

BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

REBUTTAL TESTIMONY

OF

AHMAD FARUQUI

ON BEHALF OF

WESTAR ENERGY

DOCKET NO. 18 – WSEE- 328-RTS

July 3, 2018

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND ADDRESS.

A. My name is Ahmad Faruqi. I am a Principal with the Brattle Group, an economics consulting firm. My address is 201 Mission Street, Suite 2800, San Francisco, California 94105.

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN THIS PROCEEDING?

A. Yes, I submitted direct testimony on behalf of Westar Energy, Inc. (“Westar”) in this proceeding.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my rebuttal testimony is to address certain points in the rebuttal testimony of Ms. Madeline Yozwiak (Sierra Club and Vote Solar), Ms. Stacey Harden (CURB), Mr. Brian Kalcic (CURB), and Dr. Bob Glass (KCC Staff). In responding to the intervenor testimony, I make the following points:

- Westar’s rate proposal does not over-collect costs from DG customers.
- Westar’s proposed rate design is a reasonable reflection of the underlying cost structure.
- The average increase in DG bills resulting from the new RS-DG rate proposal is due to the change in revenue requirement and should not be attributed to the introduction of a demand charge.
- It is appropriate for the RS-DG rate to be based on a DG-specific revenue requirement.

- 1 • Customers can understand and respond to a demand
2 charge.
- 3 • Westar's residential rate proposal is sound and
4 consistent with the principles of rate design.

5 **II. WESTAR'S RATE PROPOSAL DOES NOT OVER-**
6 **COLLECT COSTS FROM DG CUSTOMERS**

7 **Q. DO WESTAR'S DG CUSTOMERS CURRENTLY SUBSIDIZE NON-**
8 **DG CUSTOMERS?**

9 A. No, contrary to Ms. Yozwiak's statement that DG customers subsidize
10 non-DG customers under the current rate design.¹

11 **Q. WHY IS THAT NOT THE CASE?**

12 A. Ms. Yozwiak uses inconsistent numbers from Westar's CCOS study
13 and Proof of Revenue analysis. Specifically, Ms. Yozwiak relies on a
14 revenue estimate that assumes growth in RS-DG customers relative to
15 the test year. She compares this revenue estimate to test year costs
16 that do not reflect the same growth. This error causes her to overstate
17 RS-DG revenues relative to the costs of the RS-DG class.

18 In the Proof of Revenue analysis, Westar has assumed that the
19 RS-DG customer base will grow by roughly 72 percent, resulting in an
20 increase in RS-DG revenue of 59 percent.² It is common for Proof of

¹ Yozwiak Rebuttal, page 16, lines 5 to 15.

² Total RS-DG sales volume increases from 1,118,140 kWh to 1,918,300 kWh due to pro forma adjustments. Revenue increases from \$153,989 to \$244,709 due to the pro forma adjustments. As I discuss later in the testimony, I made an additional adjustment for the TDC rider revenue, which decreases the corrected revenue estimate by \$19,995.

1 Revenue studies to include such adjustments. This growth, however,
2 is not reflected in the costs from the CCOS study, as the CCOS study
3 deliberately only adjusts test year values for future changes that are
4 “known and measurable.” It is inappropriate to compare a historical
5 cost value to a revenue value which assumes an estimated,
6 significantly higher number of customers in the future.

7 **Q. WHAT HAPPENS IF THIS ERROR IN YOZWIAK’S ANALYSIS IS**
8 **FIXED?**

9 A. Once Ms. Yozwiak’s analysis is corrected for this error, it becomes
10 clear that current rates under-recover costs from DG customers. In
11 other words, DG customers are being subsidized by non-DG
12 customers under current rates, not the other way around, as suggested
13 by Ms. Yozwiak.

14 Table 1 illustrates how correcting the error changes Ms.
15 Yozwiak’s findings. Whereas Ms. Yozwiak was estimating that
16 Westar’s current rates collect revenues from DG customers that are
17 112 percent of costs, the corrected analysis shows that these revenues
18 account for only 62 percent of costs.

Table 1: Residential DG Costs and Revenues (Current Rate)

	Costs	Revenues	Revenue as % of cost
Yozwiak testimony with error	\$217,688	\$244,709	112%
Corrected Yozwiak figures	\$217,688	\$133,994	62%

Source: Yozwiak Rebuttal, page 18 and Brattle analysis.

1 **Q. HOW DID YOU CORRECT MS. YOZWIAK’S ERROR?**

2 A. To correct Ms. Yozwiak’s error, I used test year revenue from Westar’s
3 Proof of Revenue file, rather than revenue reflecting the pro forma
4 adjustments that led to the inaccurate comparison in Ms. Yozwiak’s
5 analysis. Additionally, I have subtracted TDC rider revenue from the
6 test year revenues in the Proof of Revenue file, as my understanding is
7 that the TDC rider is not included in the comparable cost figures from
8 the CCOS study.³

9 **Q. DOES THIS ERROR IN MS. YOZWIAK’S ANALYSIS HAVE**
10 **IMPLICATIONS FOR HER CONCLUSIONS ABOUT THE**
11 **PROPOSED DG RATE?**

12 A. Yes. The same error in Ms. Yozwiak’s conclusions about Westar’s
13 current rate also results in incorrect conclusions being drawn about

³ There may be additional minor unaccounted-for inconsistencies between the Proof of Revenue file and the CCOS study, such as changes in rider values due to the forward-looking nature of the Proof of Revenue study. However, these are inconsequential relative to the overriding problem in Ms. Yozwiak’s analysis that I have described above.

1 Westar's proposed rates. Ms. Yozwiak has incorrectly concluded that
2 Westar's proposed RS-DG rate further exacerbates what she
3 incorrectly perceived to be an over-collection of costs from DG
4 customers.

5 Once I have corrected the error in Ms. Yozwiak's analysis using
6 the method described above, it becomes clear that the proposed DG
7 rates do not result in an over-collection of costs from DG customers. In
8 fact, the proposed DG rates reduce but do not eliminate the under-
9 collection of costs from DG customers. This, in effect, helps to
10 mitigate, but does not fully eliminate, the unintended subsidization of
11 DG customers that exists in current rates, which is Westar's stated
12 objective for the rate.⁴ This is illustrated in Table 2.

Table 2: Residential DG Costs and Revenues (Current and Proposed Rates)

	Costs	Revenues	Revenue as % of cost
Original Yozwiak Testimony			
Current rate	\$217,688	\$244,709	112%
Proposed rate	\$217,688	\$301,429	138%
Corrected Yozwiak Figures			
Current rate	\$217,688	\$133,994	62%
Proposed rate	\$217,688	\$192,049	88%

Source: Yozwiak Rebuttal, pages 18-19 and Brattle analysis.

⁴ Faruqui Direct, page 16, lines 13 to 19 and page 17, lines 1 to 3.

1 **Q. AFTER CORRECTING THE FIGURES IN MS. YOZWIAK’S**
2 **ANALYSIS, ARE THE NEW FINDINGS CONCEPTUALLY**
3 **CONSISTENT WITH THE CONCLUSIONS IN YOUR TESTIMONY?**

4 A. Yes. The correction to Ms. Yozwiak’s analysis shows that current
5 rates under-collect costs from residential DG customers, and that
6 Westar’s proposed RS-DG rate will help to mitigate that under-
7 collection. This is the same finding presented in my direct testimony.⁵

8 **Q. DOES MS. YOZWIAK PROVIDE AN EXPLANATION FOR THE**
9 **DIFFERENCE IN CONCLUSIONS BETWEEN HER REBUTTAL**
10 **TESTIMONY AND YOUR DIRECT TESTIMONY?**

11 A. Ms. Yozwiak speculates about the assumptions that drive the
12 difference between her analysis and mine. She attributes the
13 difference to my calculation of revenue being based on “a small subset
14 of the RS-DG class (31 customers) that appears to have lower billing
15 determinants than the class as a whole.”⁶ By comparison, her analysis
16 relies on test year billing determinants.

17 **Q. IS MS. YOZWIAK’S EXPLANATION FOR THE DIFFERENCE**
18 **ACCURATE?**

⁵ Ibid.

⁶ Yozwiak Rebuttal, page 20, lines 14 to 15.

1 A. No. The analysis in my direct testimony did indeed rely on load data
2 for 31 DG customers.⁷ However, these customers are not materially
3 different from the class as a whole, contrary to Ms. Yozwiak's
4 suggestion. As I discussed previously, the overall difference in our
5 conclusions is attributable to the fact that she has made an
6 inconsistent comparison of revenues and costs.

7 Ms. Yozwiak's opposition to Westar's rate proposal hinges on
8 her inaccurate conclusion that DG customers overpay for electric
9 service. Correcting for this mistaken conclusion renders the
10 fundamental arguments in her testimony irrelevant.

11 **III. WESTAR'S PROPOSED RATE DESIGN IS A**
12 **REASONABLE REFLECTION OF THE**
13 **UNDERLYING COST STRUCTURE**

14 **Q. DOES WESTAR'S PROPOSED THREE-PART RATE STRUCTURE**
15 **REFLECT UNDERLYING COSTS?**

16 A. Yes. Contrary to assertions by Ms. Yozwiak, the rate design is cost-
17 based.⁸

18 **Q. WHY DOES MS. YOZWIAK SUGGEST THAT THE DESIGN OF THE**
19 **DEMAND CHARGE DOES NOT REFLECT THE UNDERLYING**
20 **COST STRUCTURE?**

⁷ As stated in my direct testimony, these customers were chosen because they were the only relevant DG customers for which a full year of hourly load data was available.

⁸ Yozwiak Rebuttal, page 31, lines 1 to 17.

1 A. Ms. Yozwiak contrasts Westar's class cost of service (CCOS) study's
2 allocation of capacity cost on a 4CP and NCP basis to the design of
3 the demand charge, which recovers costs based on monthly maximum
4 demand for 12 months of the year. She concludes that the two
5 approaches are inconsistent.

6 **Q. WHY IS THE DESIGN OF THE DEMAND CHARGE COST-BASED?**

7 A. As discussed in my direct testimony, the design of rates requires a
8 trade-off between the principles of cost-reflectivity, equity, and
9 simplicity, among others.⁹ Approximations must be made in the design
10 of residential rates.

11 A rate that is designed to perfectly reflect the allocation of each
12 cost component in the CCOS study would do an excellent job of
13 reflecting costs but would likely be too complex for the average
14 residential customer to grasp. The transition to such a rate cannot be
15 made in the near-term.

16 Westar's proposed RS-DG rate strikes a practical compromise
17 between cost reflectivity and simplicity. The demand charge applies
18 on a monthly basis, providing customers with a consistent, predictable
19 price signal. Measurement of demand is constrained to peak hours of
20 the day, which aligns the demand charge with the hours of the day that
21 drive capacity investment. And seasonal differentiation of the demand

⁹ Faruqui Direct, pages 12 to 16.

1 charge reflects the primarily summer-driven nature of new capacity
2 needs. All of these features align the RS-DG rate with costs while
3 keeping its design simple enough for customers to understand.

4 Westar is not alone in offering such a three-part rate. There are
5 at least 42 utilities offering 50 demand charge-based rates in 21 states
6 that offer three-part rates to residential customers.¹⁰ In Kansas, three-
7 part rates are offered by all major utilities.¹¹ These rates commonly
8 include monthly demand charges, consistent with Westar's proposed
9 RS-DG rate.

10 **Q. DO ANY OTHER PARTIES SUPPORT THE INTRODUCTION OF A**
11 **DEMAND CHARGE?**

12 A. Yes. Both KCC Staff and CURB support the introduction of a demand
13 charge for residential DG customers.¹² These positions are also
14 consistent with the policy direction set by the Commission in DG Rate
15 Design docket (16-GIME-403-GIE)

16 **IV. THE AVERAGE INCREASE IN DG BILLS**
17 **RESULTING FROM THE NEW RATE PROPOSAL**
18 **SHOULD NOT BE ATTRIBUTED TO THE**
19 **INTRODUCTION OF A DEMAND CHARGE**

20 **Q. IS THE INTRODUCTION OF A DEMAND CHARGE THE REASON**
21 **THAT DG CUSTOMER BILLS WILL INCREASE ON AVERAGE?**

¹⁰ Faruqui Direct, page 21, lines 3 to 4.

¹¹ Faruqui Direct, page 20, lines 3 to 11.

¹² Glass Rebuttal, page 34, Table 7. Kalcic Rebuttal, page 17, lines 22 to 23.

1 A. No. Ms. Yozwiak assigns the increase in DG customer bills to the
2 introduction of a demand charge, but this is inaccurate.¹³ The demand
3 charge is not what drives the increase in the average rate for DG
4 customers in Westar's proposal.

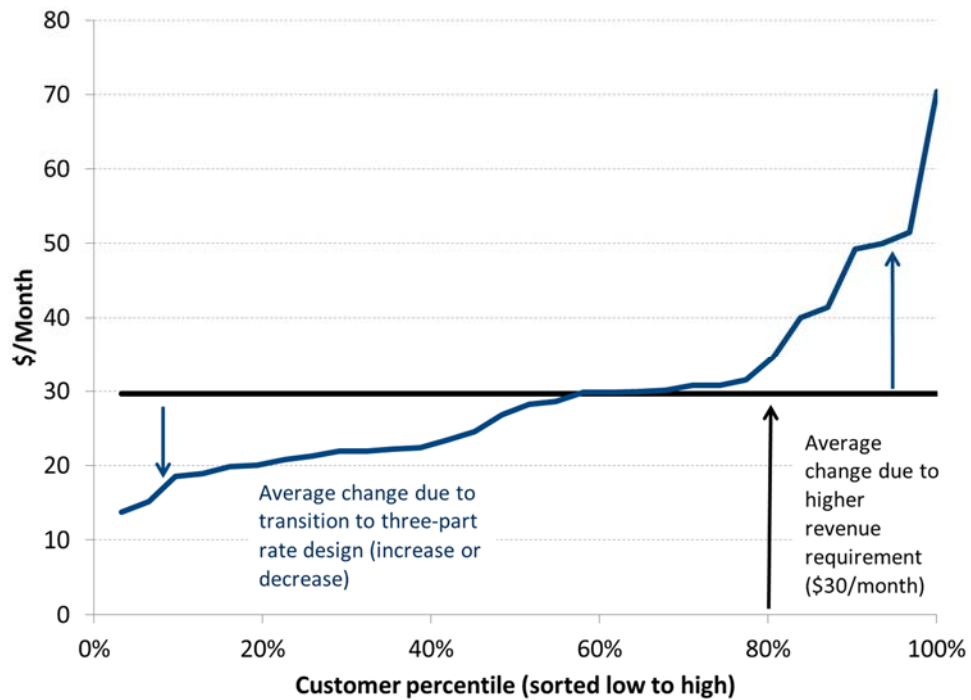
5 **Q. PLEASE EXPLAIN WHY THE DEMAND CHARGE IS NOT LEADING**
6 **TO AN AVERAGE RATE INCREASE FOR DG CUSTOMERS.**

7 A. There are two relevant aspects of Westar's proposed change in rates
8 for DG customers. The first is an increase in the average rate level
9 due to the introduction of a DG class-specific revenue requirement.
10 This increase in rate level drives a bill increase for DG customers
11 regardless of the associated rate design. It reflects the partial
12 mitigation of an unintended subsidy that would otherwise be paid for by
13 non-DG customers.

14 The second aspect of Westar's proposal is the change in rate
15 design. The change in rate design will decrease bills for some
16 customers and increase bills for others, relative to the new rate level.
17 On average, the new rate design does not increase bills relative to the
18 established revenue requirement. Figure 1, taken from my direct
19 testimony, illustrates this difference.

¹³ Yozwiak Rebuttal, page 9, lines 16 to 17.

Figure 1: Distribution of Bill Impacts due to Proposed Changes in RS-DG Rate



1 In fact, the new rate design provides the opportunity for bill
2 reductions relative to the new rate level if customers manage demand.
3 My direct testimony further discusses the likely response of customers
4 when enrolled in the new RS-DG rate.¹⁴

5 **V. IT IS APPROPRIATE FOR THE RS-DG RATE TO**
6 **BE BASED ON A DG-SPECIFIC REVENUE**
7 **REQUIREMENT**

8 **Q. IS IT APPROPRIATE FOR THE RS-DG RATE TO BE BASED ON A**
9 **DG-SPECIFIC REVENUE REQUIREMENT THAT LEADS TO AN**
10 **AVERAGE RATE INCREASE FOR DG CUSTOMERS?**

¹⁴ Faruqi Direct, page 30 line 11 to page 32 line 6.

1 A. Yes. Ms. Yowziak's, Mr. Kalcic's, and Ms. Harden's opposition to an
2 increase in the rate level for DG customers is effectively opposition to
3 the introduction of a separate revenue requirement for these residential
4 DG customers.¹⁵ I disagree with them on this point, as their position is
5 contrary to both the commission stated policy and widely-accepted
6 principles of ratemaking.

7 Docket No. 15-WSEE-115-RTS established that it is appropriate
8 to create a separate revenue requirement for DG customers and was
9 affirmed as state policy as a result of the Commission Order in Docket
10 No. 16-GIME-403-GIE. This separate revenue requirement helps to
11 mitigate the hidden subsidy that is otherwise embedded in current
12 rates when DG and non-DG customers are lumped into a single rate
13 class.

14 Westar's proposal is to introduce a rate that is based on that
15 new revenue requirement. The increase in average bills for DG
16 customers is consistent with this approach, and reduces the subsidy
17 currently being provided by non-DG customers. Doing so is consistent
18 with the principles of ratemaking, as I discussed in prior testimony
19 before the KCC.¹⁶ Docket No. 15-WSEE-115-RTS. Failing to make

¹⁵ Yozwiak Rebuttal, page 38, lines 8 to 14. Kalcic Rebuttal, page 17, lines 23 to 24. Harden Rebuttal, page 24, lines 6 to 19.

¹⁶ Direct Testimony of Ahmad Faruqui, Docket No. 15-WSEE-115-RTS. Direct Testimony of Ahmad Faruqui, Docket No. 15-WSEE-115-RTS. Affidavit of Dr. Ahmad Faruqui in Kansas

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this change would prolong the provision of the subsidy to DG customers.

Q. DO YOU RECOMMEND DELAYING THE TRANSITION TO THE DG CUSTOMER-SPECIFIC REVENUE REQUIREMENT?

A. No. Mr. Kalcic suggests postponing the transition to the new revenue requirement, but I disagree with this proposal.¹⁷ As I discussed in my direct testimony, it is advantageous to transition to new, cost-reflective rate designs for DG customers now, before PV adoption reaches levels that make the transition problematic.¹⁸

VI. CUSTOMERS CAN UNDERSTAND AND RESPOND TO A DEMAND CHARGE

Q. DO YOU AGREE WITH MS. YOZWIAK'S CHARACTERIZATION OF APS'S EXPERIENCE WITH THREE-PART RATES?

A. No. Ms. Yozwiak cites a survey of APS customers as evidence that participants in APS's three-part rate are not familiar with the rate's design.¹⁹ However, the very same survey results cited by Yozwiak indicate that a majority of APS's three-part rate participants know how to control their demand, do not feel it is difficult to manage household energy cost, and are aware of the demand charge.

Continued from previous page

Generic Docket on Distributed Generation Rate Design, Docket No. 16-GIME-403-GIE. Also see my direct testimony in the current proceeding.

¹⁷ Kalcic Rebuttal, page 17, lines 23 to 24.

¹⁸ Faruqi Direct, page 16 line 20 to page 17 line 5.

¹⁹ Yozwiak Rebuttal, page 34, lines 8 to 11.

1 Additionally, as stated in my Direct Testimony, 60 percent of
2 participants in APS's three-part rate reduced demand after enrolling in
3 the rate.²⁰ This is a clear indication that those customers are able to
4 not only understand the price signal embodied in such a rate but also
5 to respond to it.

6 **Q. CAN CUSTOMERS UNDERSTAND A DEMAND CHARGE?**

7 A. Contrary to Ms. Yozwiak's assertion, customers can understand a
8 demand charge.²¹ Customers commonly encounter the concept of
9 electricity demand in daily life. Take the case of the ubiquitous light
10 bulb. When buying or installing a light bulb, the customer would have
11 encountered the power of the bulb expressed in watts. The customer
12 would have picked the bulb based on its wattage, with the higher
13 wattage translating into more "power." Given that wattage is exactly
14 how demand is measured, it would be difficult to find a customer who
15 has not encountered the concept of demand.

16 If the customer had purchased a high-wattage hair dryer and a
17 high-wattage electric iron, and decided to run both at the same time,
18 they may have tripped the circuit breaker, requiring a visit to the
19 garage or basement to reset it. This is not an uncommon experience,

²⁰ Faruqui Direct, page 29, lines 23 to 25.

²¹ Yozwiak Rebuttal, page 33, lines 21 to 23.

1 and is another way in which customers would have become familiar by
2 experience with the concept of demand or capacity.

3 Customers do not need to know the precise definition of a
4 kilowatt in order to be able to respond to a demand rate. Successful
5 education involves conveying the simple message that customers
6 should try to avoid using appliances during on-peak periods. Simple
7 messages encouraging customers to avoid using appliances at the
8 same time can convey this concept of demand in easy-to-understand
9 terms without even using the word “kilowatt.”

10 In addition, there is empirical evidence that customers will
11 respond to demand charges by changing their electricity consumption
12 patterns. This suggests that customers can understand demand
13 charges. I described these studies previously in my Direct Testimony.²²

14 **VII. WESTAR’S RESIDENTIAL RATE PROPOSAL IS**
15 **REASONABLE AND CONSISTENT WITH THE**
16 **PRINCIPLES OF RATE DESIGN**

17 **Q. HAS YOUR REVIEW OF THE INTERVENOR TESTIMONY**
18 **CHANGED YOUR CONCLUSIONS ABOUT THE MERITS OF**
19 **WESTAR’S RESIDENTIAL RATE PROPOSAL?**

20 **A.** No. The conclusions of my Direct Testimony remain unchanged.
21 Westar has put forward cost-based three-part DG rate proposals that

²² Faruqui Direct, page 29, lines 5 to 20.


1 are consistent with the widely-accepted principles of rate design. I
2 support Westar's plan to make this the standard rate for all its
3 residential DG customers, and to create a voluntary option for non-DG
4 residential customers.

5 **Q. THANK YOU.**

STATE OF CALIFORNIA)
) ss:
COUNTY OF _____)


VERIFICATION

Ahmad Faruqui, being duly sworn upon his oath deposes and states that he a Principal with the Brattle Group, that he has read and is familiar with the foregoing Rebuttal Testimony, and attests that the statements contained therein are true and correct to the best of his knowledge, information and belief.



Ahmad Faruqui

Subscribed and sworn to before me this 2nd day of July, 2018.



Notary Public

My Appointment Expires:


See document attached

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County of San Francisco

Subscribed and sworn to (or affirmed) before me

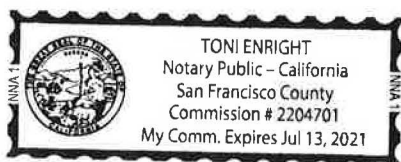
on this 2 day of July, 2018,
by
Date Month Year

(1) Ahmad Faruqi

(and (2) _____),

Name(s) of Signer(s)

proved to me on the basis of satisfactory evidence
to be the person(s) who appeared before me.

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