in place before including them in its load forecast? Please explain why or why not.

<u>RESPONSE</u>: (do not edit or delete this line or anything above this)

**Confidentiality:** CONFIDENTIAL

Statement: (5) Strategies employed, to be employed, or under consideration

a)	

# >> evergy



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).



Requestor Grady Justin -Response Provided February 17, 2025

Question:KCC-1R Regarding: Update to Plan Performance Ranking Spreadsheet

Please Provide the Following: update to this requested information when Evergy provides its supplemental filing on February 14, 2025

In the Confidential workpapers provided by Evergy, there is an excel spreadsheet named "Conf. Kansas Central Rankings and Performance Metrics 10\_31". This spreadsheet appears to be an updated version of the file "Appendix 5A Evergy Kansas Central Rankings and Performance Metrics", provided during the 2024 IRP filing, from Docket No. 24-EKCE-387-CPL, however the

spreadsheet has been updated to account for a new modeled plan, reflecting the updated costs and characteristics of Kansas Sky solar. What has not been updated in this spreadsheet is the updated

cost characteristics and cost estimates for Combustion Turbines or the updated charecersitics and cost estimates to construct a Combined Cycle Generating Unit. Please provide the following with regard to this file:

Can Evergy update in this proceeding the aforementioned spreadsheet from the 2024 IRP filing (or the one filed in this Docket with just the Kansas Sky updates) to account for the higher costs and updated characteristics of both Combustion Turbines and Combined Cycle generators? If so, please provide that update.

If this information cannot be provided, please explain why it cannot be provided.

If Evergy cannot update and provide the information as requested in No. 1 above, can Evergy provide an update to the Spreadsheet that doesn't rerun the Capacity Expansion model for each plan, but which updates the cost estimates and NPVRR calculations for each resource plan that selects and builds a Combined Cycle generation unit, to account for Evergy's most recent cost estimates of the Combined Cycle Generating Units in this Docket?

If Evergy cannot provide the documents described in No. 3 above, please explain why not.

For the data requested in No. 1 and No. 3 above, if this information is provided by Evergy, please provide an update to this requested information when Evergy provides its supplemental



filing on February 14, 2025.

<u>**RESPONSE</u>**: (do not edit or delete this line or anything above this)</u>

## **Confidentiality:** PUBLIC

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

#### **Response:**

Please see the two files attached with updated revenue requirements and rankings calculations for the ranked plans filed in the 2024 IRP. All resource plans are the same, the only change is the cost, size, and heat rates of the Combined Cycle and Combustion Turbine resources. The first file uses the updated Combined Cycle and Combustion Turbine costs from the fall filing. The second file uses the most recently updated Combined Cycle and Combustion Turbine costs included in the 2/14 supplemental filing.

## **Information provided by:**

Maxwell Griffith, Energy Resource Analyst Attachment(s):

Q\_KCC-1\_Updated Rankings Nov24 Costs Q\_KCC-1\_Updated Rankings Feb25 Costs

## 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).



Requestor Grady Justin -Response Provided March 05, 2025

Question:KCC-2R2 MONTHLY RECURRING

Regarding: Update to KIC-1-17

Please Provide the Following:

Does the Confidential spreadsheet provided in response to KIC-1-17 reflect the most current information available to Evergy with regard to the possibility of economic development and new potential customers to the Evergy service territory?

If not, please provide an update to this spreadsheet and please continue to update this spreadsheet weekly as this information become known and this Docket progresses.

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

#### **Confidentiality:** CONFIDENTIAL

**Statement:** (3) Market analyses or other market-specific information relating to services offered in competition with others.

**Response:** 

Information provided by: Jason Klindt

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).



Requestor Grady Justin -Response Provided February 11, 2025

Question:KCC-11 Regarding: 40% Capacity Factor Limitation

Please Provide the Following:

Please provide the following pertaining to the EPC RFP to construct Kansas Sky:

In Evergy witness Code Vandevelde's Direct Testimony he discusses an updated IRP analysis Evergy performed for this predetermination proceeding that evaluated the higher estimated cost of the combined cycle generating units, as

compared to the 2024 IRP analysis. The spreadsheet provided in the Evergy workpapers that contains the output of this capacity expansion modeling identifies yearly modeled capacity factors for the 2030 Combined Cycle generator at line 521 of the spreadsheet. There are several instances of modeled capacity factors that are higher than 40% during the period 2032 to 2043. Please provide the following:

1. Has Evergy performed capacity expansion modeling similar to that provided in this Docket, that limited the 2030 Combined Cycle generator to a 40% yearly capacity factor for all years after 2032, in accordance with the

current Final GHG rules promulgated by the EPA? If so, please provide the results of that modeling in a spreadsheet similar to "Conf. EKC Plan Selected with Updated NG Costs" as provided in the Workpapers.

2. If Evergy has not performed the modeling discussed in Item No. 1 above, please explain why Evergy cannot perform this modeling or why Evergy does not believe that information is relevant to the Commission's decision in this proceeding.

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

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



For the 2024 IRP, Evergy used capacity expansion to formulate GHG compliant plans consistent with its expectations for a final rule, prior to that rule being issued. Evergy's scenarios were informed by the proposed rule and industry feedback. The expected options for new combined cycles at the time were hydrogen blending -30% 2032-2037 and 96% 2038 and beyond, or carbon capture and sequestration at 90% rate 2035 and beyond. Evergy studied the carbon capture and sequestration 2035 pathway in its models.

Evergy can limit combined cycle generator output to a 40% capacity factor in its modeling software and will provide updated GHG compliance scenarios in its 2025 IRP Annual Update.

Evergy has not yet completed final modeling for the 2025 IRP. Long-term planning inherently has many uncertainties and long-lead-time resource decisions have to be made with incomplete and imperfect information about the future. Evergy identified environmental rules for carbon dioxide emissions as a critical uncertain factor in the 2024 Triennial IRP and analyzed three different levels of emissions reductions as part of the economic evaluation of the resource plans. It is unclear what the future holds for the GHG final rule, given the change of US presidential administration. Evergy does expect emission reductions to be part of future policy over the planning horizon and the highly efficient advanced combined cycle technology employed by these new resources will produce firm dispatchable energy with much lower carbon dioxide emissions rates than existing coal, natural gas, and oil-fired dispatchable resources.

**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).



Requestor Owings Paul -Response Provided February 21, 2025

Question:KCC-45 CONFIDENTIAL

Regarding: Follow up to Staff DR 18

Please Provide the Following:

A:	
B. Constant	
C.	

<u>RESPONSE</u>: (do not edit or delete this line or anything above this)

## Confidentiality: CONFIDENTIAL

**Statement:** (3) Market analyses or other market-specific information relating to services offered in competition with others.





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<i>B</i> .		
С.		

**Information provided by:** JP Meitner, Market Operations

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).



Requestor Zakoura James -Response Provided December 19, 2024

Question:KIC-1-14 RE: Discovery Provided to Others Please Respond to the Information Request detailed below.

Reference Paragraph 13 of the Petition (second bullet point - "preferred plan"):

Has Evergy, EKC and / or EKM determined that it will "retire" any or all of the coal fired generation units (coal plants) that are currently operated? Is so, provide: a) The name of any coal plant that is to be "retired."

b) The estimated retirement date of any coal plant to be "retired."

c) An estimate of any undepreciated plant balance at the time of retirement of any coal plant.

d) Whether or not, Evergy, EKC and / or EKM will seek t recover from their retail ratepayers, an undepreciated plant balances, on or after the "retirement of any coal plant."

#### <u>RESPONSE</u>: (do not edit or delete this line or anything above this)

#### **Confidentiality: PUBLIC**

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

- a) According to the preferred plan, the 2024 Integrated Resource Plan (IRP) identified the following coal plant retirements indicated by year: Jeffrey 1 (2039), Jeffrey 2 (2030), Jeffrey 3 (2030), La Cygne 1 (2032), La Cygne 2 (2039), and Lawrence 4 (2028). Additionally, the preferred plan includes the conversion of Lawrence 5 from coal to natural gas in 2029.
- b) See dates in response to (a) above.
- c) The 2024 IRP considers ongoing capital expenditures and the impact on the cost to serve customers, but it does not include an explicit estimate the of undepreciated plant balance at the time of retirement.



d) Evergy's decision to seek recovery of undepreciated plant balances would be made consistent with regulations at the time of retirements.

**Information provided by:** 

Greg Reesor, Lead Energy Resource Analyst

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).



Requestor Zakoura James -Response Provided December 20, 2024

<u>Question</u>:KIC-2-2 RE: Discovery Provided to Others Please Respond to the Information Request detailed below.

Reference the Evergy Integrated Resource Plan – Update for 2024, dated April 1, 2024. https://investors.evergy.com/2024IRPUpdate Page 3 For Evergy Kansas Central

A. Please explain the meaning of the statement, appearing at page 3, to wit: "Preferred Plan includes a placeholder for an additional coal unit retirement in 2030."

B. Which EKC coal unit is designated as the "placeholder" coal unit?

C. On page 3, is the 674 MW "Retirement" of a coal asset in 2030, the "Placeholder?"

D. What are the criteria for determining whether the "placeholder" coal unit will or will not be retired in 2030?

E. If either or both, the proposed Viola and McNew natural gas electric generation units are constructed, will the "Placeholder" coal unit be retired in 2030?

F. If the "Placeholder" coal unit is not retired in 2030, what date in the future will the "Placeholder" coal unit be retired?

G. On page 3 of the Chart for 2024, is Lawrence Unit 5 included as an "Addition?"

H. On page 3 of the Chart for 2024, are the natural gas additions in 2029 and 2030, the proposed capacity from the proposed Viola and McNew plants?

I. On page 3 of the Chart for 2024, provide detail of the 650 MW addition of natural gas in 2031, including but not limited to the location, the cost of the facility, and whether its construction is required to retire any of the existing coal fired electric generation assets.

J. If retirement of the EKC coal fired generation units is extended for 6 years from the current proposed retirement dates, are the Viola and McNew proposed natural gas



facilities required by EKC in 2029 and 2030?

K. Provide all documents that evidence the addition of 300 MW of solar in 2027 and 150 MW of solar in 2028.

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:**

**Objection:** Evergy objects to DR 2-2 E, F and J in that each request is an incomplete hypothetical which does not sufficiently identify the necessary factors and variables in order to allow Evergy to reasonably respond to the question. Evergy objects to DR 2-2 I in that it is vague and ambiguous in its request that Evergy "provide detail" of the stated addition of natural gas in 2031. It is not clear or evident what is meant by "provide detail" and what detail or information is being requested, and therefore the request is vague and ambiguous. Evergy further objects to DR 2-2 K in that it is overly broad and unduly burdensome, specifically in that it requests production of all documents that evidence the addition of 300 MW of solar in 2027 and 150 MW of solar in 2028. The request inasmuch as it requests production of "all documents" supporting these additions is substantially overbroad and unduly burdensome. Evergy intends to provide timely responses to those subsections where no objection has been made. Evergy will similarly provide timely responses consistent with and in consideration of the above objections to subsections E, F, J, I and K.

A. The Preferred Portfolio for Evergy Kansas Central includes retiring Jeffrey 2 at the end of 2030. The economic analysis in the IRP showed similar costs for a portfolio that retired the resource and a portfolio that extended its operation with the addition of Selective Catalytic Reduction (SCR) equipment expected to be required for environmental compliance. While the plans had relatively similar cost expectations, the risks to customers were also considered in selecting a preferred portfolio. Due to the long lead time to build new thermal resources, Evergy Kansas Central must begin procurement and construction promptly to insure commercial operation of new combined cycles in 2029 and 2030. If these resources are not constructed, Evergy Kansas Central will not have flexibility to retire Jeffrey 2 (whether due to environmental costs/compliance, age/repair needs, etc.). In the modeling scenario where the Jeffrey 2 retirement was scheduled for 2039, an additional 750 MW of solar was needed by 2031, on top of the 750 MW in the preferred portfolio. While this is also a significant investment, it is not expected to have the reliability characteristics (capacity accreditation) to enable the Jeffrey 2 retirement. While the Jeffrey 2 retirement 12/31/2030 is part of the preferred portfolio, Evergy Kansas Central maintains the flexibility to modify the retirement date if future expectations change.


# B. Jeffrey 2

- C. No, that is the retirement of Jeffrey 3.
- D. Evergy still has flexibility in determining the retirement date. The most pressing deadline is currently the state planning for the EPA's GHG Final Rule. If this Rule is enforced, Evergy must make commitments for its entire coal fleet to retire, or invest in natural gas infrastructure to co-fire or fully convert in order to remain operational. Evergy has not developed a compliance plan. If the Rule is not enforced, other decisions that would affect retirement decision timing are: lead time to invest in SCR/ changes to expected compliance dates, future expected performance of a facility approaching it's expected useful life, on-going availability of parts to maintain reliability of an aging facility, potential need to use the site and interconnection for a replacement resource, SPP retirement transmission/reliability study (about 2 years if resource not being replaced by a thermal resource). Generally, the retirement decision will be based on assessment of customer needs (load growth, reliability requirements), expected going-forward costs of operation, viability of continued operation, expected costs and viability of other alternatives should the resource retire.
- E. Based on the 2024 IRP, the resources being constructed are necessary to retire the placeholder to insure that Kansas Central continues to meet its customer's reliability needs. However, the inverse is not true. The placeholder unit could continue to operate even with both new resources in operation.
- F. The alternative date studied in the 2024 IRP was 12/31/2039. As explained in D., Evergy expects some flexibility in finalizing the future retirement date.
- G. It was included to highlight that it will cease burning coal and fully operate on natural gas.
- H. Yes, however the turbine size for Viola and McNew is larger than was expected at the time of the IRP release.
- I. This resource has not been sited and equipment has not been procured.
- J. No specific models were run for that scenario. The IRP plan extending Jeffrey 2 to a 2039 retirement included an extra 750 MW of early solar. A combustion turbine was needed in 2031 and more thermal builds were needed in the later 2030's.
- K. The preferred portfolios included 600 MW of solar in 2027 (150 MW EMW, 150 MW EKC, 300 MW EM), and 450 MW of solar in 2028 (300 MW EKC, 150 MW EM). These are included in the IRP preferred portfolio discussion. Evergy Missouri West has procured 165 MW of solar to meet the 2027 need and filed for CCN in Missouri. Evergy Kansas Central has filed for predetermination in Kansas for the 150 MW Kansas Sky



project for 2027. Projects have not been selected for 2028. Evergy Metro is still in negotiations and has not filed for CCN or predetermination for 2027 solar yet.

# 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).



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

Requestor Zakoura James -Response Provided December 20, 2024

Question:KIC-2-5 RE: Discovery Provided to Others Please Respond to the Information Request detailed below.

If EKC and EKM accept an Order in this Docket and construct the Viola and McNew natural gas electric generation facilities, will Evergy seek to retire the existing coal fired electric generation facilities on the schedule included in the Evergy Integrated Resource Plan?

**<u>RESPONSE</u>**: (do not edit or delete this line or anything above this)

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

## **Response:**

**Objection:** Evergy objects to 2-5 in that it is vague and ambiguous as to what is meant by "accept an Order in this Docket and construct the Viola and McNew natural gas generation facilities," and because the request is an incomplete hypothetical that Evergy is unable to answer without supplying additional facts or assumptions. Evergy intends to provide a timely response to DR 2-5 consistent with and in consideration of the above objections based upon its reasonable understanding of the request.

EKC and EKM will continue to run triennial and annual IRPs consistent with the IRP requirements in the state of Kansas. No final determinations have been made with regard to retirements, and future IRPs will continue to evaluate the timing of retirements given changing planning dynamics. Prudent planning does require us to look at future environmental regulations, generator age, and generator characteristics to develop plans that can meet the needs of our customers at the least risk adjusted cost.

## Information provided by: Jason Humphrey, Vice President Development



Attachment(s): None

# 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).



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

Requestor Zakoura James -Response Provided February 19, 2025

Question:KIC-5-5

With respect to Mr. VandeVelde's testimony on page 9, he states part of his Company's resource planning efforts includes development of revenue requirements, calculations, and NPVRR. With regard to this testimony please describe the following:

- a. Please explain how the Company captures the cost of plants that are retired before they are fully depreciated in the annual revenue requirement calculations and describe the period the unrecovered plant costs are recovered in revenue requirements until the plant is fully recovered.
- b. Please identify a rate of return and pretax rate of return used in the revenue requirement calculations.
- c. Please identify the expected depreciation rate on existing coal-fired resources, and all other resources.

**<u>RESPONSE</u>**: (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. For coal-fired plants that are subject to retirement before they are fully depreciated, the IRP analysis includes two components: (1) revenue requirements for existing investments and (2) revenue requirements for future capital expenditures.

For existing investments, the rate base is reduced by the annual straight-line depreciation, which corresponds to an annual depreciable life of 36.7 years in the 2024 IRP. The declining annual revenue requirements for the IRP planning horizon are translated into a net present value for inclusion in the NPVRR analysis.

For future capital expenditures, the annual revenue requirements are estimated for the 20year planning horizon. If a plant retires before the end of the plan, a retirement cost is included in the NPVRR to account for the unrecovered plant balance on these capital



expenditures. Additionally, the retirement cost includes an estimate for necessary transmission upgrades associated with the planned retirement.

- b. For the 2024 IRP, the Company used a pretax rate of return is 6.85% in revenue requirement calculations.
- c. As indicated in (a) above, existing coal-fired plant investment depreciates on a 36.7-year schedule, which would correspond to a rate of 2.72% per year. Future capital investments for coal and all other resources are depreciated according to the following schedule:

Plant	Book Life (Years)	Annual
		<b>Depreciation</b> (%)
Coal	33.9	2.95%
Gas	41.93	2.38%
Wind	19.72	5.07%
Solar	30	3.33%
Storage	20	5%
Nuclear	50.16	1.99%

## **Information provided by:**

Greg Reesor, Lead Energy Resource Analyst

## 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).



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

Please Respond to the Information Request detailed below.

Please refer to the Direct Testimony of Cody VandeVelde beginning at page 19.

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<u>RESPONSE</u>: (do not edit or delete this line or anything above this)

# **Confidentiality:** CONFIDENTIAL

Statement: (1) Material or documents that contain information relating directly to specific customers

# **Response:**







## 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).

#### **CERTIFICATE OF SERVICE**

## 25-EKCE-207-PRE

I, the undersigned, hereby certify that a true and correct copy of the above and foregoing document was served by electronic service on this 14<sup>th</sup> day of March, 2025, to the following:

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