BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

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In the Matter of the Joint Application of Westar Energy, Inc. and Kansas Gas and Electric Company for Approval to Make Certain Changes in their Charges for Electric Services.

Docket No. 18-WSEE-328-RTS

TESTIMONY AND ATTACHMENTS OF RICK GILLIAM ON BEHALF OF CLIMATE AND ENERGY PROJECT, SIERRA CLUB, AND VOTE SOLAR IN RESPONSE TO WESTAR'S PROPOSED RATE DESIGNS

NOVEMBER 13, 2020

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I. Introduction

1	Q.	Please state your name and business address.
2	A.	My name is Rick Gilliam. My business address is 590 Redstone Drive, Suite 100,
3		Broomfield, Colorado.
4	Q.	On whose behalf are you submitting this direct testimony?
5	A.	I am submitting this testimony on behalf of Climate and Energy Project, Sierra Club,
6		and Vote Solar.
7	Q.	By whom are you employed and in what capacity?
8	A.	I serve as the Senior Program Director of Distributed Generation ("DG") Regulatory
9		Policy for Vote Solar. I oversee policy initiatives, development, and implementation
10		related to distributed solar generation, as well as other distributed energy resources
11		including electric vehicles. In this capacity, I review regulatory filings, perform
12		technical analyses, review and analyze rate designs, and testify in commission
13		proceedings around the country.
14	Q.	Please describe your educational background.
15	A.	I hold a Master's Degree in Environmental Policy and Management from the
16		University of Denver in Denver, Colorado, and a Bachelor's of Science in Electrical
17		Engineering from Rensselaer Polytechnic Institute in Troy, New York.
18	Q.	Please describe your experience in utility regulatory matters.
19	A.	Prior to joining Vote Solar in January of 2012, my regulatory experience included
20		five years in the Government Affairs group at SunEdison, at the time one of the
21		world's largest solar developers, as a manager, director, and eventually vice
22		president; twelve years with Western Resource Advocates (formerly known as the

	Land and Water Fund of the Rockies) as Senior Policy Advisor; and twelve years in
	Public Service Company of Colorado's rate division as Director of Revenue
	Requirements.
	Prior to that, I spent six years with the Federal Energy Regulatory Commission
	("FERC") as a technical witness (engineer). All told, I have over forty years of
	experience in utility regulatory matters. A complete summary of my background is
	appended as Attachment RG-1.
Q.	Have you previously testified before the Kansas Corporation Commission
	("Commission")?
A.	Yes. I testified before this Commission in Docket No. 16-GIME-403-GIE, a general
	investigation to examine issues surrounding rate design for DG customers.
Q.	What other utility regulatory commissions have you testified before?
A.	I testified in proceedings before the Arizona Corporation Commission, Colorado
	Public Utilities Commission, Georgia Public Service Commission, Idaho Public
	Utilities Commission, Nevada Public Utilities Commission, New Mexico Public
	Regulation Commission, Utah Public Service Commission, Wisconsin Public Service
	Commission, Wyoming Public Service Commission, and the FERC.
	II. Purpose of Testimony and Summary
Q.	What is the purpose of your testimony in this proceeding?
A.	My testimony addresses the rate design proposals set forth by Evergy Kansas Central,
	Inc. and Evergy Kansas South, Inc. ("Evergy" or the "Company") in its October 13,
	2020, filing in this proceeding, along with the underlying (although largely irrelevant)
	cost recovery concerns raised by the Company.
	Q. A. Q. A.

1	Q.	Please summarize your recommendations.
2	A.	I recommend rejecting both the Company's proposed grid access charge and
3		minimum bill alternative. Instead, I propose the Commission require Evergy to either
4		eliminate the DG customer class and transfer all customers back to the standard
5		residential service ("RS") class, or to impose the same rates and charges on DG
6		customers as the RS rate. Regardless, the Commission should also order Evergy to
7		refund RS-DG customers for the higher bills that they paid under the unlawful RS-
8		DG rate, with interest determined at the Company's authorized weighted average cost
9		of capital.
		III. Summary of the Kansas Supreme Court Decision
10	Q.	Please summarize your understanding of the Court's Decision in Case No.
11		120,346.
12	A.	While I am not a lawyer and I am not providing any legal conclusions in this
13		testimony, I base my testimony on my understanding of the Court's decision. As I
14		read the plain language of the decision, it can be summarized by several key points.
15 16 17 18 19 20		• The Court recognized that partial requirements or DG customers, "are less dependent than others on the primarily fossil-fueled electricity sold by the utilities" because they "use less utility generated electricity" and "in some cases, if the DG customer is generating more electricity than they use and selling the excess back to the grid, the variable energy portion of the bill may amount to a net-zero." ¹
21 22 23 24 25		• Because the typical two-part rate structure is designed to send long-term price signals to reduce usage of utility-supplied electricity by collecting costs through usage-based charges, the utility's short run revenues are lower when customers respond to that price signal, including when customers self-supply. To reverse that revenue reduction from DG customers, "the Utilities sought

¹ Matter of Westar Energy, Inc., 460 P.3d 821, 822 (Kan. 2020).

1 2	and obtained approval of a new rate structure applicable only to DG customers—the residential distributed generation (RS-DG) rate design." ²
3 4 5	• "The proposed RS-DG rate design violates K.S.A. 66-117d because it uses a customer's DG status as a basis for charging more for the same goods and services than the Utilities charge to non-DG customers." ³
6 7	• If the Commission seeks to change the price signals incorporated into volumetric charges it must do so equally for DG and non-DG customers. ⁴
8	To reach those conclusions, the Court determined that K.S.A. 66-1265(e), which
9	allows utilities to propose "time-of-use rates, minimum bills or other rate structures
10	that would apply to all such customer-generators prospectively," does not supersede
11	the anti-discrimination statute, K.S.A. 66-117d, and that a rate structure for DG
12	customers need not necessarily result in higher or otherwise discriminatory charges.
13	In other words, "while utilities may try to alter the rate structure applicable to DG
14	customers, they must do so within the larger context of a nondiscriminatory price
15	regime." ⁵
16	In addition, while the Court recognized that DG customers use less electricity and
17	therefore pay less in volumetric charges than they would without DG, the Court
18	understood this response to be the natural result of a rate design that puts fixed costs
19	into volumetric charges rather than a problem specific to DG customers. ⁶ The fact
20	that DG customers respond to the intentional price signal sent by volumetric charges
21	by reducing the amount of utility-provided electricity they consume is simply
22	volumetric rates producing the response they are intended to induce. The Court did
23	not draw a distinction between electric service to DG customers and non-DG

 ² Id. at 823.
 ³ Id. at 827.
 ⁴ Id.
 ⁵ Id.
 ⁶ Id. at 823.

1		customers. And the Court commented-through a rhetorical question-that a DG
2		customer's response to price signals provided through volumetric rates by using less
3		utility electricity is a feature, not a flaw, of a rate design intended to incentivize that
4		exact response. If the Commission decides to no longer send price signals based on
5		the volume of utility electricity consumed (which I believe would be a poor policy
6		choice), it must do so across the board. It cannot change that policy only for DG
7		customers and single them out to pay more for their electricity than other customers.
8	Q.	Did the Court agree that the Company has a "free-rider" problem, as alleged by
9		Evergy's testimony ⁷ and by Staff's August 14, 2020 comments? ⁸
10	A.	No, it did not. The Court mentions "free-riders" three times, each time making it clear
11		that such characterization was the Utilities'. The Court did not agree with those
12		characterizations.
13 14		• "According to the Utilities, this has created what is sometimes referred to in economic parlance as a 'free rider' problem." ⁹
15 16 17 18		• "As such, one would be justified in wondering whether the free rider problem identified by the Utilities is a feature of the system rather than a bug (because lower energy users will necessarily pay a smaller per-unit share of the fixed costs)." ¹⁰
19 20 21		• "We can think of several ways the Utilities could attempt to reduce or eliminate their economic 'free rider' problem without creating a regime of price discrimination." ¹¹
22		The Court's references to the purported "free-rider problem" were to ultimately
23		conclude—even if one accepts the purported "problem" for the sake of argument—

⁷ Direct Testimony on Remand of Ahmad Faruqui on Behalf of Evergy, at 8:10 (Oct. 13, 2020) ("Faruqui Direct").
⁸ Verified Initial Comments of Commission Staff, ¶ 14 (Aug. 14, 2020).
⁹ Matter of Westar Energy, Inc., 460 P.3d at 822.
¹⁰ Id. at 823.
¹¹ Id. at 827.

1		that it would not justify a discriminatory rate. Moreover, the Court recognized the
2		underlying policy reasons for K.S.A. 66-117d and the Public Utilities Regulatory
3		Policies Act of 1978 ("PURPA"): "to encourage increased conservation of electric
4		energy, increased efficiency in the use of facilities and resources by electric utilities,
5		and equitable retail rates for electric consumers." ¹² Among other things, PURPA
6		prohibited utilities from "discriminat[ing] against qualifying cogenerators or
7		qualifying small power producers," such as DG customers. ¹³
		IV. Review of Evergy's Rate Design Proposals
8	A. E	Evergy's Grid Access Charge Proposal is Discriminatory
9	Q.	Have you read the direct testimony on remand of the two Evergy witnesses?
10	A.	Yes.
11	Q.	Do those witnesses correctly understand the Court's Decision?
12	A.	No. Evergy witness Faruqui's claim that "KSA 66-117d and the Kansas Supreme
13		Court order do not prohibit Evergy from charging RS-DG customers a different rate,
14		even if it results in an overall higher price for some RS-DG customers" ¹⁴ is in direct
15		conflict with the Court's decision and application of K.S.A. 66-117d:
16 17 18		K.S.A. 66-117d is an antidiscrimination provision that prohibits utilities from charging DG customers a higher price than non-DG customers for the same service. ¹⁵
19		The Company's logic appears to be that "the grid access charge can be applied
20		equally to all residential customers (RS and RS-DG) without being regarded as

¹² *Id.* at 824.
¹³ 16 U.S.C. § 824a-3(b)(2).
¹⁴ Faruqui Direct at 10:5–7.
¹⁵ *Matter of Westar Energy, Inc.*, 460 P.3d at 826.

1		discriminatory" ¹⁶ even though, "[b]y definition, the charge would be zero for RS
2		customers since they don't have DG capacity and, therefore, do not export power to
3		Evergy's grid." ¹⁷ However, claiming to "apply" a charge to customers who do not
4		pay the charge is not a serious distinction and does not change the fact that DG
5		customers would pay a higher price for their electric service, which is exactly what
6		the Kansas Supreme Court found violates K.S.A. 66-117d. Accordingly, the grid
7		access charge plainly violates KSA 66-117d, regardless of whether the utility includes
8		a line in non-DG customers' bills for a \$0 grid access charge. It is therefore unclear if
9		Evergy's proposal to impose charges that only DG customers pay for electric service
10		is intended to be taken seriously, or whether it is simply a strategy of refusing to
11		accept the Court's conclusion.
12	Q.	How does the grid access charge impose higher prices on DG customers for their
13		service?
14	A.	Because the grid access charge applies to DG customers' generation—which is what
15		distinguishes them from non-DG customers—in addition to the monthly fixed charge
16		and usage based charge means that the DG customer will pay an additional \$3.00 per
17		installed kilowatt ("kW") beyond what the non-DG customer will pay for the same
18		electricity. While this is true at any level of consumption and any size of generation,
19		I prepared an example in Figure 1, which compares a DG with an 8 kW generating

¹⁶ Faruqui Direct at 10:14–16. ¹⁷ *Id*. at 10:16–17.

- 1 system and a non-DG customer, each consuming 850 kilowatt hour¹⁸ ("kWh") in the
 - sample month.

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Figure 1. Bill Impact Comparison for non-DG and DG Residential Customers,

Charge	Residential	Residential (850 kWh)
	(850 kWh)	with 8 kW Solar DG
Basic Service Fee	\$ 14.50	\$ 14.50
First 500 kWh	\$ 36.76	\$ 36.76
Next 400 kWh	\$ 25.73	\$ 25.73
Additional kWh	\$ 0.00	\$ 0.00
Grid Access Charge	\$ 0.00	\$ 15.00
Total before Riders	\$ 76.99	\$ 100.99

Each Consuming 850 kWh during the month

5 In this example, the DG customer pays 31% more for the same amount of utility-

7 Q. Do DG customers as a group use more utility-delivered electricity than non-DG 8 customers?

- 9 A. On average, DG customers' usage is higher than those of non-DG customers. That is
- 10 to be expected because single family residences are the typical residential DG
- 11 customer and single family detached housing usually has higher usage. However,
- 12 averages are misleading when comparing two diverse groups who significantly
- 13 overlap. All customers have different individualized usage patterns. Like any subset
- 14 of residential customers, RS-DG customers will have differences between each other,
- 15 as well as differences from other residential customers. Figures 2a and 2b
- 16 demonstrate that the load characteristics of DG customers are well within the range of
- 17 non-DG customers overall.

⁶ supplied electricity.

¹⁸ 850 kWh is very close to the average monthly consumption of the average Evergy Kansas Central residential customer. *Direct Testimony on Remand of Bradley D. Lutz on Behalf of Evergy*, at 11:21–12:1 (Oct. 13, 2020) ("Lutz Direct").



Figure 2a plots the upper and lower bounds of utility provided electricity for all non-DG and DG customers for which data are available. Non-DG customers are reflected by the gray shading and the DG customers within the range bounded by solid blue lines. The median values for each group are shown by the dashed lines.





9 The load data confirms that nearly all DG customers fall within the natural 10 variation of non-DG customers. As a group, DG customer loads are within the range 11 of non-DG customers.

7

1	Q.	Does a DG customer have a different, more costly or elaborate connection to
2		"access" the utility grid that could justify imposing a different "grid access
3		charge" on DG customers?
4	A.	No. All residential customers have essentially the same connection to the grid-a
5		distribution transformer, a service drop, and a meter. Any incremental cost associated
6		with interconnecting the DG system to the grid is paid by the customer. ¹⁹ There is no
7		cost basis for charging DG customers a premium for "access to the grid."
8	Q.	Evergy suggests that the presence of DG customers connected to its grid can
9		actually increase the utility's costs to serve customers. Do you agree?
10	A.	No, I do not agree, and there is no evidence to support Evergy's claim. DG
11		customers export electricity that serves other loads in real time. Absent the DG
12		customers' exports, those other loads would be served by utility-supplied energy
13		flowing from a central station across the transmission system and the entire
14		distribution system. DG exports not only displace the electricity that the utility would
15		otherwise generate or purchase to serve load, but inject electricity downstream from
16		all of the transmission and primary distribution system to reduce the loading on all of
17		the upstream equipment. DG exports do not increase flows upstream from the nearest
18		load; rather, they reduce the overall load on the grid, and therefore costs from the
19		secondary distribution system all the way up to the generator level.
20	Q.	Do DG customers receive a different service than non-DG customers?
21	А.	No. All of the services that a DG customer receives are bundled in the inflow
22		electricity from the utility. Regardless of what label one applies (standby,

¹⁹ Additionally, a \$100 processing fee is charged to the DG customer with the application to interconnect to the grid in accordance with Rate Schedule NMR.

supplemental, partial requirements), what the utility is providing and the customer is
receiving are the same. DG customers' inflowed electricity is no different than nonDG customers' electricity. Nor is the utility reserving additional capacity to serve a
DG customer should their generation stop producing more than the utility reserves to
serve a non-DG customer, whose load may change instantly (pool pump starts,
resistance water heater turns on, electric vehicle plugs in).

7 In an effort to demonstrate that DG customers receive a different service than non-DG customers, Evergy listed possible "costs" and "burdens" related to DG 8 customers.²⁰ When asked to support its claims, Evergy was unable to provide any 9 quantification or estimate of these costs or burdens.²¹ That is similar to my 10 experience in other cases, including in states with significantly higher DG penetration 11 12 than Kansas, where utilities are still unable to support claims that adding DG imposes 13 costs to the system. In fact, as I note above, DG customers actually reduce burdens 14 and costs on the system upstream of nearby loads served by DG exports. 15 In addition, while Evergy expresses concern about theoretical geographically 16 clustered DG (in the form of photovoltaic) leading to hypothetical new capacity 17 constraints on the distribution system, it has nothing beyond speculation to support such concerns.²² In discovery, the Company clarified that this concern is related to a 18

- 19
- 20

future condition "as more RS customers become RS-DG customers."²³ Evergy does

not identify what level of new DG customers would be required before any such

²⁰ Faruqui Direct at 7:5–9.

²¹ Evergy's Response to Interrogatories Sierra Club 8-3 (Oct. 27, 2020).

²² Faruqui Direct at 7:12–15.

²³ Evergy's Response to Interrogatories Sierra Club 8-4 (Oct. 27, 2020).

issues arise, much less the actual cost that would occur even if the undefined and
 theoretical level of DG customers is reached.

3 Relatedly, Evergy describes the possibility of increased costs resulting from twoway flows of electricity on a system designed for one-way flows.²⁴ Here again, 4 5 Evergy provides no data or analyses supporting this assertion. I note, again, that this "two-way flow" exists only on the secondary distribution system and primarily on the 6 7 solar customer's service drop. The cost of the service drop itself is paid through the 8 monthly Basic Service Fee that DG customers pay like any other customer. Upstream 9 of the nearest load, which is almost always on the secondary system, there is no "two-10 way flow" and, instead, only a reduction in load. 11 **Q**. In your experience, have you seen distribution capacity constraints due to 12 geographical clustering of DG occur in other states? 13 A. I have not. For example, in Colorado, Xcel Energy has about twice the number of 14 residential customers and more than fifty times the penetration of DG on its grid as

- that on Evergy's grid. Colorado has experienced neither the grid constraint issue nor
 two-way flow issues that Evergy hypothesizes.
- 17 Q. Does the proposed grid access charge recover the purported additional costs of
 18 DG customers' two-way flow on the grid, even if such costs did exist?
- A. No. Evergy's claims of increased costs from bi-directional DG flows is completely
 irrelevant to the grid access charge. As noted, there are no documented costs of
 exports. But even if there were, the proposed grid access charge is not based on those
 costs. Instead, it is calculated based on—and would recover revenues allocated to—
 - ²⁴ Faruqui Direct at 7:16–8:4.

loads or inflows of electricity from the utility to the customer from the utility's cost of
 service study.²⁵ In other words, the proposed grid access charge recovers costs of
 providing electricity from the utility to the DG customer.

4 Q. What costs is the grid access charge designed to recover?

5 A. The grid access charge is Evergy's estimate of the average *revenue* shortfall per customer per month in the DG group.²⁶ It starts with a total DG class cost figure 6 7 from Westar's cost of service ("COS") study and subtracts estimated kWh revenues 8 to derive a purported difference between the costs and revenues, divides that 9 purported deficit by the number of customers, and then by the average installed DG system size.²⁷ There are a number of problems with the inputs used to calculate the 10 11 charge, some of which I discuss further below. However, the relevant point in this 12 phase of the proceeding is that the charge recovers allocated revenue requirement for 13 the common and conventional costs of utility service, not any costs of the "two-way 14 flow," DG-caused distribution system capacity constraints, or any other costs unique 15 to DG customers. Instead, the proposed grid access charge is simply higher charges 16 for DG customers to cover the utilities' normal costs of serving all customers, 17 resulting in DG customers paying more towards the utility's costs than non-DG 18 customers with identical levels of use.

²⁵ Evergy's Response to Interrogatories CURB-58, Attach. QCURB-58_Grid Access Charge Calculation.xls (Oct. 27, 2020).

²⁶ Evergy's Response to Interrogatories Sierra Club 8-11 (Oct. 27, 2020).

²⁷ Evergy's Response to Interrogatories CURB-58, Attach. QCURB-58_Grid Access Charge Calculation.xls (Oct. 27, 2020).

1	Q.	Are there other problems with Evergy's proposed grid access charge?
2	A.	Yes. Several. First, the Company's calculation appears to start with a revenue
3		requirement derived from Westar's original COS study, not the Commission's
4		approved revenue requirement for DG customers. Not only is that the wrong revenue
5		requirement value, but Westar's COS study overstates DG customer costs of service
6		by applying the wrong non-coincident peak ("NCP") allocator hour and allocating
7		costs of load placed on the primary distribution system to customer exports, which are
8		not only not load, but do not reach the primary system and actually reduce loads on
9		the primary system. ²⁸ Second, it uses a revenue value that (a) is calculated from rates
10		other than those approved in the Commission's September 27, 2018 Order Approving
11		the Non-Unanimous Stipulation and Agreement; (b) uses a subset of only 31 DG
12		customers rather than all DG customers (or the proof of revenue billing determinants
13		approved by the Commission as Appendix D to the Non-Unanimous Stipulation and
14		Agreement); and (c) subtracts credits for electricity received from DG customers and
15		resold to other customers as a reduction in revenue from DG customers. ²⁹ The
16		combination of the overstated cost to serve and understated revenues produces a false
17		revenue deficiency value that Evergy uses to calculate the grid access charge. In
18		addition, the average DG system size used to determine the level of charge does not
19		appear to be from the same 31 customer data sample used to derive the costs and
20		revenues it is applied to.

²⁸ These allocation errors, alone, account for \$251 per DG customer in over-allocated costs. *Direct Testimony and Exhibits of Madeline Yozwiak on Behalf of Sierra Club and Vote Solar*, at 23 (June 11, 2018). This represents almost half of the Company's assumed \$536 of "cross subsidy" even before accounting for the other errors in the calculation.

²⁹ Sierra Club Hr'g Ex. 6 (Westar Response to Data Request Sierra Club 1-41). This not only fails to recognize any value for electricity received from DG customers and used to serve other customers' loads, but reducing DG customer revenues implies that it has negative value.

1		The fundamental problem with the Company's proposed grid access charge is that
2		it discriminates by charging RS-DG customers more for the electricity they receive
3		from the Company than a non-DG customer would pay for the exact same level of
4		electricity. However, in addition, the inputs to the Company's calculation of the
5		charge itself contain numerous flaws.
6		Lastly, the Company's testimony is unclear on whether it proposes to apply the
7		charge to all DG customers or only those who interconnected after July, 2014 (or
8		some other vintage date). To the extent that Evergy seeks to apply the charge to
9		customers covered by K.S.A. 66-1265(d), the charge would appear to violate that
10		statute as well as violating K.S.A. 66-117d.
11	Q.	Evergy points to Arizona and New York as other states that have imposed grid
11 12	Q.	Evergy points to Arizona and New York as other states that have imposed grid access charges. What is your response?
11 12 13	Q. A.	Evergy points to Arizona and New York as other states that have imposed grid access charges. What is your response? Arizona Public Service Company ("APS") instituted a grid access charge as a result
11 12 13 14	Q. A.	 Evergy points to Arizona and New York as other states that have imposed grid access charges. What is your response? Arizona Public Service Company ("APS") instituted a grid access charge as a result of a settlement, and not a litigated outcome. There was no determination on the
 11 12 13 14 15 	Q. A.	 Evergy points to Arizona and New York as other states that have imposed grid access charges. What is your response? Arizona Public Service Company ("APS") instituted a grid access charge as a result of a settlement, and not a litigated outcome. There was no determination on the merits that the charge is lawful based on any statute similar to K.S.A. 66-117d.
 11 12 13 14 15 16 	Q. A.	 Evergy points to Arizona and New York as other states that have imposed grid access charges. What is your response? Arizona Public Service Company ("APS") instituted a grid access charge as a result of a settlement, and not a litigated outcome. There was no determination on the merits that the charge is lawful based on any statute similar to K.S.A. 66-117d. Moreover, the APS grid access charge is at issue in a pending APS general rate case,
 11 12 13 14 15 16 17 	Q. A.	 Evergy points to Arizona and New York as other states that have imposed grid access charges. What is your response? Arizona Public Service Company ("APS") instituted a grid access charge as a result of a settlement, and not a litigated outcome. There was no determination on the merits that the charge is lawful based on any statute similar to K.S.A. 66-117d. Moreover, the APS grid access charge is at issue in a pending APS general rate case, and it may be rescinded. Other Arizona regulated utilities, such as Tucson Electric³⁰
 11 12 13 14 15 16 17 18 	Q. A.	 Evergy points to Arizona and New York as other states that have imposed grid access charges. What is your response? Arizona Public Service Company ("APS") instituted a grid access charge as a result of a settlement, and not a litigated outcome. There was no determination on the merits that the charge is lawful based on any statute similar to K.S.A. 66-117d. Moreover, the APS grid access charge is at issue in a pending APS general rate case, and it may be rescinded. Other Arizona regulated utilities, such as Tucson Electric³⁰ and UniSource Energy,³¹ do not have a grid access charge.
 11 12 13 14 15 16 17 18 19 	Q. A.	 Evergy points to Arizona and New York as other states that have imposed grid access charges. What is your response? Arizona Public Service Company ("APS") instituted a grid access charge as a result of a settlement, and not a litigated outcome. There was no determination on the merits that the charge is lawful based on any statute similar to K.S.A. 66-117d. Moreover, the APS grid access charge is at issue in a pending APS general rate case, and it may be rescinded. Other Arizona regulated utilities, such as Tucson Electric³⁰ and UniSource Energy,³¹ do not have a grid access charge. It is also incorrect that all three rate plans available for APS DG customers have a

 ³⁰ Tucson Electric Power, *Tariff R-4* (effective Sept. 21, 2018), <u>https://www.tep.com/wp-content/uploads/2018/10/704_tep_rider.pdf</u>.
 ³¹ UNS Electric Inc., *UNS Electric Statement of Charges* (effective July 1, 2020), <u>https://www.uesaz.com/wp-</u>

content/uploads/2018/03/Statement-of-Charges.pdf.

1		claimed by Evergy witness Faruqui. ³² In reality, the basic service charge under that
2		utility's three DG tariffs is 15% lower than its basic residential tariff and 12% lower
3		than Evergy's RS and RS-DG monthly fixed charge. ³³
4		Evergy also incorrectly characterizes New York's Customer Benefit Contribution
5		as a grid access charge. That charge is not an additional charge on DG customers to
6		pay for a service received. Instead, as the name implies, it is a charge to recover non-
7		bypassable public benefit costs. ³⁴
8	Q.	Are you aware of proposed grid access or similar charges in other states?
9	A.	Yes. Southwestern Public Service Company ("SPS") in New Mexico began charging
10		its DG customers a "standby charge" that was tied to the amount of generation each
11		month from the customer's DG system. Like Evergy's proposal here, SPS explained
12		the purpose of the charge was to recover a portion of the utility's unrecovered fixed
13		costs from serving DG customers. However, a Hearing Examiner in New Mexico
14		found that there were no incremental costs of serving DG customers, and that the
15		standby rates were not cost based. As a result, the Hearing Examiner ordered SPS to
16		cancel its two standby service tariff sheets. ³⁵
17		Wisconsin Electric proposed and the Wisconsin PSC approved a \$3.794/kW grid
18		access charge in 2014. ³⁶ While the utility mischaracterized the charge as a "demand

³² Faruqui Direct 12:1–3.

³³ APS "Premier Choice" is the utility's standard two-part rate with flat kWh charges. The monthly service charge for that tariff is \$15 per month. The three tariffs open to DG customers have monthly service charges of \$13 per month. Only the limited tariff for small customers has a lower monthly service charge. See APS, *Residential Service Plans*, <u>https://www.aps.com/-/media/APS/APSCOM-PDFs/Residential/Service-Plans/1804088-Plan_Comparison_-Update_FL.ashx?la=en&hash=7B3D9E77B447045FC916BEC7268C885F</u>.

³⁴ State of New York Public Service Commission, *Order Establishing Net Metering Successor Tariff*, at 26–27, Case No. 15-E-0751 (July 16, 2020).

³⁵ New Mexico Public Regulation Commission, *Recommended Decision*, Case No. 17-00255-UT (June 29, 2018). Adopted in pertinent part by the Public Regulation Commission of the State of New Mexico.

³⁶ Public Service Commission of Wisconsin, *Final Decision*, at App. B, 5-UR-107 (Dec. 23, 2014).

1	charge," the charge was actually imposed on each kW of installed capacity and not on
2	customer demand. While the Wisconsin commission initially approved the charge, a
3	court reversed, finding the charge unlawful and precluding the utility from imposing
4	it. ³⁷ Similar to the Kansas Supreme Court's comment that DG customers reducing
5	charges by reducing use is "a feature of the system rather than a bug," the Wisconsin
6	court noted that utility claims of an "unfair subsidy" refers to any customer who uses
7	less electricity and therefore contributes less revenue, which was intended by the
8	volumetric rate design and also not specific to DG customers. ³⁸
9	DTE Electric Company in Michigan proposed a grid access charge in 2018—
10	called a "system access contribution charge"—to be imposed on a DG customer's
11	system capacity size. The Michigan PSC rejected the charge, finding it "neither [cost
12	of service]-based nor equitable" and "unreasonable from a [cost of service]
13	ratemaking perspective." ³⁹
14	Finally, the Minnesota Public Utilities Commission reviewed a series of grid
15	access charges imposed by electric cooperatives. Like Evergy's proposed grid access
16	charge in this case, the Minnesota cooperatives' charge was calculated from a
17	purported revenue deficiency from DG customers and divided by and applied to
18	installed generation capacity. ⁴⁰ Notably, unlike Evergy's proposal in this case, the

³⁷ Final Order and Judgment, *The Alliance for Solar Choice and Renew Wisconsin v. Pub. Serv. Comm'n of Wisconsin and Wisconsin Elec. Power Co.*, Case No. 15-cv-153 (Dane Co. Wis. Cir. Ct., Nov. 20, 2015).
 ³⁸ Hr'g Tr. 63–66, 69, *The Alliance for Solar Choice and Renew Wisconsin v. Pub. Serv. Comm'n of Wisconsin*, Case No. 15-cv-153 (Dane Co. Wis. Cir. Ct., Oct. 30, 2015).

³⁹ Michigan Public Service Commission, *Order* at 198, Case No. U-20162 (May 2, 2019), <u>https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t0000004SM3yAAG</u>, adopting the Administrative Law Judge's Proposal for Decision at 285–286 (Mar. 5, 2019), <u>https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t0000004HLiHAAW</u>.

 ⁴⁰ Minnesota Public Utilities Commission, *Staff Briefing Papers* at 9, Docket No. E999/CI-16-512 (Nov. 9, 2017), <a href="https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId={80B77 D5F-0000-C61B-9997-5A54425728AD & documentTitle=201711-137125-01.

1		Minnesota cooperatives' method exempted the first 3.5 kW of DG to reflect the
2		"normal' variation of customer usage due to energy efficiency, usage patterns, and
3		household size" within the class as a whole and also capped the charge based on the
4		class-wide average customer distribution fixed costs. ⁴¹ Even with the additional
5		limitations on the charge that the Evergy proposal does not contain, the Minnesota
6		commission found that the charge, based on a DG customer's reduction in revenues,
7		violated a state law that allowed an additional charge for DG customers only where
8		"reasonable and appropriate based on the most recent cost of service study." ⁴²
9	Q.	Please summarize your testimony on the grid access charge proposal.
10	A.	The proposed grid access charge is plainly discriminatory and must be rejected by
11		this Commission. "Grid access" is a service both DG and non-DG customers receive,
12		not a different service provided to DG customers. In addition, contrary to Evergy's
13		claim that the grid access charge "appropriately charge[s] RS-DG customers for the
14		service they are taking when they are using the grid in a two-way fashion," ⁴³ the
15		shares is not then related to survey as to associated with the surrout of surrous, non-hased
		charge is neither related to any costs associated with the export of energy, nor based
16		on the level of exports. A DG customer with a balanced load and DG combination or
16 17		on the level of exports. A DG customer with a balanced load and DG combination or who uses battery storage, and thus eliminates exports, would pay the same charge as a

https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId={A0692 B63-0000-C732-A360-AF0673C2582B}&documentTitle=20185-142756-02. ⁴³ Faruqui 10:10–12.

⁴¹ *Id.* at 10.

⁴² Minn. Stat. § 216B.164, Sub. 3(a); Minutes of November 9, 2017 Public Utilities Commission Meeting, at Energy Agenda - E-999/CI-16-512 - In the Matter of a Commission Investigation into Fees Charged to Qualifying Facilities by Cooperative Electric Associations under the 2015 Amendments to Minn. Stat. § 216B.164, Subd. 3 (applying Minn. Stat. § 216B.164, Sub.3(a)),

1		The proposed grid access charge so obviously discriminates and the Company's
2		defense of it is so transparently weak that it appears to be a Trojan horse for Evergy's
3		"secondary" proposal of a high fixed charge for all customers.
4	В.	Evergy's "Minimum Bill" Proposal is Regressive and Contrary to Kansas's Net
5		Metering Law
6	Q.	Please describe Evergy's "alternative" rate design proposal.
7	A.	Evergy proposes an "alternative" to its discriminatory grid access charge proposal
8		that it claims is "easy to explain to customers and easy to implement." ⁴⁴ This
9		mechanism would require all residential customers to pay a minimum of \$35 to
10		Evergy each month, regardless of the amount of electricity each customer consumed.
11		While this would have little effect on higher use customers, low-use and often lower
12		income customers would be hit hardest by this proposal. Indeed, Evergy concedes
13		that its minimum bill proposal "will raise the monthly bills for low use customers." ⁴⁵
14		Evergy's proposal constitutes a regressive rate design similar to high fixed charges,
15		which this Commission has previously rejected. In addition, applying a minimum bill
16		to DG customers appears inconsistent with statutory requirements for net metering.
17	Q.	Has Evergy calculated the amount of incremental revenue that would result
18		from the proposed minimum bill?

No, it has not.⁴⁶ 19 A.

 ⁴⁴ *Id.* at 12:10.
 ⁴⁵ *Id.* at 14:4.
 ⁴⁶ Evergy Response to Interrogatories CURB-63 (Oct. 27, 2020).

- 1 Q. Are low-use customers also low-income customers? 2 Generally, low-income customers tend to have lower consumption than more affluent A. 3 customers. This has proven to be true in virtually all regions of the country as shown in Figure 3.47 4
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Even with lower usage, the electricity bills of customers with lower incomes

comprise a larger share of household income (known as energy burden) as shown in

Figure 4.48 9

⁴⁷ John Howat et al., Reversing Energy System Inequity: Urgency and Opportunity During the Clean Energy Transition, at 2, https://www.nclc.org/images/pdf/special projects/climate change/report-reversing-energy-system- $\frac{\text{inequity.pdf}}{^{48}}$ *Id.* at 3.







⁴⁹ Lutz testimony 10:9–12.

⁵⁰ *Id.* at 11:19–21.

1	Q.	Has Evergy estimated the number of non-DG customers that would be impacted	
2		by the proposed minimum bill?	
3	A.	No, it has not. ⁵¹	
4	Q.	Have you estimated the number of non-DG customers with one or more months	
5		of usage less than 278 kWh?	
6	А.	Yes. For the test period in this proceeding, I estimate that 32% of the 610,619 non-	
7		DG residential customers have one or more months of electricity consumption less	
8		than 278 kWh, representing more than 195,000 residential customers. In other words,	
9		Evergy seeks to address its belief that a subset of its 833 DG customers are not paying	
10		their "fair share" of fixed costs (which is also not supported by the evidence) by	
11		increasing the electricity bills of nearly 200,000 non-DG customers.	
12	Q.	Please explain how you derived your figures.	
13	А.	Evergy provided hourly consumption data for 406,074 non-DG residential customers,	
14		representing 67% of the total number of non-DG customers. Unfortunately, only	
15		187,876 of the 406,074 non-DG customers had complete data. Even so, all non-DG	
16		customers were reviewed for months where consumption fell below the 278 kWh	
17		threshold for minimum bill impact.	
18		I found that 129,576 of the 406,074 non-DG customers (31.9%) had at least one	
19		month with usage below the threshold. I also found the energy usage of 5,517 non-	
20		DG customers (1.36%) below the threshold for <i>every</i> month of the test period.	
21		Assuming that the mix of load patterns in the group of 406,074 non-DG	
22		customers is representative of the patterns of the somewhat larger total group of non-	

⁵¹ Evergy's Response to Interrogatory CURB-64 at 64(a) (Oct. 27, 2020).

1 DG customers, the number of non-DG customers with at least one month below the 2 threshold can be extrapolated to 194,845 customers in the larger total residential 3 group. 4 Notwithstanding the fact that Evergy should have presented this data to the 5 Commission in its case-in-chief, receiving complete data from Evergy would have 6 allowed me to provide more accurate estimates of the number of customers with 7 consumption below the 278-kWh threshold. Figure 5 shows non-DG customers 8 impacted by month.



Figure 5: Non-DG Customers by Month Below Minimum Bill Threshold

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Q. Do you have other concerns regarding the minimum bill proposal?

A. Yes. Increasing cost recovery from one-third of Evergy's customers through a
minimum bill policy without reducing other charges will produce more revenue than
authorized in the rate proceeding. Because there is a rate change moratorium in place
through 2023, this problem cannot be rectified immediately. At best, the Commission
would have to create a regulatory liability and recover the over-collection through a
future rate case—creating new cost shifts between customers and over time.

1	Q.	You noted above that you have concerns with the consistency of the minimum
2		bill with statutory requirements. Please explain.
3	A.	The Kansas net metering statute, K.S.A. 66-1266(b)(1) provides:
4 5 6		If the electricity supplied by the utility exceeds the electricity generated by the customer-generator during a billing period, the customer-generator <u>shall</u> be billed for the net electricity supplied by the utility. (emphasis added).
7		However, for customer-generators with net usage below 278 kWh, Evergy's
8		minimum bill proposal would bill the DG customer the minimum bill, which is more
9		than "for the net electricity supplied by the utility."
		V. Other Problems With The Company's Rate Design Proposals
10 11	<i>A</i> .	The DG customer cost of service decreases roughly proportionate to volumetric reduction
12	Q.	Please explain the issue or concern raised by the Company with respect to the
13		cost of serving DG customers.
14	A.	Evergy identifies the "primary policy issue associated with the installation of rooftop
15		solar panels" as a dramatic reduction in the amount of power that DG customers buy
16		from Evergy for purposes of revenue collection but not for purposes of cost
17		incurrence. ⁵² Evergy argues that:
18 19 20 21 22		As the volume comes down, their bill goes down. But the cost to serve them does not go down as dramatically. In the case of Evergy, RS-DG customers purchase significantly less energy from the utility without reducing their demand by a corresponding amount – about a 49% reduction in energy with a less than 5% change in demand. ⁵³
23		Evergy graphically demonstrates its claim by netting a residential customer load
24		profile (based on Westar's own 2013 residential load research sample) on an average

⁵² Faruqui Direct at 5:1–3. ⁵³ *Id.* at 5:4–8.

summer day with the output from a solar generator (based on Wichita solar data) to obtain a "net load profile"⁵⁴ as reproduced in Figure 6:

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Figure 6: Evergy Witness Faruqui's Figure 1.

Evergy's chart does not support the Company's "cost to serve" contention. The 5 6 entire argument conflates individual customer maximum demand with the cost to 7 provide service. According to Evergy, "[c]ost causation is the key element to 8 selecting an allocation method. This has been the standard by which an allocation 9 method is evaluated and it continues to be the gold standard for assessing cost 10 allocation."55 Yet, individual customer maximum demand causes virtually no costs 11 and has an imperceptible impact on cost to serve. Looking at DG customers' load 12 reduction during cost-causing hours produces the opposite result as Evergy's claims: installing DG reduces cost to serve roughly commensurate with revenue reductions. 13

⁵⁴ *Id.* at 6, Figure 1: Residential Customer Load Profile, Average Summer Day.

⁵⁵ Direct Testimony of Ronald J. Amen, at 8 (Feb. 1, 2018).

1	Q.	How are the costs of providing service all	located to customer classes?
2	A.	Costs are first functionalized into three or for	our basic functions. Evergy subdivides
3		costs into the following categories:	
4 5 6 7		 Production/supply Transmission Distribution Customer service/Retail Billing 	
8		Once functionalized, the costs are then o	classified as customer-related, demand-
9		related, or energy-related. Customer-related	l costs are generally recovered through the
10		monthly basic service fee. Energy-related co	osts are mostly fuel or purchased power
11		and some maintenance costs. These costs va	ary with energy and thus tend to match
12		consumption patterns of DG customers. It	is the recovery of demand-related costs
13		that are the underlying concern to Evergy th	nat resulted in this remanded proceeding.
14		The costs classified as demand related b	by function from Evergy (then, Westar's)
15		COS study are shown in Figure 7.	
16		Figure 7. COS by Function a	nd Sub-function ⁵⁶
		S	System Average
		Production/Supply	85.7%
		Transmission	0.5%
		Transformer	1.2%
		Primary Distribution	11.9%
		Secondary Distribution	0.6%
		Total	100.0%
17		Figure 7 shows that 97.6% of the total s	ystem demand-related costs are
18		production and primary distribution, with the	ne vast majority in the production function.

⁵⁶ *Id.*, Schedule RJA-6, COS by Function at 1 of 3.

1		Finally, the functionalized and classified costs are allocated to customer classes.
2		When allocated to customer classes, the percentages of residential class costs
3		attributable to five functions above are nearly the same as the system-wide
4		percentages. That is, the vast majority of residential demand costs are production
5		related demand costs and a smaller portion are primary distribution. Very small
6		fractions are transmission, transformers, and secondary distribution. This is reflected
7		in Figure 8, below.
8		For Evergy's "primary policy issue" to be true, DG customers would have to
9		reduce their consumption charges significantly without a similar reduction in their
10		contribution to the demands that drive the production and primary costs and, to a
11		lesser extent, to the demands that drive the transmission, transformer, and secondary
12		costs. As shown below, DG customers actually reduce those cost-causing demands
13		significantly.
14	Q.	What are the bases for cost-causation as identified by Evergy?
15	A.	The bases for cost causation vary by function. At issue in this proceeding has been
16		the recovery of fixed costs related to its production, transmission, and distribution
17		functions. According to Evergy's witness, the cost-causing bases for allocating these
18		functions are as follows:
19 20 21 22 23 24		<u>Production</u> : "In the case of production, the choice of an allocation factor depends on how costs are incurred for the capacity portion of production costs. It is a basic proposition of reliable utility service that the utility must have adequate capacity to meet the peak load requirements of its customers plus a level of reserves to maintain reliability. This means that peak load causes capacity costs to be incurred." ⁵⁷ Evergy goes on to note that a "portion of the capital cost for baseload
25		is related to energy," ⁵⁸ and that "[t]he AED method [average and excess demand]

⁵⁷ *Id.*, App. B at 10.
⁵⁸ *Id.*, App. B at 11.

1 2	recognizes a portion of cost is related to demand related cost." ⁵⁹	energy and the excess cost is a pure	
3 4 5 6 7	The AED method allocates a por generation on average demand (a.k.a. er four coincident peaks or "4CP." The 4C classes on the basis of each class's contr monthly summer peaks of the test year.	rtion (equal to the system load factor) of hergy), and the remainder on the basis of P portion assigns costs to customer ribution to each of the critical four	
8 9 10 11	<u>Transmission</u> : Allocation of transmission costs is based on the twelve coincident peak method or "12CP." The 12CP method assigns costs to customer classes on the basis of each class's contribution to each of the monthly system peaks of the test year.		
12 13 14 15	<u>Distribution</u> : Allocation of distribution of cost at issue. Generally, each class's no of all classes NCPs) is used to allocate the individual NCPs are used to allocate the	costs depends on the level of the system on-coincident peak or "NCP" (to the sum he primary system, and the sum of e secondary system.	
16	Application of these (and other) allocati	on factors results in the cost responsibility	
17	for the residential class represented in Figur	re 8.	
18	Figure 8. Residential COS by Func	tion and Sub-function ⁶⁰	
		Residential	
	Production/Supply	86.0%	
	Transmission	0.5%	
	Transformer	1.3%	
	Primary Distribution	11.5%	
	Secondary Distribution	0.7%	
	Total	100.0%	
19	Similar to the results shown in Figure 7	above, Figure 8 shows that 97.5% of the	
20	demand-related COS allocated to the reside	ntial class is related to production and	
21	primary distribution functions, with the vas	t majority in the production function.	

⁵⁹ *Id.*, App. B at 11.
⁶⁰ *Id.*, Schedule RJA-6, COS by Function at 1 of 3.

1	Q.	What are the implications of these COS results for the DG group of customers	
2		within the residential class in light of Evergy's contention that the cost to serve	
3		DG customers doesn't decline when consumption declines?	
4	A.	The implications for DG customers are significant. For the far and away largest cost	
5		function assigned to the residential class – production costs – the cost causation	
6		factors either (1) decline as consumption declines (for the average demand or energy	
7		portion) or (2) drop to zero or a negative value for the portion caused by contribution	
8		to the four coincident peaks.	
9		Evergy witness Faruqui's example characterized DG reducing energy purchased	
10		from the utility by about 49% but only reducing peak demand by about 5%. However,	
11		the only costs that are assigned to customers on the basis of individual customer	
12		maximum peak demand in the Company's COS study is a portion of the secondary	
13		distribution system. These costs only represent 0.6% of total system demand-related	
14		costs, and about one-quarter of total system secondary distribution costs. Even so, a	
15		reduction in loading on the secondary system, even if only 5%, is helpful.	
16	Q.	Did Evergy provide any actual data in its testimony to support its implied	
17		contention that the customer's maximum load drives cost causation?	
18	A.	No, it did not.	
19	Q.	If there were a relationship between individual customer's peak load and cost	
20		causation, would the DG customers be contributing to that cost?	
21	A.	Only to a limited extent. The individual peak loads of DG customers overlap with	
22		non-DG customers, but are generally occurring later in the evening. Figure 9 plots the	

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customers.



frequency of the occurrence of the monthly peak loads of individual DG and non-DG

5 Figure 9 shows the hours with the highest number of maximum loads for non-DG customers are 5 p.m. through 8 p.m. The corresponding four-hour period for DG 6 7 customers is 7 p.m. through 10 p.m. This load diversity tends to spread customers' 8 maximum demands on the distribution system our over a longer period of time, 9 reducing loading at any one time and costs on the grid. DG customers have lower 10 individual peaks during the cost-causing peak hours and have shifted their individual peaks to later in the day, when there is more unused capacity on the system and their 11 12 loads cause fewer if any costs.

13 Q. Please describe what is meant by "fixed costs."

A. The term "fixed costs" has different meanings in different contexts. When used for
utility ratemaking arguments, it typically is used to describe costs that do not vary
with the amount of energy consumed. For example, a customer's meter is a fixed cost

needed to measure customer consumption, but its cost does not vary with the amount
 of that consumption. Fuel costs, on the other hand, do vary directly with consumption
 in almost real time. The more energy consumed, the more fuel required to produce
 that energy. All other costs are fixed or variable depending on the time horizon.

5

Q.

Are fixed costs non-varying for long periods of time?

6 A. No, the lives of fixed costs vary. For example, many administrative and general 7 expenses are relatively short term in nature, such as information technology 8 equipment, automobiles, office furniture, and certain wages and salaries. Others are 9 longer term in nature but are in flux because they reflect large categories of costs that 10 include regular turnover rather than a single asset. Power plants have long lives but the number and mix of power plants changes over time. Transformers' lifespan 11 12 depends on age and wear caused by loading, and utilities replace and upgrade some 13 portion of their transformers on a regular basis. Some equipment maybe considered 14 for retirement is refurbished with newer components. Other components are 15 upgraded or upsized at end of economic or useful life. In the end, all costs are 16 variable. That is why Evergy's COS methodology (like most utilities) treat even 17 short-run "fixed" costs like power plants, distribution substations, and transmission as 18 being caused by usage and allocated by the long-run cost-causing usage attributes like 19 load during peak hours, rather than pro rata customer count. 20 **Q**. For the test period in this proceeding, what time of day did the cost-causing

20 Q. For the est period in this proceeding, what third of day did the cost-causing

21 system peak demands occur during each of the four summer months?

A. Figure 10 provides a chart showing the hour of the system peak for each of the foursummer months of the test period.

1	Figure 10: Timing of Test Period System Peak Hours ⁶¹		
		MONTH	PEAK HOUR
		JUNE 2017	5:00 p.m.
		JULY 2016	5:00 p.m.
		AUGUST 2016	5:00 p.m.
		SEPTEMBER 2016	4:00 p.m.
2		Comparing the timing of the system	peak in these months to the net load profile in
3		Dr. Faruqui's testimony, reproduced abo	ve, confirms that DG customers placed either
4		zero or a negative demand (i.e. they supp	blied capacity to the utility) on the system
5		during the hours upon which production	and primary distribution cost causation is
6		measured. The implication for the critica	al summer system peak hours is that DG
7		customers either placed no load on the sy	vstem or were actually providing capacity to
8		the system. Thus, contrary to Dr. Faruqu	i's assertions that DG customers do not
9		reduce costs to serve them commensurate	e with reduced kWh billing determinants, DG
10		customers significantly reduce their cont	ribution to peak load hours and, therefore,
11		cost to serve.	
12	Q.	Figure 1 in Evergy witness Faruqui's t	estimony relied on a hypothetical load
13		chart rather than actual Evergy custo	mer load data. Have you reviewed the
14		data for actual Evergy DG customers?	
15	А.	Yes, I have. Figure 11 shows the average	e load contribution of DG and non-DG
16		customers at the time of the peak demand	d for DG customers for each of the four
17		monthly summer peak hours.	

⁶¹ Evergy's Response to Interrogatories Sierra Club 8-16, Attach. Q8-16 Native Load Peak.



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Figure 11. Average Load Contribution for DG and Non-DG Customers

As depicted in Figure 11, the relative contribution of load to Evergy's overall system loads is much lower for DG customers than for non-DG customers, supporting the low cost-causation premise discussed above.

7 Q. Dr. Faruqui claims that DG customers "exhibit different consumption

8 characteristics" than non-DG customers. Do you agree?

9 A. No. Dr. Faruqui uses averages to reflect "typical" customers and generic solar 10 generation curves to make his argument. He uses net usage, which is not a 11 consumption pattern of the customer, but consumption combined with services 12 provided to the utility. The reality is that all customers are unique and exhibit 13 different consumption characteristics. An average hides the diversity within the class. 14 The variability among individual residential customers is significant. As shown in 15 Figures 2a and 2b, above, DG customers have consumption of utility-supplied electricity within the range of non-DG customers. Moreover, the degree to which 16

1		Evergy's 833 DG customers deviate from the mean is no greater than the amount by
2		which other subgroups deviate from the mean.
3	Q.	Is there other evidence that DG loads are within the natural variation of the
4		residential class?
5	А.	Yes. An APS study found considerable variation in load shapes among residential
6		customers, ⁶² identifying five different types of residential customers with very
7		different usage patterns. Figure 12 below illustrates the different sub-groups' load
8		shapes. The DG customer load shape in Arizona is similar to the load shape found in
9		Dr. Faruqui's Figure 1.

⁶² See Direct Testimony of Briana Kobor on Behalf of Vote Solar, Arizona Corporation Commission Docket Nos. E-01345A-16-0036 and E-01345A-16-0123, at 69 (Feb. 3, 2017), http://images.edocket.azcc.gov/docketpdf/0000177081.pdf ("Kobor APS Direct").



APS additionally indicated that the residential class breaks down into the various customer types as shown in Figure 13 below.

⁶³ Id.

Customer Type	Percentage of Customers
Weekday Evening Peakers	42%
Weekday Steady Eddies	19%
Weekday Daytimers	16%
Weekday Twin Peaks	10%
Weekday Night Owls	10%
Rooftop Solar Customers	3%

Figure 13: APS Residential Customer Class by Customer Type⁶⁴

2 Results from the APS study demonstrate that it is possible to identify several 3 distinct groups of customers larger than the group of rooftop solar customers with 4 highly varying load shapes. In this context, the rooftop solar customer load shape 5 does not appear to be an outlier. Moreover, other subgroups with an identifiable load 6 shape are much more numerous and therefore significant than solar customers, even 7 in APS territory that has significantly more solar customers than Evergy. 8 While this evidence is from Arizona, it demonstrates that (1) simple averaging of 9 the loads of a large class masks the high degree of variability that exists between 10 various subgroups within the class; and (2) DG customers are not the only subgroup 11 that, on average, may appear different from the other subgroups or the class as a 12 whole. To my knowledge, Evergy does not have the granular data necessary to 13 perform a similar analysis, but there is no reason to believe that a similar analysis 14 within its residential class would not show similar differences between subgroups. 15 **Q**. Please summarize your view of Evergy's cost causation concern. 16 Evergy's concern that the DG cost causation factors do not decline in the same A. 17 proportion as reductions in utility-supplied energy is misplaced and wrong. For the

vast majority of costs, the cost causation factor declines as much, if not more than, net
energy. However, even if DG customers' costs were higher than revenues, that
characteristic would not be unique to DG customers and imposing a charge only on
DG and not the many non-DG customers who exhibit a similar ratio of loads during
cost causing peaks to total energy use would discriminate against DG.

6

B. DG customers do not receive a different service than non-DG customers

7 Q. How does Evergy characterize the service provided to DG customers?

8 A. Evergy itself agrees that the Court states "a rate design is only discriminatory and in 9 violation of the statute if it charges RS-DG customers a higher price than non-DG customers for the same service."⁶⁵ Therefore, to justify its proposed grid charge, 10 11 Evergy attempts to characterize service to DG customers as a different service because DG customers "have the ability to send power out onto the grid."⁶⁶ But 12 13 exported electricity is a different service—one provided by the customer to the 14 utility—than the service reflected in inflowed electricity from the utility to the 15 customer. The utility-provided inflowed electricity service is subject to K.S.A. 66-16 117d, and Evergy cannot charge the DG customer more.

17 Q. Did the Court understand that DG customers have the ability to send power out 18 onto the grid?

A. Yes. The Court fully understood that the service utilities provide to DG customers reflects the fact that DG customers can export energy and reduce their consumption, even to net zero.

⁶⁵ Faruqui Direct at 9:17–10:2 (Oct. 13, 2020).

⁶⁶ *Id.* at 10:3–5.

1 2 3 4 5 6		Still connected to the utility grid, so-called DG customers have always paid the flat service charge, just like everyone else. But as a class, they use less utility generated electricity and thus the variable energy portion of their utility bills is lower. In fact, in some cases, if the DG customer is generating more electricity than they use and selling the excess back to the grid, the variable energy portion of the bill may amount to a net-zero. ⁶⁷
7		Yet, despite the fact that DG customers may export, the Court correctly found
8		that: "The proposed RS-DG rate design violates K.S.A. 66-117d because it uses a
9		customer's DG status as a basis for charging more for the same goods and services
10		than the Utilities charge to non-DG customers."68
11	Q.	How is electricity exported by a DG customer a service provided to the utility
12		and indirectly to a neighbor?
13	A.	Electricity exports from DG customers result in reduced loads on the distribution and
14		transmission systems, and reduced generation by the utility. As a matter of physics,
15		exported energy serves a neighboring customer. Energy exported from one residence
16		follows the path of least resistance to the nearest load where it is consumed
17		instantaneously without incremental cost to the utility, nor any control over the flow.
18		The neighboring customer consuming the exported solar electricity sees nothing
19		different in its normal electricity service, unaware that the electricity in use was
20		generated by their solar-powered neighbor. As a result, they pay the full retail price
21		for the electricity. The utility recovers full retail revenue for the solar electricity from
22		the DG customer's neighbor, which is set based on a revenue requirement covering
23		all of the utility's assets and expenses even though the utility did not use those assets
24		to provide the DG customer's electricity to a neighboring home.

 ⁶⁷ Matter of Westar Energy, Inc., 460 P.3d at 3.
 ⁶⁸ Id. at 13.

1		Thus, a DG customer's exported energy provides energy service to the neighbor
2		without any action or management by the utility, and the utility receives retail
3		revenue from the non-solar neighbor, thus being made whole and in some cases more
4		than whole.
		VI. Summary of Recommendations
5	Q.	Please summarize your recommendations to the Commission.
6	A.	I recommend the Commission reject both the Company's proposed grid access charge
7		and minimum bill alternative as replacement rate designs for the RS-DG group.
8		I further recommend the Commission require Evergy to either eliminate the DG
9		customer class and transfer all customers back to the RS class, or to impose the same
10		rates and charges on DG customers as the RS rate.
11		Finally, Evergy has collected higher charges from RS-DG customers for two
12		years despite the Kansas Supreme Court finding the charges unlawful and reversing.
13		To effectuate the court's decision, I recommend that the illegal charges be returned to
14		those customers with interest at the Company's approved weighted cost of capital.
15	Q.	Does this complete your testimony?
16	A.	Yes, it does.

BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

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In the Matter of the Joint Application of Westar Energy, Inc. and Kansas Gas and Electric Company for Approval to Make Certain Changes in their Charges for Electric Service

Docket No. 18-WSEE-328-RTS

VERIFICATION

I, Rick Gilliam, state and affirm the following: that I am an expert witness for the Climate and Energy Project, Sierra Club and Vote Solar; I have read and reviewed the above and foregoing testimony; and attest that the contents therein are true and correct to the best of my information, knowledge, and belief.

Dated this 13th day of November, 2020.

<u>/s/ Rick Gilliam</u> Rick Gilliam

******The notarization requirement is waived temporarily pursuant to Kansas Corporation Commission Order Temporarily Waiving Notary Requirement filed in KCC Docket No. 20-GIMX-393-MIS on April 21, 2020.

ATTACHMENT RG-1

STATEMENT OF QUALIFICATIONS

James F. "Rick" Gilliam Senior Program Director, Vote Solar <u>rick@votesolar.org</u> 303-550-3686

Professional Employment

January 2012 to Present: Program Director, DG Regulatory Policy, Vote Solar. Manage technical and policy research for Vote Solar, and engage in state, regional, and national campaigns related to distributed solar generation and beneficial electrification. Expert witness in many formal state regulatory proceedings addressing issues related to distributed solar resources.

March-April 2012: Solar Energy Industries Association - Under a short term contract with SEIA to participate in an Xcel Energy distributed solar generation Technical Review Committee and to manage consulting support also under contract to SEIA.

January 2007 to January 2012: SunEdison, LLC - Various solar policy related positions beginning with Director of Interior West Policy to Managing Director of Western Policy (July 2007), to Vice President of North American Government Affairs (July 2009) to Global Policy Advisor (July 2011). In each of these roles, directed and managed policy research, development and implementation for the company for the various geographies identified at the regulatory and legislative levels.

June 2011 to December 2011: Chair of the Solar Alliance Board.

Dec 1994 to Jan 2007: Senior Energy Policy Advisor, Western Resource Advocates (formerly the Land and Water Fund of the Rockies), Boulder, Colorado. Develop innovative clean energy and air quality public policies within the economic and cultural framework unique to this region. Lead environmental advocate in development of Arizona Environmental Portfolio Standard, Nevada Renewable Portfolio Standard implementation rules, Colorado Renewable Energy Standard legislative proposals, and the 2003 Utah Renewable Energy Standard legislative proposal. Principal author of Colorado's Amendment 37 and lead advocate for related PUC rule development.

Jan 1983 to Dec 1994: Director of Revenue Requirements, Public Service Company of Colorado, Denver, Colorado. Primary responsibility for development of formal rate-related filings for this investor-owned utility for electric, gas, and thermal energy service in two states and the FERC. Developed and responded to a variety of proposed mechanisms to encourage the use of energy efficiency technologies, including innovative rate design approaches.

Dec 1976 to Dec 1982: Technical Witness (Engineer), Federal Energy Regulatory Commission, Washington, D.C. Testified as expert witness on behalf of the FERC in wholesale rate filings on technical, accounting, and economic issues related to rate design, pricing, and other issues.

Education

Masters, Environmental Policy and Management, University of Denver, Denver, Colorado Bachelor of Science, Electrical Engineering, Rensselaer Polytechnic Institute, Troy, New York

Summary of Formal Testimonies and Rulemaking Participation

Representing Vote Solar

- > Public Service Company of CO Docket 20A-0204E: Transportation Electrification Plan
- > Public Service Company of CO Docket 19AL-0687E: Residential TOU Rates
- El Paso Electric Company Case No. 19-00349-UT, CCN for Newman 6 C.T.
- > Public Service Company of CO Docket 19A-0369E: Renewable Energy Standard Plan
- Georgia Power Company, Docket No. 42516: GRC Rate Design & Structure
- Public Service Company of CO Docket 19AL-0268E: GRC Phase 1
- > PUC of Nevada 19-06010: Rulemaking addressing Senate Bill 358 (2019)
- Colorado PUC 19R-0096E: Proposed Amendments to Multiple PUC Rules
- Nevada Energy 18-06003; Integrated Resource Plan addressing QFs, inter alia
- Public Service Company of CO Docket 17A-0797E: Accelerated Depreciation and the Renewable Energy Standard Adjustment
- Southwestern Public Service Co., 17-00255-UT: GRC and Solar Surcharge
- > Pacificorp/RMP Docket No. 17-035-61: Export Credit Rate Phase 1
- Idaho Power Company, Case No. IPC-E-17-13, Net Metering Service Class
- Nevada Power Company Docket No. 17-06003, et al., GRC Rate Design
- Public Service Company of CO Docket 16A-0396E: Electric Resource Planning
- Nevada Energy Docket No. 17-03009/10: Proposed Subscription Solar Program
- > Pacificorp/RMP Docket No. 14-035-114: Costs and Benefits of Net Energy Metering
- Kansas Corporation Commission Investigation Docket 16-GIME-403-GIE: Rate Design for Distributed Generation Customers
- > Public Service Company of CO Docket 16A-0546E: Decoupling
- Sierra-Pacific Power Company Docket 16-06006, et al: GRC Phase 2
- Sierra-Pacific Power Company Docket 16-07001, et al: IRP
- > Public Service Company of CO Docket 16AL-0048E, et al: Three docket settlement
- Public Service Company of CO Docket 16AL-0048E: GRC Phase2
- Public Service Company of CO Docket 16A-0055E: Solar*Connect 2 Subscription Proposal
- Nevada Energy Docket No. 15-07041, et al.: Cost of Service Study and Net Metering Tariffs
- El Paso Electric Company Case No. 15-00127-UT: General Rate Case
- Public Service Company of CO Docket 13AL-0958E: Qualifying Facilities Rates/Remand
- Public Service Company of CO Docket 14A-0302E: Solar*Connect Subscription Proposal
- ➤ We Energies (WI) Docket No. 05-UR-107, General Rate Case
- Rocky Mountain Power (UT) Docket No. 13-035-184: General Rate Case
- > Public Service Company of CO Docket 13AL-0958E: Qualifying Facilities (QF) Rates
- ▶ Public Service Company of CO Docket 13A-0836E: 2014 RES Compliance Plan
- > Public Service Company of CO Docket 13AL-0695E: Line Extension Policy
- ▶ Idaho Power Company, Case No. IPC-E-12-27, Net Metering Service
- Arizona Public Service, et al., Docket No. E-01345A-10-0394, et al., RES Compliance
- New Mexico PRC Case No. 11-00218-UT: RPS Reasonable Cost Threshold
- Tucson Electric Power Docket No. E-01933A-12-0291: General Rate Case

Representing Sunedison LLC

- > Public Service Co of New Mexico Case No. 10-00037-UT 2010 Procurement Plan
- Public Service Company of CO Docket 09A-772E: 2010 Compliance Plan
- Public Service Company of CO Docket 09AL-299E: 2009 Rate Case Phase 2

- > Public Service Company of CO Docket 08A-532E: 2009 Compliance Plan
- Colorado PUC Rulemaking Docket 08R-424E: Renewable Energy Standard Rules
- New Mexico PRC Case No. 08-00084-UT: Reasonable Cost Threshold Rulemaking
- Nevada PUC Docket No. 07-10007: Petition for Declaratory Order re 3rd party ownership
- Public Service Company of CO Docket 07A-447E: 2007 Resource Plan
- Public Service Company of CO Docket 07A-462E: 2008 Compliance Plan
- New Mexico PRC Case No. 07-00157-UT: RPS Rulemaking; diversity standard
- Public Service Company of CO Docket 06A-478E: 2007 Compliance Plan
- > Public Service Company of CO Docket 06A-534E: Approval of Alamosa Contract

Representing large commercial customers

- Nevada Power Company Docket No. 02-11037: Electric Tariff Rule related to loss factor associated with metering secondary service at primary level
- Nevada Power Company Docket No. 02-5044: Electric Tariff Rule related to metering

Representing Western Resource Advocates (formerly the Land and Water Fund of the Rockies)

- > Public Service Company of CO Docket 06S-234EG: 2006 GRC Windsource issue
- > Public Service Company of CO Docket 05A-112E: Renewable Energy Standard Rulemaking
- Public Service Company of CO Docket 05A-288E: Electric Quality of Service Monitoring & Reporting Plan: 2007-08
- > Public Service Company of CO Dockets 06S-016E: Renewable Energy Service Adjustment
- > Public Service Company of CO Consolidated Dockets 04A-214E, 215, 216E: Resource Plan
- > Public Service Company of CO Docket No. 04S-164E: GRC Windsource & Net Metering
- > Public Service Company of CO Docket 02S-315EG: 2002 GRC Windsource issue
- Nevada Power Company Docket No. 01-7016: Demand-side Management Programs
- PacifiCorp Rate Case Docket No. 01-035-10: Demand-side Mgt Cost Recovery
- > Public Service Company of CO Docket No. 00A-008E: IRP DSM & Wind Resources
- PacifiCorp Rate Case Docket No. 99-035-10: System Benefit Charge Proposal
- Arizona Restructuring Rulemaking Docket No. 99-205: Renewable Portfolio Standard
- > Public Service Company of CO Docket No. 98A-511E: Air Quality Improvement Rider
- Arizona Restructuring Rulemaking Docket No. 94-165: Stranded Cost Proceeding
- ➢ Nevada Power Company Docket No. 94-7001 (Refiled): Integrated Resource Plan
- Southwestern Public Service Case No. 2678: Merger Proceeding
- PSCo Docket No. 95A-531EG: Merger Proceeding

Representing Public Service Company of Colorado

- > Public Service Company of CO Docket No. 93S-001EG GRC Revenue Requirements
- > Public Service Company of CO Docket No. 91A-480EG DSM & Decoupling Proceeding
- > Public Service Company of CO Docket No. 93I-199EG Incentive Regulation Investigation
- Public Service Company of CO Docket No. 91S-091EG GRC
- > Public Service Company of CO No. 91A-281E Fort St. Vrain Supplemental Settlement
- > Various PSCo FERC rate proceedings, and subsidiary rate proceedings

Representing the Staff of the Federal Energy Regulatory Commission

- Connecticut Light & Power Company, Docket ER 82-301
- Kentucky Utilities Company, Docket ER 81-341

- > Philadelphia Electric Company, Docket ER 80-557, et al.
- Minnesota Power & Light Company, Docket ER 80-5
- Boston Edison Company, Docket ER 79-216, et al.
- Connecticut Light & Power Company, Docket ER 78-517
- South Carolina Electric & Gas Company, Docket ER 78-283
- Minnesota Power & Light Company, Docket ER 78-245
- New England Power Company, Docket ER 78-78
- ▶ New England Power Company, Docket ER 77-97

ATTACHMENT RG-2

COMPILATION OF INTERROGATORIES TO EVERGY

Response to Astrab Joseph Interrogatories - CURB_20201014 Date of Response: 10/27/2020

Question:CURB-58

Reference the Direct Testimony on Remand of Mr. Lutz at page 8, lines 14-21. Please explain in detail how Evergy determined that a grid access charge of \$6.50 per kW of installed DG capacity would be necessary to resolve RS-DG subsidy concerns. Include an electronic copy of all workpapers supportive of Evergy's conclusion.

Response:

Please see the attached file.

Prepared by Brad Lutz

Attachment: QCURB-58_Grid Access Charge Calculation.xlsx

Grid Access Charge Calculation

	Component	Value	Sources and Notes
[1]	# of DG Customers	156	From cost of service study; see "Westar COS Study.xlsm"
	Costs		
[2]	Total Costs from DG Class (\$/yr)	\$217,688	From Faruqui Rebuttal Testimony; also see "Westar COS Study.xlsm"
[3]	Total Costs from DG Class (\$/cust-yr)	\$1,395	[2] / [1]
	Revenue		
[4]	Existing DG Revenue (\$/yr)	\$133,994	From Faruqui Rebuttal Testimony
[5]	Existing DG Revenue (\$/cust-yr)	\$859	[4] / [1]
	Cross-subsidy		
[6]	Cross-subsidy (\$/yr)	\$83,694	[2] - [4]
[7]	Cross-subsidy (\$/cust-yr)	\$536	[6] / [1]
[8]	Cross-subsidy (\$/cust-month)	\$45	[7] / 12 months
	Grid Access Charge		
[9]	Avg. Installed Capacity (kW/cust)	6.85	For Kansas Central; provided by Evergy
[10]	Grid Access Charge (\$/kW-month)	\$6.53	[8] / [9]

Response to Astrab Joseph Interrogatories - CURB_20201014 Date of Response: 10/27/2020

Question:CURB-63

Reference the Direct Testimony on Remand of Mr. Lutz at page 12, lines 19-22. Please provide an estimate of the amount of incremental revenue that would be produced by the Company's proposed minimum bill in excess of that contemplated in the Company's last general rate proceeding.

Response:

An estimate of the incremental revenue is not available at this time.

Prepared by Brad Lutz

Response to Astrab Joseph Interrogatories - CURB_20201014 Date of Response: 10/27/2020

Question:CURB-64

Reference the Direct Testimony on Remand of Mr. Lutz at page 13, lines 1-6.

a. For 2019, please provide a bill frequency analysis showing the total number of residential bills, by monthly usage level, using 50 kWh increments (i.e., 0-50, 51-100 etc.). For 2019, what is the total number of monthly bills with usage less than 278 kWh per month?

b. Assume that the Company's proposed minimum bill were to be set at \$77 per month. Please provide the breakeven level of monthly usage under this scenario (i.e., the usage level equivalent to the 278 kWh identified in the referenced testimony).

d. For 2019, what is the total number of monthly bills with usage less than the breakeven level identified in part (b)?

Response:

- a. This data is not available.
- b. \$77 \$14.50 customer charge = \$62.50 remaining
 \$62.50 ÷ \$0.073512 first & second block energy charge = 850.2 kWh
 At the \$77 minimum bill level the equivalent usage would be 850.2 kWh
- c. This data is not available.

Prepared by Brad Lutz

Response to Bender David Interrogatories - Sierra Club_20201014 Date of Response: 10/27/2020

Question:8-3

Reference the Direct Testimony on Remand of Ahmad Faruqui at 7:5–9. Quantify the amount of increase to Westar/Evergy's costs attributable to RS-DG customers' exported electricity, itemized separately for each of the following: (1) complicating system planning; (2) managing load flow; (3) system dispatch; (4) additional administrative burden; (5) additional transactional burden; (6) additional accounting burden; and (7) additional billing burden. Produce all evidence, worksheets, analysis and calculations relied upon in identifying and quantifying each such category of increased cost.

Response:

This quantification has not been carried out.

Response to Bender David Interrogatories - Sierra Club_20201014 Date of Response: 10/27/2020

Question:8-4

Reference the Direct Testimony on Remand of Ahmad Faruqui at 7:11–16. Identify each instance during the most recent five (5) years when "geographically clustered" RS-DG customers' exported electricity resulted in a new capacity constraint on the Westar/Evergy distribution system as a result of distribution transformers that were not equipped to handle the excess generation. For each instance identified, produce the engineering studies and property records related to any replacement or addition of a distribution transformer necessitated by RS-DG customer exports.

Response:

This is a general statement referring to what is likely to happen in the future as more RS customers become RS-DG customers.

Response to Bender David Interrogatories - Sierra Club_20201014 Date of Response: 10/27/2020

Question:8-11

Produce the workpapers, calculations, analysis and underlying data that support the claim on page 8:15–16, of the Direct Testimony of Lutz on Remand that a \$6.50/kW grid access charge would be required "[t]o resolve the subsidy concern."

Response:

See workpaper "Q8-11 Grid Access Charge Calculation.xlsx"

	Component	Value	Sources and Notes
[1]	# of DG Customers	156	From cost of service study; see "Westar COS Study.xlsm"
	Costs		
[2]	Total Costs from DG Class (\$/yr)	\$217,688	From Faruqui Rebuttal Testimony; also see "Westar COS Study.xlsm"
[3]	Total Costs from DG Class (\$/cust-yr)	\$1,395	[2] / [1]
	Revenue		
[4]	Existing DG Revenue (\$/yr)	\$133,994	From Faruqui Rebuttal Testimony
[5]	Existing DG Revenue (\$/cust-yr)	\$859	[4] / [1]
	Cross-subsidy		
[6]	Cross-subsidy (\$/yr)	\$83,694	[2] - [4]
[7]	Cross-subsidy (\$/cust-yr)	\$536	[6] / [1]
[8]	Cross-subsidy (\$/cust-month)	\$45	[7] / 12 months
	Grid Access Charge		
[9]	Avg. Installed Capacity (kW/cust)	6.85	For Kansas Central; provided by Evergy
[10]	Grid Access Charge (\$/kW-month)	\$6.53	[8] / [9]

Grid Access Charge Calculation

Response to Bender David Interrogatories - Sierra Club_20201014 Date of Response: 10/28/2020

Question:8-16

Identify, by month, from January 1, 2015 through present, the monthly system peak in kilowatts and the date and time of that peak (specifying hour beginning or hour ending and whether adjusted for daylight savings time).

Response:

Monthly system peak data has been provided for Evergy Kansas Central (Westar) from January 2015 through September 2020.

Attachment(s): Q8-16_ Sierra Club_20201014_EKC_Native_Load_Peak.xls

Prepared by: Kevin Helmer, Accountant

ATTACHMENT: Q8-16 Sierra Club 20201014 EKC Native Load Peak.xls

Year	Month	Peak Month	Peak Day	Peak Hour Ending	Peak MWh	Peak KWh	Check Date	Check Data	Check Error	DST	Even Split	25%	75%	Error Check
2015	January	1	7	19	3617,4807	3617480.7	1/7/2015	3617,4807						
2015	February	2	4	19	3418 4544	3418454 4	2/4/2015	3418 4544						
2015	March	3	5	8	3251 9797	3251070 7	3/5/2015	3251 9797						
2015	April	4	7	18	2014 4828	2011/182.8	4/7/2015	2044 4828						
2015	Mov	4	27	10	2344.4020	2200776.6	5/27/2015	2344.4020						
2015	luno	5	21	10	4976 9020	4976902.0	6/24/2015	4976 9020						
2015	Julie	0	24	10	4070.0039	4070003.3 E100050.3	7/24/2013	4070.00039 E166.6E02						
2015	July	/	24	17	4704 0054	47040059.5	1/24/2015 9/2/2015	4794 0954						
2015	August	8	3	17	4781.9854	4781985.4	8/3/2015	4781.9854						
2015	September	9	3	17	4637.9639	4637963.9	9/3/2015	4637.9639						
2015	October	10	8	1/	3469.5144	3469514.4	10/8/2015	3469.5144						
2015	November	11	30	19	3015.4428	3015442.8	11/30/2015	3015.4428		3722.62	1861.31	893.429	2791.97	
2015	December	12	28	19	3228.016	3228016	12/28/2015	3228.016						
2016	January	1	19	19	3317.5305	3317530.5	1/19/2016	3317.5305						
2016	February	2	4	8	3148.0503	3148050.3	2/4/2016	3148.0503						
2016	March	3	2	8	2786.0931	2786093.1	3/2/2016	2786.0931						
2016	April	4	26	15	3103.9861	3103986.1	4/26/2016	3103.9861						
2016	May	5	25	18	3550.6296	3550629.6	5/25/2016	3550.6296						
2016	June	6	22	17	5102.5888	5102588.8	6/22/2016	5102.5888						
2016	Julv	7	21	17	5183.9224	5183922.4	7/21/2016	5183.9224						
2016	August	8	11	17	5110.0586	5110058.6	8/11/2016	5110.0586						
2016	September	9	20	16	4607.6158	4607615.8	9/20/2016	4607.6158						
2016	October	10	17	17	3684 3052	3684305.2	10/17/2016	3684 3052						
2016	November	11	1	16	3086 1249	3086124.9	11/1/2016	3086 1249		3735 17	1867 59	896 441	2801 38	
2010	Docombor	12	10	0	2565 9524	2565952 4	12/10/2016	2565 9524		5755.17	1007.00	030.441	2001.00	
2010	December	12	15	10	2460 70	2460700	1/5/2010	2460 70						
2017	January	1	5	19	3409.79	3409790	1/5/2017	3409.79						
2017	rebluary	2	9	0	3123.2024	3123202.4	2/9/2017	3123.2024						
2017	March	3	13	11	3044.1455	3044145.5	3/13/2017	3044.1455						
2017	April	4	19	17	3173.118	3173118	4/19/2017	3173.118						
2017	May	5	15	18	3903.5361	3903536.1	5/15/2017	3903.5361						
2017	June	6	15	17	4753.3588	4753358.8	6/15/2017	4753.3588						
2017	July	7	20	17	5242.0522	5242052.2	7/20/2017	5242.0522						
2017	August	8	20	18	4600.904	4600904	8/20/2017	4600.904						
2017	September	9	21	17	4762.3848	4762384.8	9/21/2017	4762.3848						
2017	October	10	2	16	3718.8263	3718826.3	10/2/2017	3718.8263						
2017	November	11	27	19	2960.6935	2960693.5	11/27/2017	2960.6935		3935.3	1967.65	944.473	2951.48	
2017	December	12	27	19	3466.3055	3466305.5	12/27/2017	3466.3055						
2018	January	1	17	8	3754.7313	3754731.3	1/17/2018	3754.7313						
2018	February	2	5	8	3452.5844	3452584.4	2/5/2018	3452.5844						
2018	March	3	6	20	2953.5631	2953563.1	3/6/2018	2953.5631						
2018	April	4	4	8	3019.2813	3019281.3	4/4/2018	3019.2813						
2018	Mav	5	31	18	4291.2132	4291213.2	5/31/2018	4291.2132						
2018	June	6	28	17	5203.9749	5203974.9	6/28/2018	5203.9749						
2018	July	7	12	16	5113 7366	5113736.6	7/12/2018	5113 7366						
2018	August	8	27	17	4870 7232	4870723.2	8/27/2018	4870 7232						
2018	Sentember	9	19	17	4746 5808	4746580.8	9/19/2018	4746 5808						
2018	October	10	3	17	4178 5297	4178529 7	10/3/2018	4178 5297						
2018	November	11	12	10	3265 0176	3265017.6	11/12/2018	3265 0176		3920.48	1960 24	940 916	2940 36	
2010	Docombor	12	2	10	2260.0170	2260992.2	12/2/2010	2260.0170		0020.40	1500.24	540.510	2340.00	
2010	lanuary	1	20	0	2401 6701	2401670.1	1/20/2010	2401 6701						
2019	January	1	30	0	3491.0791	2491079.1	2/7/2019	3491.0791						
2019	Moreh	2	1	0	2437.0017	3437330	2/1/2019	3437.330						
2019	Narch	3	4	0	3477.0017	3477001.7	3/4/2019	3477.0017						
2019	April	4	10	17	2869.4619	2869461.9	4/10/2019	2869.4619						
2019	May	5	16	17	3858.3256	3858325.6	5/16/2019	3858.3256						
2019	June	6	28	17	4827.4774	4827477.4	6/28/2019	4827.4774						
2019	July	7	19	17	5108.4157	5108415.7	7/19/2019	5108.4157						
2019	August	8	20	17	5032.1791	5032179.1	8/20/2019	5032.1791						
2019	September	9	3	17	4727.3376	4727337.6	9/3/2019	4727.3376						
2019	October	10	1	15	4214.8243	4214824.3	10/1/2019	4214.8243						
2019	November	11	11	19	3219.7706	3219770.6	11/11/2019	3219.7706		4132.88	2066.44	991.892	3099.66	
2019	December	12	16	19	3291.28	3291280	12/16/2019	3291.28						
2020	January	1	21	9	3318.0842	3318084.2	1/21/2020	3318.0842						
2020	February	2	14	8	3425	3425000	2/14/2020	#N/A	#N/A					
2020	March	3	16	12	2734	2734000	3/16/2020	#N/A	#N/A					
2020	April	4	3	12	2755	2755000	4/3/2020	#N/A	#N/A					
2020	May	5	31	18	3208	3208000	5/31/2020	#N/A	#N/A					
2020	June	6	30	18	4723	4723000	6/30/2020	#N/A	#N/A					
2020	Julv	7	8	17	4773	4773000	7/8/2020	#N/A	#N/A					
2020	August	8	28	17	4942	4942000	8/28/2020	#N/A	#N/A					
2020	September	9	7	17	4301	4301000	9/7/2020	#N/A	#N/A					
		-												

CERTIFICATE OF SERVICE

I hereby certify that on this 13th day of November, 2020, a true and correct copy of

TESTIMONY AND ATTACHMENTS OF RICK GILLIAM ON BEHALF OF CLIMATE AND ENERGY PROJECT, SIERRA CLUB, AND VOTE SOLAR IN RESPONSE TO WESTAR'S PROPOSED RATE DESIGNS was electronically delivered to the following

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