

BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

In the Matter of the Complaint of Kansas Gas)
Service, a Division of ONE Gas, Inc., Against)
Westar Energy, Inc., Regarding Westar's) Docket No. 19-WSEE-061-COM
Practice of Offering Payments to Developers in)
Exchange for the Developers Designing All)
Electric Subdivisions.)

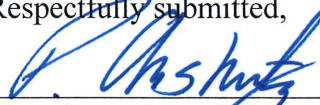
**STAFF'S ERRATA TO TESTIMONY OF
STAFF WITNESS ROBERT H. GLASS**

COMES NOW, the Staff of the State Corporation Commission of the State of Kansas (Staff and Commission, respectively), makes this errata filing to correct testimony of Staff witness Robert H. Glass. For the convenience of the parties, this filing is provided instead of corrections provided at hearing, so that necessary clarifications of the testimony and position of Mr. Glass can be made available now, in advance of the hearing. The corrected testimony is attached. Following is an explanation of the corrections:

1. Correcting an erroneous assertion contained in Glass' initial testimony; and
2. Correcting an error in both a table and appendix caused by a formatting error that went unnoticed at the time of submission.

WHEREFORE, Staff provides this errata filing.

Respectfully submitted,



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ATTORNEYS FOR STAFF

**BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

**In the Matter of the Complaint of)
Kansas Gas Service, a Division of ONE)
Gas, Inc., Against Westar Energy, Inc.,)
Regarding Westar's Practice of) Docket No. 19-WSEE-061-COM
Offering Payments to Developers in)
Exchange for the Developers Designing)
All Electric Subdivisions.)**

DIRECT TESTIMONY

PREPARED BY

ROBERT GLASS

UTILITIES DIVISION

KANSAS CORPORATION COMMISSION

July 22, 2019

I. STATEMENT OF QUALIFICATIONS

Q. What is your name?

A. Robert H. Glass.

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

A. I am employed by the Kansas Corporation Commission (KCC or Commission) as the Chief of Economics and Rates Section within the Utilities Division.

Q. What is your business address?

A. 1500 S.W. Arrowhead Road, Topeka, Kansas, 66604-4027.

Q. What is your educational background and professional experience?

A. I have a B.A. from Baker University with a major in history. I also have an M.A. and a Ph.D. in economics from the University of Kansas. For 22 years prior to my employment at the Commission, I was employed at the University of Kansas by the Institute for Business and Economic Research, which later became the Institute for Public Policy and Business Research. My primary duty was performing economic research.

Q. Have you previously submitted testimony before this Commission?

A. Yes. I provided testimony as a Staff consultant for Docket Nos. 91-KPLE-140-SEC and 97-WSRE-676-MER. As an employee of the Commission, I have testified in numerous rate case and non-rate case dockets.

III. ANALYSIS

Overview of Westar's Developer Rebate Program

Q. What is Westar's Developer Rebate Program?

A. Westar has three non-tariffed heat pump rebate programs that are discussed by Staff Witness Leo Haynos.¹ Kansas Gas Service (KGS) filed its complaint against the Developer Rebate Program, and that program will be the focus of my analysis.

Since there is no tariff describing the program, the best overview of the Developer Rebate Program is the agreement between Westar and the developer.² The agreement states "All buildings within the subdivision to be built Total Electric with a Full Heat pump split system as the primary heating source." The rebate amounts are listed in a table that is provided below.

Table 1

	Per Building Payout		
Building Type	14 SEER HP	16 SEER HP	NOTES
Single Family	\$1,200	\$1,500	1 or more HP system per building
Duplexes	\$1,600	\$2,000	2 or more HP system per building
Quads	\$2,400	\$3,000	4 or more HP system per building
Greater than Quad	\$500 per HP unit, 14+ SEER		Maximum \$20,000 rebate per building

The essence of the program is first the subdivision be required to be total electric and then Westar provides a rebate to the developer after the heat pump system and the residential meter are installed.

¹ The three heat pump Developer Rebate Programs are the HVAC Program, the Builder Program, and the Total Electric Subdivision Heat Pump Program programs.

² Attached to KGS's complaint, Janet Buchanan's Direct Testimony, and Leo Haynos's Direct Testimony is a copy of the contract.

1 **Policy Analysis**

2 ***Legal Rules for Policy Analysis***

3 **Q. What are the criteria for the policy analysis of the Developer Rebate Program?**

4 A. The criteria for program review centers on whether Westar's Developer Rebate
5 Program is in any respect unreasonable, unfair, unjust, unreasonably inefficient or
6 insufficient, unjustly discriminatory or unduly preferential.³ KGS argued Westar's
7 Developer Rebate Program is anticompetitive and actively damages the public
8 interest.⁴ To aid in Staff's evaluation of this claim, Staff reviewed the Developer
9 Rebate Program's effect on competition between utilities, which has broadly been
10 used in the evaluation of public utility operations.⁵

11 **Q. Why is this criteria important for Staff's policy analysis of the Developer**
12 **Program?**

13
14 A. It is necessary to detail how KGS's complaint against Westar (and the Developer
15 Rebate Program) should be evaluated. While I am not a lawyer, it is essential that
16 Staff's analysis be able to render an opinion on the ultimate issue in this case – i.e.
17 whether the Developer Rebate Program is an unjust or unreasonable practice and
18 should be stopped.

19 **Q. On what grounds did KGS bring its complaint?**

20 A. KGS asserted Westar's Developer Rebate Program was contrary to the public
21 interest, unreasonable, unfair, unjust and therefore violated K.S.A. 66-101e.⁶ KGS

³ See K.S.A. 66-101b, K.S.A. 66-101e, and K.S.A. 66-101f.

⁴ Complaint, p. 2.

⁵ Cent. Kansas Power Co. v. State Corp. Comm'n, 206 Kan. 670, 677, 482 P.2d 1, 7 (1971).

⁶ Complaint of Kansas Gas Service against Westar Energy, Inc., p. 1. (Aug. 7, 2018) (Complaint).

1 requested the Commission issue an order pursuant to K.S.A. 66-101f requiring
2 Westar to cease the Program.⁷

3 **Q. What did you do to evaluate whether Westar's Developer Rebate Program was**
4 **contrary to the public interest, unreasonable, etc....?**

5 A. I referenced multiple authorities on the subject. For example, K.S.A. 66-101f
6 allows the Commission to substitute rates, rules, regulations, practices, services or
7 acts that are found to be unjust, unreasonable, unfair, unjustly discriminatory or
8 unduly preferential, or in any way violate the law.⁸ In particular, "the public is
9 entitled to demand...that no more be exacted from it for the use of [private utility
10 property] than the services rendered by it are reasonably worth."⁹

11 Additionally, the Kansas Supreme Court has held "The statutes authorizing the
12 commission to supervise and control corporate action in the utility field have
13 generally been understood as an expression of the legislature's administrative
14 policy designed to protect against ruinous competition...."¹⁰ Predatory behavior is
15 synonymous with ruinous competition.¹¹

⁷ See *id.* Additionally, KGS argued this practice conflicts with the Commission's rules provided in K.S.A. 66-101b.

⁸ "If after investigation and hearing the rates or rules and regulations of any electric public utility governed by this act are found unjust, unreasonable, unfair, unjustly discriminatory or unduly preferential, or in any way in violation of the provisions of this act, or of any of the laws of the state of Kansas, the commission shall have the power to establish, and order substituted therefor, such rates or rules and regulations as the commission determines to be just, reasonable and necessary. If it is found that any rule and regulation, practice or act, relating to any service performed or to be performed by such electric public utility for the public is in any respect unreasonable, unjust, unfair, unreasonably inefficient or insufficient, unjustly discriminatory or unduly preferential, or otherwise in violation of this act or of any of the laws of the state of Kansas, the commission may substitute therefor such other rules and regulations, practice, service or act as the commission determines to be just, reasonable and necessary."

⁹ Leonard Goodman, *The Process of Ratemaking*, Vol. I, p. 21.

¹⁰ Cent. Kansas Power Co. v. State Corp. Comm'n, 206 Kan. 670, 677, 482 P.2d 1, 7 (1971).

¹¹ Thomas Sharpe (1987), "Predation", *European Competition Law Review*, 8, p. 54.

1 Regulators generally encourage a regulated company to compete with non-
2 regulated providers of the same service as long as it does not violate statutory
3 authority or antitrust principles.¹² However, when a dominant firm uses its
4 dominance to change or limit the behavior of its competitors, the dominant firm is
5 engaging in predatory behavior.¹³ For example, “The North Carolina commission
6 in 1994 held that an electric utility’s discount to its largest retail customer to avoid
7 loss of load to self generation could not be used by the utility to gain load currently
8 provided by a natural gas LDC. The North Carolina Commission’s authorization
9 to offer the reduced rate was expressly conditioned upon the utility ‘not using these
10 reduced rates to gain the natural gas load.’”¹⁴

11 *Predatory Behavior that leads to Ruinous Competition is Impermissible*

12 **Q. Does Westar have asymmetrical dominance in the home heating market?**

13 A. Yes. Westar has asymmetrical dominance in the home heating market: all homes
14 need electricity, but natural gas is an option. Since the developer already has to
15 provide electricity, installing electric heating adds no additional expense except for
16 the heating unit. But adding natural gas heating entails the addition of natural gas
17 infrastructure to the subdivision in addition to the natural gas furnace.

18 **Q. Has Westar used its dominant position in a predatory manner to essentially**
19 **foreclose the natural gas option?**

20 A. Yes. Even though natural gas heating is cheaper for home buyers, if Westar can
21 cause developers to not include natural gas infrastructure in a subdivision, Westar

¹² Leonard Goodman, *The Process of Ratemaking*, Vol. II, p. 958.

¹³ Thomas Sharpe (1987), “Predation”, *European Competition Law Review*, 8, p. 58.

¹⁴ *Ibid.*, p. 959. Citing *Re Carolina Power and Light Corp.*, 151 PUR 4th 180, 184 (N.C.UC, 1994).

1 has used its dominant position in a predatory manner to essentially foreclose the
2 natural gas option. The result is that the dominant firm, Westar, directly harms its
3 competitor, KGS and KGS's ratepayers and indirectly harms home buyers.¹⁵

4 The Developer Rebate Program can unnecessarily raise the rates of either
5 Westar's or KGS's ratepayers, or both sets of ratepayers' rates depending on the
6 specific circumstances.

7 ***Analysis of the Effect of Westar's Developer Rebate Program***

8 **Q. What is the economic effect of the Developer Rebate Program?**

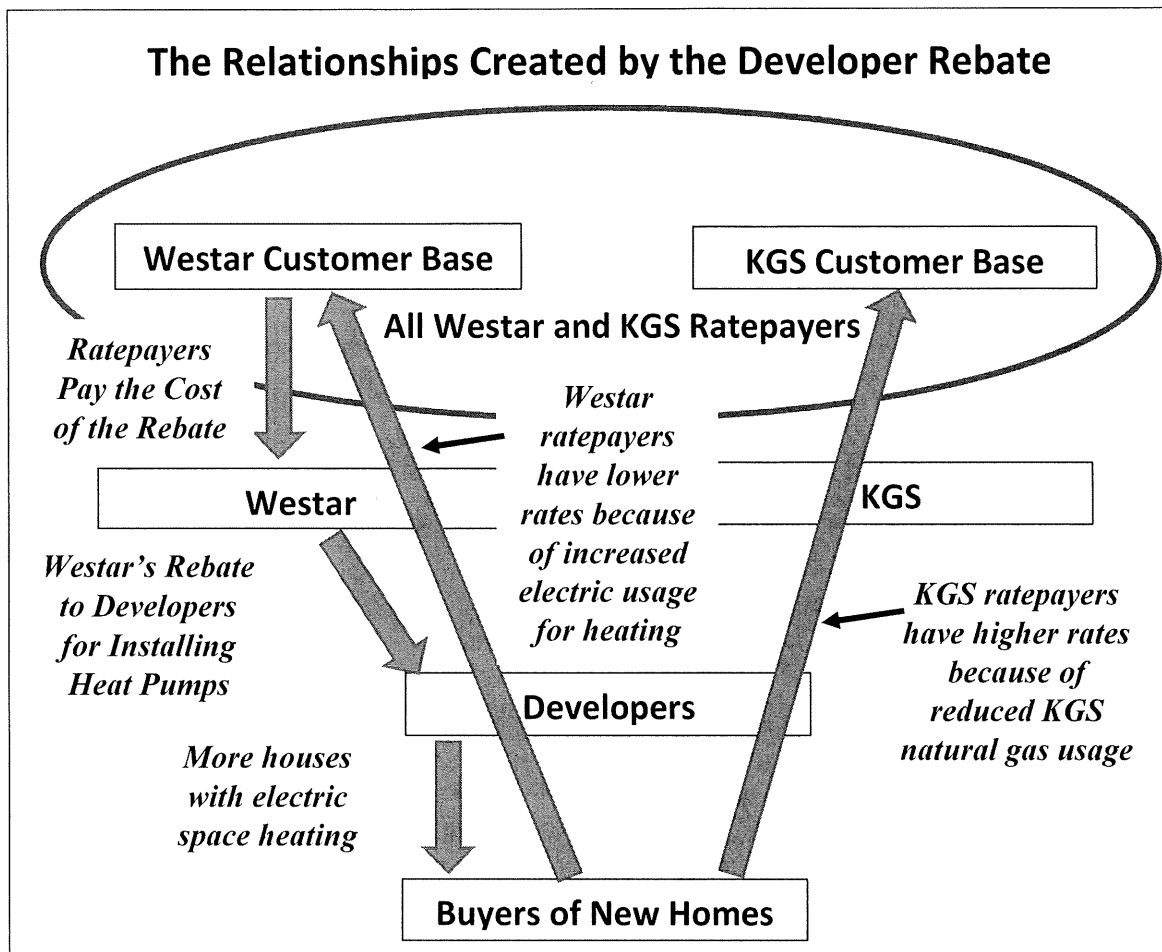
9 A. Answering the question requires investigating the effect of the Developer Rebate
10 Program on three distinct groups: Westar and KGS ratepayers, developers, and
11 buyers of new houses.¹⁶ The relationships between the different groups is laid out
12 in Figure 1 below.

¹⁵ The regulatory agency needs to ensure the regulated utility does not leverage its market power in an unfair manner. Leonard Goodman, *The Process of Ratemaking*, Vol. II, p. 959.

¹⁶ Rebecca Fowler suggests that the net benefit of the Developers Rebate Program could be more than \$15 million. Direct Testimony, Docket No. 19-WSEE-061-COM, p. 7. Staff does not think that the aggregate net benefit is the appropriate measure of the program and discusses a better method of evaluating the program in the Appendix to this testimony.

1

Figure 1



2

3 Resulting Benefit if the Developer Rebate Program Is Successful in Changing the
 4 Developer's Heating Technology Decision

5 Westar Ratepayers and the Developers

6 **Q. What is the effect on the Developers and Westar ratepayers of the Developer**
 7 **Rebate Program if it successfully changes developers' decisions about heating**
 8 **technology?**

9 **A** The Developer Rebate Program helps developers by covering most of the cost of
 10 purchasing and installing heat pumps, and it eliminates the cost of installing natural
 11 gas infrastructure in the subdivision. The program helps Westar ratepayers by
 12 increasing Westar's winter energy load, which benefits its ratepayers, by increasing

1 total load and revenue. On the cost side, the increased winter load requires little or
2 no increase in Westar's rate base. The result is that Westar's fixed costs are spread
3 over greater energy use, which lowers Westar customers' rates.

4 *Resulting Harm if the Developer Rebate Program Is Successful in Changing the*
5 *Developer's Heating Technology Decision*

6 KGS Ratepayers

7 **Q. What is the effect on KGS ratepayers of the Developer Rebate Program if it**
8 **successfully changes developers' decisions about heating technology?**

9 A. If the Developer Rebate Program causes developers to use more electric heating
10 and less natural gas heating in their subdivisions, then the program hurts KGS
11 ratepayers because it reduces KGS's sales of natural gas, which increases rates for
12 KGS ratepayers. Staff believes this indicates the Developer Rebate Program is
13 unjust and unreasonable because the harm to KGS ratepayers is caused by Westar
14 using its asymmetrical power to distort the home buyers' market and to limit home
15 buyers' choices.

16 Home Buyers

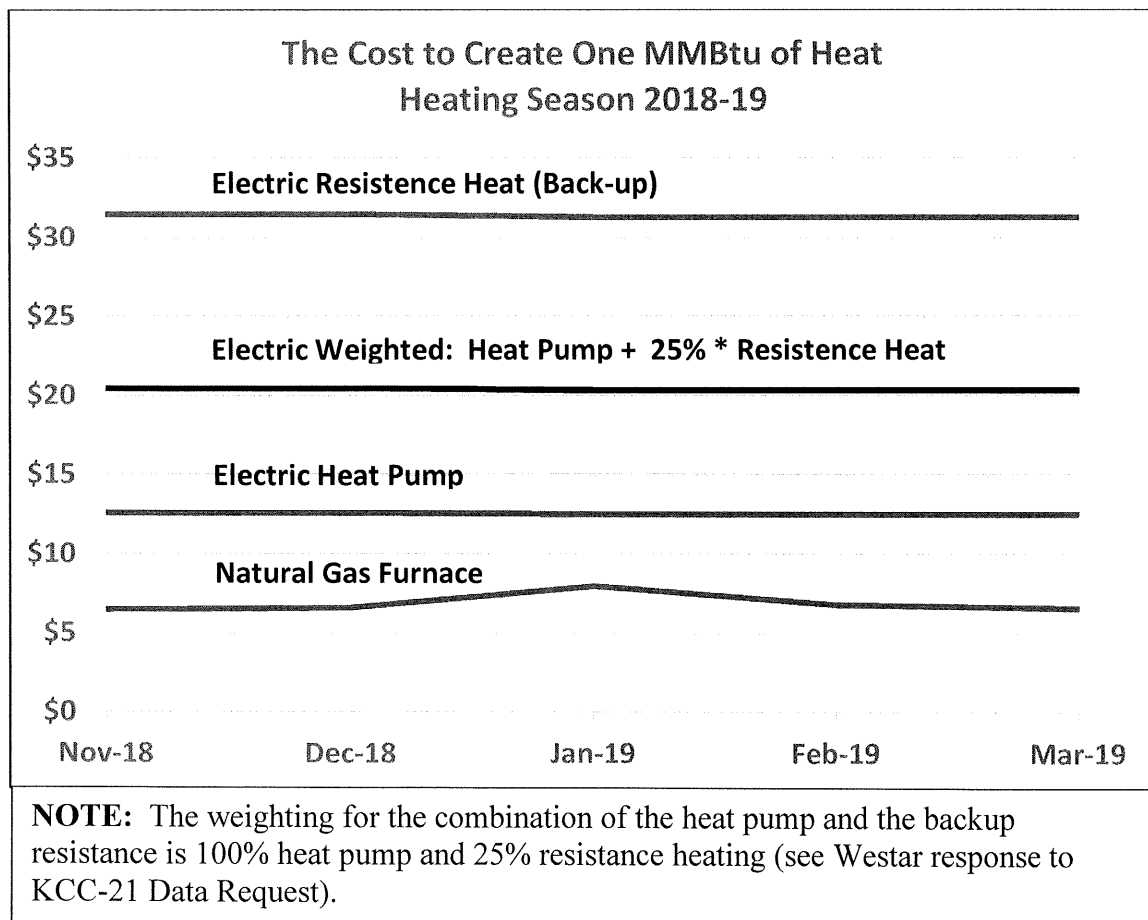
17 **Q. What is the effect on home buyers of the Developer Rebate Program if the**
18 **program successfully changes developers' decisions about heating technology?**

19 A. If the Developer Rebate Program causes developers to install more electric heating
20 and less natural gas heating in their subdivisions, then the program hurts home
21 buyers. This is because there is more electric home heating and less natural gas
22 home heating than the market would produce without the Developer Rebate
23 Program. And home buyers pay more for electric heating than they would if they
24 had natural gas heating. Westar's market distortion disadvantages home buyers

1 that want houses with natural gas heating. The result of this practice creates an
2 environment that is unduly preferential towards electric heating

3 In addition, unsophisticated home buyers that do not investigate the difference
4 in cost between electric and natural gas home heating, would be locked into electric
5 home heating. Staff Witness Justin Prentiss's Direct Testimony shows that natural
6 gas heating is significantly cheaper than electric heating (see Figure 2 below for the
7 relative cost of home heating for the winter of 2018-2019). Thus, if the
8 unsophisticated home buyers are amenable to natural gas heating, they would not
9 have that choice without selling their house and moving into a different house.

10 **Figure 2**



1 *Resulting Harm if the Developer Rebate Program Is Unsuccessful in Changing the*
2 *Developer's Heating Technology Decision*

3 **Q. What is the effect of Developer Rebate Program if it does not change the**
4 **developer's decision on the heating technology?**

5 A. If the only developers that accept the rebates for building total-electric houses were
6 developers who would have built total-electric houses anyway, then these
7 developers would be free riding on the Developer Rebate Program. And Westar
8 ratepayers do not benefit from the program because the program would not create
9 any additional load. Additionally, KGS ratepayers are not harmed by the program
10 because there is no loss of natural gas sales as these sales would not have occurred
11 anyway. The program is simply a monetary transfer from Westar ratepayers to
12 developers for no benefit in return.

13 *Resulting Harm if KGS Retaliates with its own Developer Rebate Program*

14 **Q. What would be the effect of KGS creating a competing Developer Rebate**
15 **Program to encourage developers to place only natural gas furnaces in houses?**

16 A. If KGS responds with its own Developer Rebate Program that provides an
17 equivalent rebate to developers who install natural gas furnaces, then the KGS
18 program would reverse the effect of Westar's program. With both Westar and KGS
19 providing rebates, the developers would get a rebate no matter what heating
20 technology they employed. But because both Westar and KGS would be providing
21 rebates paid for by their ratepayers, the competing rebate programs would result in
22 higher rates for Westar and KGS ratepayers.

23 The developer rebates, because of their limited size (about 1% or less of the sale
24 price of a house) and the demand driven nature of the housing market, would have
25 no noticeable effect on the total number of houses built. The competing rebate

1 programs would result in a return to the pre-rebate equilibrium number of houses
2 with electric heating and natural gas heating.

3 Therefore, all competition between Westar and KGS using developer rebates
4 paid for by Westar and KGS ratepayers would accomplish is the transfer of money
5 from ratepayers to developers with almost no change in the housing market and no
6 benefit to either Westar or KGS ratepayers. The transfer of money from ratepayers
7 to developers with no benefit to ratepayers would be unjust and unreasonable
8 because Westar and KGS ratepayers have unnecessarily higher rates and the
9 ratepayers are paying more for electric service than the services rendered by it are
10 reasonably worth. In addition, the unnecessarily higher rates are unfair, unjustly
11 discriminatory or unduly preferential.

12 **Q. Please summarize the issues in your testimony.**

13 A. Below is Table 2 which summarizes the issues in my testimony.

Table 2

Summary of the Issues in My Testimony			
Situation	Benefited	Harmed	Not Affected
(1)	(2)	(3)	(4)
Program successfully changes developers heating technology decision	Westar Ratepayers (lower rates), Developers (rebate)	KGS Ratepayers (higher rates), Home Buyers (distorted housing market)	
Program unsuccessfully changes developers heating technology decision	Developers (rebate)	Westar Ratepayers (higher rates)	KGS Ratepayers, Home Buyers
KGS develops its own developers rebate program	Developers (rebate)	Westar & KGS Ratepayers (higher rates)	Home Buyers

Q. Is the Developer Rebate Program in the public interest?

A. No. No matter what the situation, the Developer Rebate Program harms some group of ratepayers. Therefore, it is not in the public interest and should be stopped.

Q. Are the HVAC and Builder's programs in the public interest?

A. Because they were not the subject of the complaint, I did not evaluate whether these programs are in the public interest. It is unclear if these programs are energy efficiency programs,¹⁷ although from Staff's perspective they appear to be similar to the Developer Program. Regardless of whether they are energy efficiency programs, Westar has not sought specific approval of the programs and the Commission has not granted such a request. If Westar would like to continue the

¹⁷ CURB Data Request No. 240, Docket No. 08-WSEE-1041-RTS, Janet Buchanan, Direct Testimony, Docket No. 19-WSEE-061-COM, pp. 10 – 12, and The Joint Response of Kansas Gas Service Data Request and Atmos Energy to the Staff Report and Recommendation filed April 13, 2009, Docket No. 09-GIMX-160-GIV, May 29, 2009, p. 3.

1 HVAC and Builder's programs, I recommend the Commission stop the programs
2 and require Westar to file tariff applications requesting they be continued. If
3 Westar files tariff applications for these programs, then Staff will evaluate the
4 programs to determine whether they met the established energy efficiency program
5 criteria.

6 IV. CONCLUSION

7 Recommendation

8 **Q. Please summarize Staff's recommendations.**

9 A. As discussed above, Staff's analysis has shown Westar's Developer Rebate
10 Program is unjust, unreasonable, unduly preferential, and the practice itself is
11 predatory and contrary to the public interest. Therefore, the Commission should
12 terminate the Developer Rebate Program because it is not in the public interest.

13 **Q. Does this conclude your testimony?**

14 A. Yes. Thank you.

APPENDIX: Net Benefit

Net Benefit to Westar's Ratepayers of the Developer Rebate Program

Rebecca Fowler, in her Direct Testimony, stated that the net benefit of the Developer Rebate Program could be more than \$15 million.¹ Staff's analysis indicates that an aggregate net benefit number is probably not informative because of the important caveats that apply to estimating net benefit gained from the developer program. Instead, Staff will focus on the net benefit of one additional Residential All-Electric (all-electric) ratepayer to Westar and one additional Residential ratepayer (ratepayer) to KGS. Net benefit is defined as the difference between the additional revenue generated by the new ratepayer and the cost to either Westar or KGS of the new ratepayer.

The problem involved in estimating the electric usage created by a new all-electric ratepayer is separating out the electric heating energy usage from the non-heating electric energy usage. Since nearly all new homes have electricity, it is only the additional need for electricity created by home electric heating that counts toward net benefit. Table A-1 below shows the results of using three different estimates of additional energy usage on the estimated net benefit of an additional all-electric ratepayer.

Table A-1

Westar Net Benefit of New All Electric Customer	
One New Customer Assuming Increased Winter Monthly usage of:	Net Benefit
1,143 kWh	\$ 9,470.18
720 kWh	\$ 5,524.32
333 kWh	\$ 1,910.00

The first estimate of winter monthly heating usage (1,143 kWh) came from Rebecca Fowler's workpapers.² Ms. Fowler assumes that the electric heating is used for 2,000 hours during eight months and that the heat pump is used for all of that time and that back-up resistance heating is used in addition to the heat pump for 25% of the time. For the eight months of the heating season, the estimated total usage is 9,140 kWh which is about 1,143 kWh per month.

The second estimate came from KCP&L's billing determinants for Residential Class RESD—space heating with two separate meters—from the last KCP&L rate case: Docket No. 18-KCPE-480-RTS (18-480).³ The second meter is for space heating which makes this estimate

¹ Rebecca Fowler, Direct Testimony, Docket No. 19-WSEE-061-COM, p. 7.

² Westar's response to Staff's Data Request number 21, *15 year life cycle analysis*.

³ Docket No. 18-KCPE-480-RTS.

the most realistic empirical estimate. The average monthly usage for the second meter during the eight winter months was 720 kWh.

The third estimate came from the same KCP&L Residential billing determinants but for the Regular Residential Sub-Class, RESA, and the All-Electric Residential Sub-Class, RESC. The estimated electric heating usage was calculated by subtracting the average monthly winter RESC class usage from the average monthly winter RESA class usage. The result was an average monthly usage of 333 kWh. The idea behind this method is that the difference between the winter usage of a regular residential customer and an electric heating customer would be the electric heating usage.

Staff finds the second estimation that is based on KCP&L's second meter for space heating to be the most convincing estimate of the additional electric usage that an electric heating customer would add. If this estimate were used, the aggregate net benefit for the Developer Rebate Program would be substantially reduced from Westar's estimate, but still significantly positive.

Net Benefit to KGS's Ratepayers of an Additional Ratepayer

Estimating the net benefit to KGS's ratepayers of an additional ratepayer is a much simpler process than trying to separate out electric heating from other electric winter usage. All of the energy used by a new KGS ratepayer, winter or summer, adds to the net benefit created by that ratepayer. Table A-2 has Staff's estimate of the net benefit of a new ratepayer for KGS.

Table A-2

KGS Net Benefit of New Customer (Based on 18-560 test year data)	
	Net Benefit
One New Customer	\$ 2,719.32

Compared to Staff's preferred estimate of the net benefit of an additional all-electric ratepayer to Westar, the KGS new ratepayer adds \$2,805 less than the new all-electric customer. Although the above analysis indicates that if the Developer Rebate Program adds one more all-electric ratepayers, the program is more beneficial to Westar ratepayers than adding one more KGS ratepayer, Staff has a couple of caveats that need to be considered before taking net benefit of the developer program at face value.

Caveats to the Net Benefit Analysis of the Developer Rebate Program

Staff has two caveats to the above analysis that suggest that the net benefit of the developer program is over-stated by only comparing the net benefit to Westar and KGS ratepayers.

1. ***The Free Rider Problem:*** There are almost certainly free riders to the Developer Rebate Program: developers who would have put in electric heating without the program but still receive the rebate.

Staff has two examples of highly probable free riding. (1) KGS has informed Staff that beginning in the 1990s, and possibly earlier, KGS has had a hard time getting natural gas heating into quads (four apartments per building) and larger multi-family complexes. (2) Staff notes that even when natural gas is available in a sub-division, not all customers choose natural gas heating. There are still some homeowners that want all-electric even when natural gas is available.⁴

Staff has no idea how to accurately estimate the number of free riders to the developer program. But the inability to measure the free riding does not mean it does not exist. The two examples Staff provided above show its existence is highly probable.

2. ***The Higher Efficiency of Natural Gas Heating Distorts Net Benefit:*** One of the reasons that the net benefit of electric heating is higher for an all-electric ratepayer than the net benefit of a new KGS ratepayers is because natural gas heating is more efficient.

The effect of the lower efficiency of electric heating can be seen in the effect of the additional average monthly electric usage on the net benefit to Westar ratepayers. As the average monthly usage increases from 333 kWh to 720 kWh to 1,143 kWh the net benefit increases from \$1,910.00 to \$5,524.32 to 9,470.18. The more inefficient electric heating is, the greater the net benefit of electric heating to other Westar ratepayers. Another indication of the role of efficiency in the estimation of net benefit is that the use of a higher efficiency heat pump than Westar has been assumed would lower the net benefit of electric heating.

The Calculation of Net Benefit

Table A-3 below illustrates estimation of the net benefit of one additional Westar all-electric ratepayer and of one new KGS ratepayer. On the left of the table is the calculation of the net benefit of one additional all-electric ratepayer based on Staff's preferred estimate of the addition electric usage caused by an all-electric ratepayer. On the right is the calculation of the net benefit of one additional KGS ratepayer.

⁴ KGS response to Staff's Data Request number 25.

Table A-3

The Calculation of the Net Benefit of One More Residential All-Electric Ratepayer for Westar and One More Residential Customer for KGS				
<u>All Electric Ratepayer</u>			<u>Natural Gas Ratepayer</u>	
	<u>Winter</u>		<u>Summer</u>	<u>Winter</u>
Usage in kWh	720	Usage in MCF	1.29	6.57
Relevant Rates		Relevant Rates		
Block 2 Energy Charge	\$ 0.060089	Customer Charge	\$ 18.70	\$ 18.70
Property Tax Surcharge	\$ 0.001209	Gas Charge	\$ 2.3485	\$ 2.3485
TDC	\$ 0.016274	Hedge Recovery	\$ 0.3565	\$ 0.3565
Energy Efficiency Rider	\$ 0.000256	Ad Valorem	\$ 0.0134	\$ 0.0134
Monthly Revenue		Monthly Revenue		
Energy Charge Revenue	\$ 43.26	Customer Charge Revenue	\$ 18.70	\$ 18.70
Non-Rider Revenue	\$ 43.26	Energy Charge Revenue	\$ 3.03	\$ 15.43
		Non-Rider Revenue	\$ 21.73	\$ 34.13
PTS Revenue	\$ 0.87			
TDC Revenue	\$ 11.72	Hedge Recovery	\$ 0.46	\$ 2.34
EER Revenue	\$ 0.18	Ad Valorem	\$ 0.02	\$ 0.09
Rider Revenue	\$ 12.77	Rider Revenue	\$ 0.48	\$ 2.43
Annual Revenue		Annual Revenue		
Energy Charge Revenue	\$ 346.11	Customer Charge Revenue	\$ 74.80	\$ 149.60
Non-Rider Revenue	\$ 346.11	Energy Charge Revenue	\$ 12.13	\$ 123.41
		Non-Rider Revenue	\$ 86.93	\$ 273.01
PTS Revenue	\$ 6.96			
TDC Revenue	\$ 93.74	Hedge Recovery	\$ 1.84	\$ 18.73
EER Revenue	\$ 1.47	Ad Valorem	\$ 0.07	\$ 0.70
Rider Revenue	\$ 102.18	Rider Revenue	\$ 1.91	\$ 19.44
Total Annual Revenue	\$ 448.29	Total Revenue	\$ 88.84	\$ 292.45
15-year Revenue	\$ 6,724.32	Total Annual Revenue	\$ 381.29	
		15-year Revenue	\$ 5,719.32	
Costs		Costs		
Rebate (14-SEER)	\$ 1,200.00	Infrastructure	\$ 3,000.00	
Net Revenue	\$ 5,524.32	Net Revenue	\$ 2,719.32	
NOTE: The usage data for Westar came from the billing determinants for KCP&L's Residential sub-class that has two meters with one dedicated to space heating. The billing determinants came from the last KCP&L rate case: Docket No. 18-KCPE-480-RTS.				

In both cases the assumed energy usage is at the top of the table followed by the relevant rates. In Westar's case the retail energy cost adjustment is left out and in KGS's case the cost of gas rider is left out. Both of these are energy pass through riders which are not tied to fixed costs and do not reduce the per ratepayer fixed cost allocation. Below the rates is the calculation of the non-rider and rider monthly revenue.

The major difference between the Westar calculation and the KGS calculation is the number of relevant months. For Westar, only the winter is relevant, so the monthly revenue is multiplied by eight to calculate the annual revenue. For KGS, both the winter and summer are relevant. And since average monthly usage is significantly different, there are columns for summer and winter. Also, the customer charge for KGS is added because it would be additional revenue created by a new KGS ratepayer. The winter monthly averages are multiplied by eight and the summer monthly averages are multiplied by four and then both are added together to provide the annual revenue.

The total annual revenue is then multiplied by 15 to give the total 15-year revenue.⁵ Then the costs are subtracted from the 15-year revenue resulting in the net benefit for an individual ratepayer. Since the sub-division would have to have electric infrastructure anyway, the only cost for electric heating is the rebate to the developer. For KGS, the infrastructure must be added in order for customers to have access to natural gas. Staff estimated the per house infrastructure costs for natural gas at about \$3,000. In both the Westar and KGS case, Staff is ignoring administrative costs.

⁵ The 15-year time period is the same time period used in Ms. Fowler's workpapers.

**BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

**In the Matter of the Complaint of)
Kansas Gas Service, a Division of ONE)
Gas, Inc., Against Westar Energy, Inc.,)
Regarding Westar's Practice of) Docket No. 19-WSEE-061-COM
Offering Payments to Developers in)
Exchange for the Developers Designing)
All Electric Subdivisions.)**

DIRECT TESTIMONY

PREPARED BY

ROBERT GLASS

UTILITIES DIVISION

KANSAS CORPORATION COMMISSION

July 22, 2019

I. STATEMENT OF QUALIFICATIONS

Q. What is your name?

A. Robert H. Glass.

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

A. I am employed by the Kansas Corporation Commission (KCC or Commission) as the Chief of Economics and Rates Section within the Utilities Division.

Q. What is your business address?

A. 1500 S.W. Arrowhead Road, Topeka, Kansas, 66604-4027.

Q. What is your educational background and professional experience?

A. I have a B.A. from Baker University with a major in history. I also have an M.A. and a Ph.D. in economics from the University of Kansas. For 22 years prior to my employment at the Commission, I was employed at the University of Kansas by the Institute for Business and Economic Research, which later became the Institute for Public Policy and Business Research. My primary duty was performing economic research.

Q. Have you previously submitted testimony before this Commission?

A. Yes. I provided testimony as a Staff consultant for Docket Nos. 91-KPLE-140-SEC and 97-WSRE-676-MER. As an employee of the Commission, I have testified in numerous rate case and non-rate case dockets.

III. ANALYSIS

Overview of Westar's Developer Rebate Program

Q. What is Westar's Developer Rebate Program?

A. Westar has three non-tariffed heat pump rebate programs that are discussed by Staff Witness Leo Haynos.¹ Kansas Gas Service (KGS) filed its complaint against the Developer Rebate Program, and that program will be the focus of my analysis.

Since there is no tariff describing the program, the best overview of the Developer Rebate Program is the agreement between Westar and the developer.² The agreement states "All buildings within the subdivision to be built Total Electric with a Full Heat pump split system as the primary heating source." The rebate amounts are listed in a table that is provided below.

Table 1

	Per Building Payout		
Building Type	14 SEER HP	16 SEER HP	NOTES
Single Family	\$1,200	\$1,500	1 or more HP system per building
Duplexes	\$1,600	\$2,000	2 or more HP system per building
Quads	\$2,400	\$3,000	4 or more HP system per building
Greater than Quad	\$500 per HP unit, 14+ SEER		Maximum \$20,000 rebate per building

The essence of the program is first the subdivision be required to be total electric and then Westar provides a rebate to the developer after the heat pump system and the residential meter are installed.

¹ The three heat pump Developer Rebate Programs are the HVAC Program, the Builder Program, and the Total Electric Subdivision Heat Pump Program programs.

² Attached to KGS's complaint, Janet Buchanan's Direct Testimony, and Leo Haynos's Direct Testimony is a copy of the contract.

1 **Policy Analysis**

2 ***Legal Rules for Policy Analysis***

3 **Q. What are the criteria for the policy analysis of the Developer Rebate Program?**

4 A. The criteria for program review centers on whether Westar's Developer Rebate
5 Program is in any respect unreasonable, unfair, unjust, unreasonably inefficient or
6 insufficient, unjustly discriminatory or unduly preferential.³ KGS argued Westar's
7 Developer Rebate Program is anticompetitive and actively damages the public
8 interest.⁴ To aid in Staff's evaluation of this claim, Staff reviewed the Developer
9 Rebate Program's effect on competition between utilities, which has broadly been
10 used in the evaluation of public utility operations.⁵

11 **Q. Why is this criteria important for Staff's policy analysis of the Developer**
12 **Program?**

13 A. It is necessary to detail how KGS's complaint against Westar (and the Developer
14 Rebate Program) should be evaluated. While I am not a lawyer, it is essential that
15 Staff's analysis be able to render an opinion on the ultimate issue in this case – i.e.
16 whether the Developer Rebate Program is an unjust or unreasonable practice and
17 should be stopped.
18

19 **Q. On what grounds did KGS bring its complaint?**

20 A. KGS asserted Westar's Developer Rebate Program was contrary to the public
21 interest, unreasonable, unfair, unjust and therefore violated K.S.A. 66-101e.⁶ KGS

³ See K.S.A. 66-101b, K.S.A. 66-101e, and K.S.A. 66-101f.

⁴ Complaint, p. 2.

⁵ Cent. Kansas Power Co. v. State Corp. Comm'n, 206 Kan. 670, 677, 482 P.2d 1, 7 (1971).

⁶ Complaint of Kansas Gas Service against Westar Energy, Inc., p. 1. (Aug. 7, 2018) (Complaint).

1 requested the Commission issue an order pursuant to K.S.A. 66-101f requiring
2 Westar to cease the Program.⁷

3 **Q. What did you do to evaluate whether Westar’s Developer Rebate Program was**
4 **contrary to the public interest, unreasonable, etc....?**

5 A. I referenced multiple authorities on the subject. For example, K.S.A. 66-101f
6 allows the Commission to substitute rates, rules, regulations, practices, services or
7 acts that are found to be unjust, unreasonable, unfair, unjustly discriminatory or
8 unduly preferential, or in any way violate the law.⁸ In particular, “the public is
9 entitled to demand...that no more be exacted from it for the use of [private utility
10 property] than the services rendered by it are reasonably worth.”⁹

11 Additionally, the Kansas Supreme Court has held “The statutes authorizing the
12 commission to supervise and control corporate action in the utility field have
13 generally been understood as an expression of the legislature’s administrative
14 policy designed to protect against ruinous competition....”¹⁰ Predatory behavior is
15 synonymous with ruinous competition.¹¹

⁷ See *id.* Additionally, KGS argued this practice conflicts with the Commission’s rules provided in K.S.A. 66-101b.

⁸ “If after investigation and hearing the rates or rules and regulations of any electric public utility governed by this act are found unjust, unreasonable, unfair, unjustly discriminatory or unduly preferential, or in any way in violation of the provisions of this act, or of any of the laws of the state of Kansas, the commission shall have the power to establish, and order substituted therefor, such rates or rules and regulations as the commission determines to be just, reasonable and necessary. If it is found that any rule and regulation, practice or act, relating to any service performed or to be performed by such electric public utility for the public is in any respect unreasonable, unjust, unfair, unreasonably inefficient or insufficient, unjustly discriminatory or unduly preferential, or otherwise in violation of this act or of any of the laws of the state of Kansas, the commission may substitute therefor such other rules and regulations, practice, service or act as the commission determines to be just, reasonable and necessary.”

⁹ Leonard Goodman, *The Process of Ratemaking*, Vol. I, p. 21.

¹⁰ Cent. Kansas Power Co. v. State Corp. Comm’n, 206 Kan. 670, 677, 482 P.2d 1, 7 (1971).

¹¹ Thomas Sharpe (1987), “Predation”, *European Competition Law Review*, 8, p. 54.

1 Regulators generally encourage a regulated company to compete with non-
2 regulated providers of the same service as long as it does not violate statutory
3 authority or antitrust principles.¹² However, when a dominant firm uses its
4 dominance to change or limit the behavior of its competitors, the dominant firm is
5 engaging in predatory behavior.¹³ For example, “The North Carolina commission
6 in 1994 held that an electric utility’s discount to its largest retail customer to avoid
7 loss of load to self generation could not be used by the utility to gain load currently
8 provided by a natural gas LDC. The North Carolina Commission’s authorization
9 to offer the reduced rate was expressly conditioned upon the utility ‘not using these
10 reduced rates to gain the natural gas load.’”¹⁴

11 *Predatory Behavior that leads to Ruinous Competition is Impermissible*

12 **Q. Does Westar have asymmetrical dominance in the home heating market?**

13 A. Yes. Westar has asymmetrical dominance in the home heating market: all homes
14 need electricity, but natural gas is an option. Since the developer already has to
15 provide electricity, installing electric heating adds no additional expense except for
16 the heating unit. But adding natural gas heating entails the addition of natural gas
17 infrastructure to the subdivision in addition to the natural gas furnace.

18 **Q. Has Westar used its dominant position in a predatory manner to essentially**
19 **foreclose the natural gas option?**

20 A. Yes. Even though natural gas heating is cheaper for home buyers, if Westar can
21 cause developers to not include natural gas infrastructure in a subdivision, Westar

¹² Leonard Goodman, *The Process of Ratemaking*, Vol. II, p. 958.

¹³ Thomas Sharpe (1987), “Predation”, *European Competition Law Review*, 8, p. 58.

¹⁴ *Ibid.*, p. 959. Citing *Re Carolina Power and Light Corp.*, 151 PUR 4th 180, 184 (N.C.U.C., 1994).

1 has used its dominant position in a predatory manner to essentially foreclose the
2 natural gas option. The result is that the dominant firm, Westar, directly harms its
3 competitor, KGS and KGS's ratepayers and indirectly harms home buyers.¹⁵

4 The Developer Rebate Program can unnecessarily raise the rates of either
5 Westar's or KGS's ratepayers, or both sets of ratepayers' rates depending on the
6 specific circumstances.

7 *Analysis of the Effect of Westar's Developer Rebate Program*

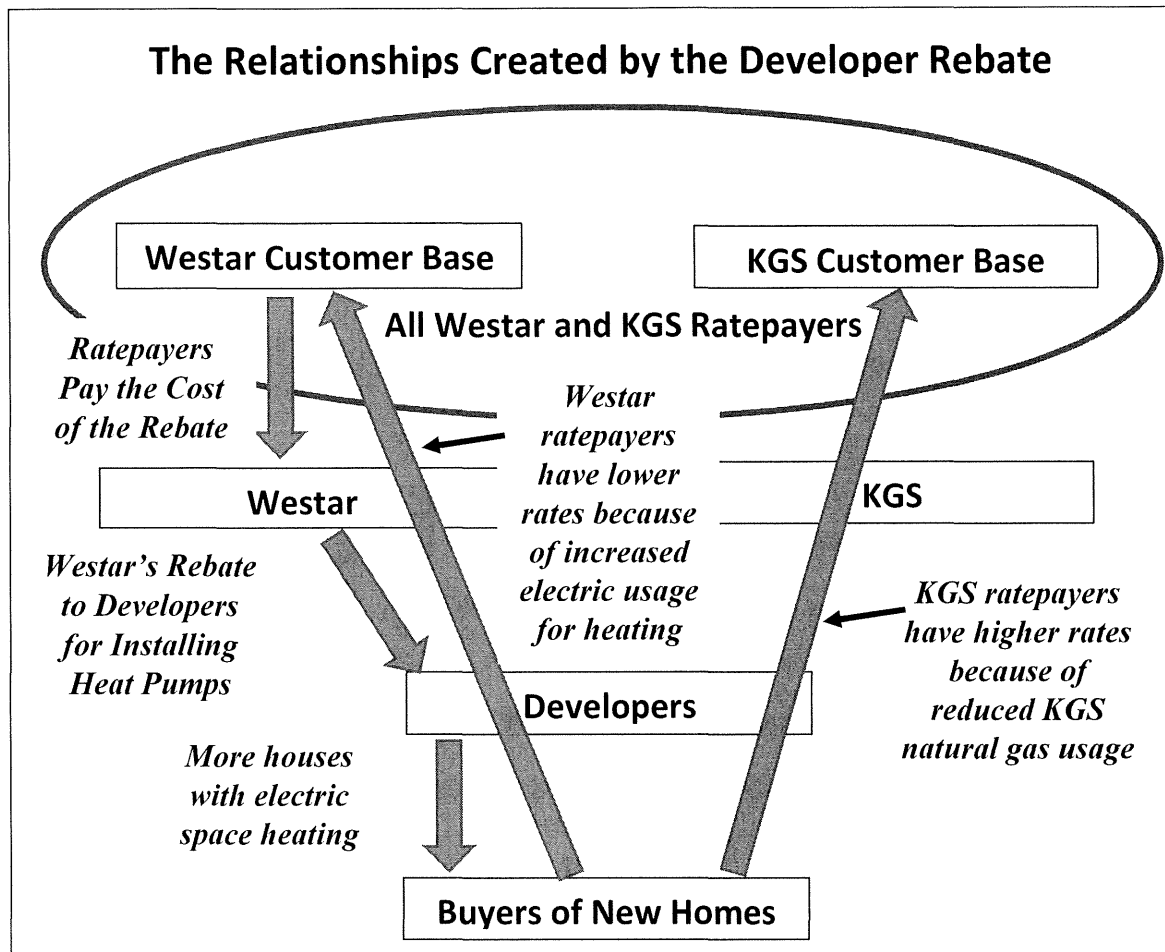
8 **Q. What is the economic effect of the Developer Rebate Program?**

9 A. Answering the question requires investigating the effect of the Developer Rebate
10 Program on three distinct groups: Westar and KGS ratepayers, developers, and
11 buyers of new houses.¹⁶ The relationships between the different groups is laid out
12 in Figure 1 below.

¹⁵ The regulatory agency needs to ensure the regulated utility does not leverage its market power in an unfair manner. Leonard Goodman, *The Process of Ratemaking*, Vol. II, p. 959.

¹⁶ Rebecca Fowler suggests that the net benefit of the Developers Rebate Program could be more than \$15 million. Direct Testimony, Docket No. 19-WSEE-061-COM, p. 7. Staff does not think that the aggregate net benefit is the appropriate measure of the program and discusses a better method of evaluating the program in the Appendix to this testimony.

Figure 1



Resulting Benefit if the Developer Rebate Program Is Successful in Changing the Developer's Heating Technology Decision

Westar Ratepayers and the Developers

Q. What is the effect on the Developers and Westar ratepayers of the Developer Rebate Program if it successfully changes developers' decisions about heating technology?

A The Developer Rebate Program helps developers by covering most of the cost of purchasing and installing heat pumps, and it eliminates the cost of installing natural gas infrastructure in the subdivision. The program helps Westar ratepayers by increasing Westar's winter energy load, which benefits its ratepayers, by increasing

1 total load and revenue. On the cost side, the increased winter load requires little or
2 no increase in Westar's rate base. The result is that Westar's fixed costs are spread
3 over greater energy use, which lowers Westar customers' rates.

4 *Resulting Harm if the Developer Rebate Program Is Successful in Changing the*
5 *Developer's Heating Technology Decision*

6 KGS Ratepayers

7 **Q. What is the effect on KGS ratepayers of the Developer Rebate Program if it**
8 **successfully changes developers' decisions about heating technology?**

9 A. If the Developer Rebate Program causes developers to use more electric heating
10 and less natural gas heating in their subdivisions, then the program hurts KGS
11 ratepayers because it reduces KGS's sales of natural gas, which increases rates for
12 KGS ratepayers. Staff believes this indicates the Developer Rebate Program is
13 unjust and unreasonable because the harm to KGS ratepayers is caused by Westar
14 using its asymmetrical power to distort the home buyers' market and to limit home
15 buyers' choices.

16 Home Buyers

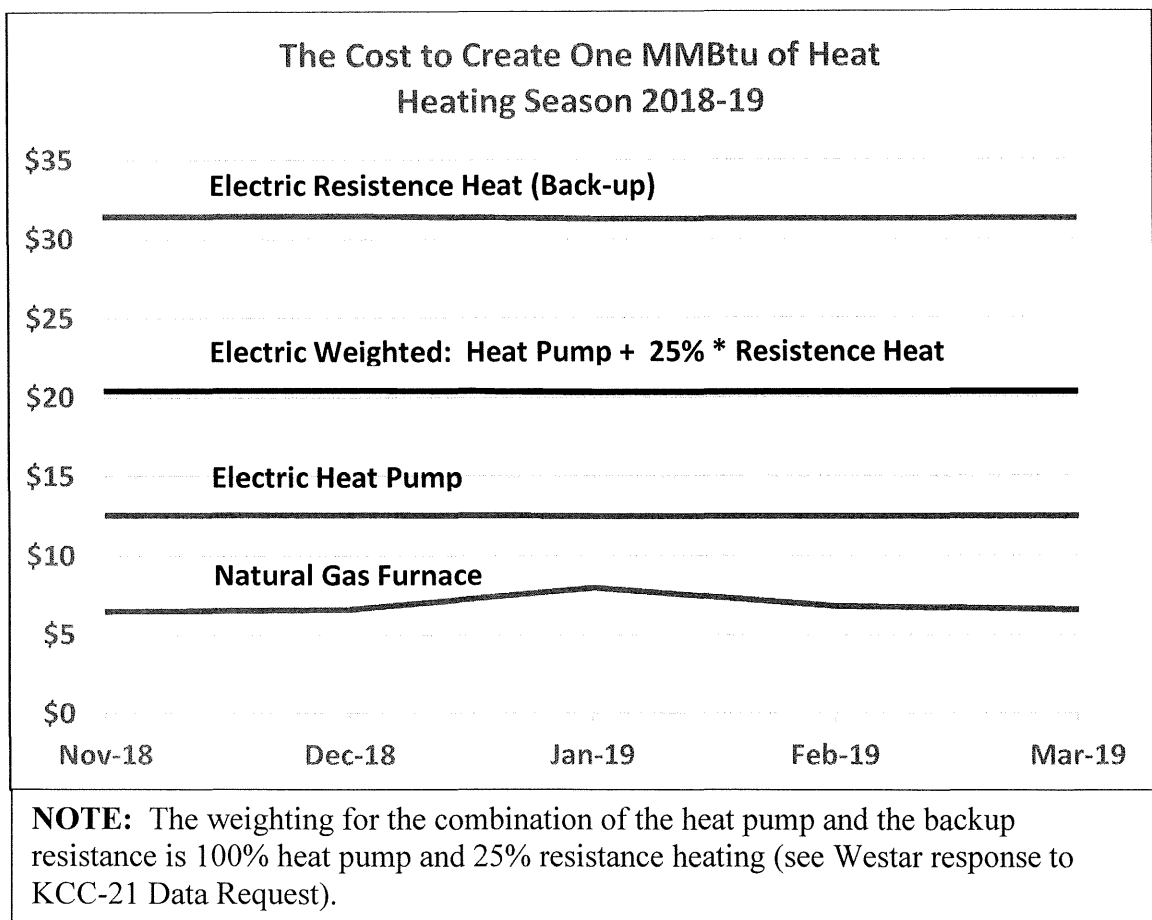
17 **Q. What is the effect on home buyers of the Developer Rebate Program if the**
18 **program successfully changes developers' decisions about heating technology?**

19 A. If the Developer Rebate Program causes developers to install more electric heating
20 and less natural gas heating in their subdivisions, then the program hurts home
21 buyers. This is because there is more electric home heating and less natural gas
22 home heating than the market would produce without the Developer Rebate
23 Program. And home buyers pay more for electric heating than they would if they
24 had natural gas heating. Westar's market distortion disadvantages home buyers

1 that want houses with natural gas heating. The result of this practice creates an
2 environment that is unduly preferential towards electric heating

3 In addition, unsophisticated home buyers that do not investigate the difference
4 in cost between electric and natural gas home heating, would be locked into electric
5 home heating. Staff Witness Justin Prentiss's Direct Testimony shows that natural
6 gas heating is significantly cheaper than electric heating (see Figure 2 below for the
7 relative cost of home heating for the winter of 2018-2019). Thus, if the
8 unsophisticated home buyers are amenable to natural gas heating, they would not
9 have that choice without selling their house and moving into a different house.

10 **Figure 2**



1 *Resulting Harm if the Developer Rebate Program Is Unsuccessful in Changing the*
2 *Developer's Heating Technology Decision*

3 **Q. What is the effect of Developer Rebate Program if it does not change the**
4 **developer's decision on the heating technology?**

5 A. If the only developers that accept the rebates for building total-electric houses were
6 developers who would have built total-electric houses anyway, then these
7 developers would be free riding on the Developer Rebate Program. And Westar
8 ratepayers do not benefit from the program because the program would not create
9 any additional load. Additionally, KGS ratepayers are not harmed by the program
10 because there is no loss of natural gas sales as these sales would not have occurred
11 anyway. The program is simply a monetary transfer from Westar ratepayers to
12 developers for no benefit in return.

13 *Resulting Harm if KGS Retaliates with its own Developer Rebate Program*

14 **Q. What would be the effect of KGS creating a competing Developer Rebate**
15 **Program to encourage developers to place only natural gas furnaces in houses?**

16 A. If KGS responds with its own Developer Rebate Program that provides an
17 equivalent rebate to developers who install natural gas furnaces, then the KGS
18 program would reverse the effect of Westar's program. With both Westar and KGS
19 providing rebates, the developers would get a rebate no matter what heating
20 technology they employed. But because both Westar and KGS would be providing
21 rebates paid for by their ratepayers, the competing rebate programs would result in
22 higher rates for Westar and KGS ratepayers.

23 The developer rebates, because of their limited size (about 1% or less of the sale
24 price of a house) and the demand driven nature of the housing market, would have
25 no noticeable effect on the total number of houses built. The competing rebate

1 programs would result in a return to the pre-rebate equilibrium number of houses
2 with electric heating and natural gas heating.

3 Therefore, all competition between Westar and KGS using developer rebates
4 paid for by Westar and KGS ratepayers would accomplish is the transfer of money
5 from ratepayers to developers with almost no change in the housing market and no
6 benefit to either Westar or KGS ratepayers. The transfer of money from ratepayers
7 to developers with no benefit to ratepayers would be unjust and unreasonable
8 because Westar and KGS ratepayers have unnecessarily higher rates and the
9 ratepayers are paying more for electric service than the services rendered by it are
10 reasonably worth. In addition, the unnecessarily higher rates are unfair, unjustly
11 discriminatory or unduly preferential.

12 **Q. Please summarize the issues in your testimony.**

13 A. Below is Table 2 which summarizes the issues in my testimony.

1

Table 2

Summary of the Issues in My Testimony			
Situation	Benefited	Harmed	Not Affected
(1)	(2)	(3)	(4)
Program successfully changes developers heating technology decision	Westar Ratepayers (lower rates), Developers (rebate)	KGS Ratepayers (higher rates), Home Buyers (distorted housing market)	
Program unsuccessfully changes developers heating technology decision	Developers (rebate)	Westar Ratepayers (higher rates)	KGS Ratepayers, Home Buyers
KGS develops its own developers rebate program	Developers (rebate)	Westar & KGS Ratepayers (higher rates)	Home Buyers

2

3 **Q. Is the Developer Rebate Program in the public interest?**

4 A. No. No matter what the situation, the Developer Rebate Program harms some
 5 group of ratepayers. Therefore, it is not in the public interest and should be stopped.

6 **Q. Are the HVAC and Builder's programs in the public interest?**

7 A. Because they were not the subject of the complaint, I did not evaluate whether these
 8 programs are in the public interest. ~~Westar asserts that they are~~ It is unclear if these
 9 programs are energy efficiency programs,¹⁷ although from Staff's perspective they
 10 appear to be similar to the Developer Program. Regardless of whether they are
 11 energy efficiency programs, Westar has not sought specific approval of the
 12 programs and the Commission has not granted such a request. If Westar would like

¹⁷ CURB Data Request No. 240, Docket No. 08-WSEE-1041-RTS, Janet Buchanan, Direct Testimony, Docket No. 19-WSEE-061-COM, pp. 10 – 12, and The Joint Response of Kansas Gas Service Data Request and Atmos Energy to the Staff Report and Recommendation filed April 13, 2009, Docket No. 09-GIMX-160-GIV, May 29, 2009, p. 3.

1 to continue the HVAC and Builder's programs, I recommend the Commission stop
2 the programs and require Westar to file tariff applications requesting they be
3 continued. If Westar files tariff applications for these programs, then Staff will
4 evaluate the programs to determine whether they met the established energy
5 efficiency program criteria.

6 IV. CONCLUSION

7 Recommendation

8 **Q. Please summarize Staff's recommendations.**

9 A. As discussed above, Staff's analysis has shown Westar's Developer Rebate
10 Program is unjust, unreasonable, unduly preferential, and the practice itself is
11 predatory and contrary to the public interest. Therefore, the Commission should
12 terminate the Developer Rebate Program because it is not in the public interest.

13 **Q. Does this conclude your testimony?**

14 A. Yes. Thank you.

APPENDIX: Net Benefit

Net Benefit to Westar's Ratepayers of the Developer Rebate Program

Rebecca Fowler, in her Direct Testimony, stated that the net benefit of the Developer Rebate Program could be more than \$15 million.¹ Staff's analysis indicates that an aggregate net benefit number is probably not informative because of the important caveats that apply to estimating net benefit gained from the developer program. Instead, Staff will focus on the net benefit of one additional Residential All-Electric (all-electric) ratepayer to Westar and one additional Residential ratepayer (ratepayer) to KGS. Net benefit is defined as the difference between the additional revenue generated by the new ratepayer and the cost to either Westar or KGS of the new ratepayer.

The problem involved in estimating the electric usage created by a new all-electric ratepayer is separating out the electric heating energy usage from the non-heating electric energy usage. Since nearly all new homes have electricity, it is only the additional need for electricity created by home electric heating that counts toward net benefit. Table A-1 below shows the results of using three different estimates of additional energy usage on the estimated net benefit of an additional all-electric ratepayer.

Table A-1

Westar Net Benefit of New All Electric Customer			
One New Customer Assuming Increased Winter Monthly usage of:		Net Benefit	
1,143 kWh		\$ 9,470.18	
720 kWh		\$ 3,994.44	\$ 5,524.32
333 kWh		\$ 1,910.00	

The first estimate of winter monthly heating usage (1,143 kWh) came from Rebecca Fowler's workpapers.² Ms. Fowler assumes that the electric heating is used for 2,000 hours during eight months and that the heat pump is used for all of that time and that back-up resistance heating is used in addition to the heat pump for 25% of the time. For the eight months of the heating season, the estimated total usage is 9,140 kWh which is about 1,143 kWh per month.

The second estimate came from KCP&L's billing determinants for Residential Class RESD—space heating with two separate meters—from the last KCP&L rate case: Docket No. 18-KCPE-480-RTS (18-480).³ The second meter is for space heating which makes this estimate

¹ Rebecca Fowler, Direct Testimony, Docket No. 19-WSEE-061-COM, p. 7.

² Westar's response to Staff's Data Request number 21, *15 year life cycle analysis*.

³ Docket No. 18-KCPE-480-RTS.

the most realistic empirical estimate. The average monthly usage for the second meter during the eight winter months was 720 kWh.

The third estimate came from the same KCP&L Residential billing determinants but for the Regular Residential Sub-Class, RESA, and the All-Electric Residential Sub-Class, RESC. The estimated electric heating usage was calculated by subtracting the average monthly winter RESC class usage from the average monthly winter RESA class usage. The result was an average monthly usage of 333 kWh. The idea behind this method is that the difference between the winter usage of a regular residential customer and an electric heating customer would be the electric heating usage.

Staff finds the second estimation that is based on KCP&L's second meter for space heating to be the most convincing estimate of the additional electric usage that an electric heating customer would add. If this estimate were used, the aggregate net benefit for the Developer Rebate Program would be substantially reduced from Westar's estimate, but still significantly positive.

Net Benefit to KGS's Ratepayers of an Additional Ratepayer

Estimating the net benefit to KGS's ratepayers of an additional ratepayer is a much simpler process than trying to separate out electric heating from other electric winter usage. All of the energy used by a new KGS ratepayer, winter or summer, adds to the net benefit created by that ratepayer. Table A-2 has Staff's estimate of the net benefit of a new ratepayer for KGS.

Table A-2

KGS Net Benefit of New Customer (Based on 18-560 test year data)	
	Net Benefit
One New Customer	\$ 2,719.32

Compared to Staff's preferred estimate of the net benefit of an additional all-electric ratepayer to Westar, the KGS new ratepayer adds ~~\$1,275~~ \$2,805 less than the new all-electric customer. Although the above analysis indicates that if the Developer Rebate Program adds one more all-electric ratepayers, the program is more beneficial to Westar ratepayers than adding one more KGS ratepayer, Staff has a couple of caveats that need to be considered before taking net benefit of the developer program at face value.

Caveats to the Net Benefit Analysis of the Developer Rebate Program

Staff has two caveats to the above analysis that suggest that the net benefit of the developer program is over-stated by only comparing the net benefit to Westar and KGS ratepayers.

1. ***The Free Rider Problem:*** There are almost certainly free riders to the Developer Rebate Program: developers who would have put in electric heating without the program but still receive the rebate.

Staff has two examples of highly probable free riding. (1) KGS has informed Staff that beginning in the 1990s, and possibly earlier, KGS has had a hard time getting natural gas heating into quads (four apartments per building) and larger multi-family complexes. (2) Staff notes that even when natural gas is available in a sub-division, not all customers choose natural gas heating. There are still some homeowners that want all-electric even when natural gas is available.⁴

Staff has no idea how to accurately estimate the number of free riders to the developer program. But the inability to measure the free riding does not mean it does not exist. The two examples Staff provided above show its existence is highly probable.

2. ***The Higher Efficiency of Natural Gas Heating Distorts Net Benefit:*** One of the reasons that the net benefit of electric heating is higher for an all-electric ratepayer than the net benefit of a new KGS ratepayers is because natural gas heating is more efficient.

The effect of the lower efficiency of electric heating can be seen in the effect of the additional average monthly electric usage on the net benefit to Westar ratepayers. As the average monthly usage increases from 333 kWh to 720 kWh to 1,143 kWh the net benefit increases from \$1,910.00 to ~~\$3,994.44~~ \$5,524.32 to 9,470.18. The more inefficient electric heating is, the greater the net benefit of electric heating to other Westar ratepayers. Another indication of the role of efficiency in the estimation of net benefit is that the use of a higher efficiency heat pump than Westar has been assumed would lower the net benefit of electric heating.

The Calculation of Net Benefit

Table A-3 below illustrates estimation of the net benefit of one additional Westar all-electric ratepayer and of one new KGS ratepayer. On the left of the table is the calculation of the net benefit of one additional all-electric ratepayer based on Staff's preferred estimate of the addition electric usage caused by an all-electric ratepayer. On the right is the calculation of the net benefit of one additional KGS ratepayer.

Table A-3

The Calculation of the Net Benefit of One More Residential All-Electric Ratepayer for Westar and One More Residential Customer for KGS				
<u>All Electric Ratepayer</u>		-	<u>Natural Gas Ratepayer</u>	
	<u>Winter</u>		<u>Summer</u>	<u>Winter</u>
Usage in kWh	720		Usage in MCF	1.29 6.57

⁴ KGS response to Staff's Data Request number 25.

Relevant Rates		Relevant Rates		
Block 2 Energy Charge	\$ 0.060089	Customer Charge	\$ 18.70	\$ 18.70
Property Tax Surcharge	\$ 0.001209	Gas Charge	\$ 2.3485	\$ 2.3485
TDC	\$ 0.016274	Hedge Recovery	\$ 0.3565	\$ 0.3565
Energy Efficiency Rider	\$ 0.000256	Ad Valorem	\$ 0.0134	\$ 0.0134
Monthly Revenue		Monthly Revenue		
Energy Charge Revenue	\$ 43.26	Customer Charge Revenue	\$ 18.70	\$ 18.70
Non-Rider Revenue	\$ 43.26	Energy Charge Revenue	\$ 3.03	\$ 15.43
PTS Revenue	\$ 0.00	Non-Rider Revenue	\$ 21.73	\$ 34.13
	\$ 0.87			
TDC Revenue	\$ 0.02	Hedge Recovery	\$ 0.46	\$ 2.34
	\$ 11.72			
EER Revenue	\$ 0.00	Ad Valorem	\$ 0.02	\$ 0.09
	\$ 0.18			
Rider Revenue	\$ 0.02	Rider Revenue	\$ 0.48	\$ 2.43
	\$ 12.77			
Annual Revenue		Annual Revenue		
Energy Charge Revenue	\$ 346.11	Customer Charge Revenue	\$ 74.80	\$ 149.60
Non-Rider Revenue	\$ 346.11	Energy Charge Revenue	\$ 12.13	\$ 123.41
PTS Revenue	\$ 0.01	Non-Rider Revenue	\$ 86.93	\$ 273.01
	\$ 6.96			
TDC Revenue	\$ 0.17	Hedge Recovery	\$ 1.84	\$ 18.73
	\$ 93.74			
EER Revenue	\$ 0.00	Ad Valorem	\$ 0.07	\$ 0.70
	\$ 1.47			
Rider Revenue	\$ 0.18	Rider Revenue	\$ 1.91	\$ 19.44
	\$ 102.18			
Total Annual Revenue	\$ 346.30	Total Revenue	\$ 88.84	\$ 292.45
	\$ 448.29			
15-year Revenue	\$ 5,194.44	Total Annual Revenue	\$ 381.29	
	\$ 6,724.32	15-year Revenue	\$ 5,719.32	
Costs		Costs		
Rebate (14-SEER)	\$ 1,200.00			

Net Revenue \$ 3,994.44 \$ 5,524.32	<table> <tr> <td data-bbox="786 207 1136 254">Infrastructure</td><td data-bbox="1136 207 1484 254">\$ 3,000.00</td></tr> <tr> <td data-bbox="786 291 1136 331">Net Revenue</td><td data-bbox="1136 291 1484 331">\$ 2,719.32</td></tr> </table>	Infrastructure	\$ 3,000.00	Net Revenue	\$ 2,719.32
Infrastructure	\$ 3,000.00				
Net Revenue	\$ 2,719.32				
NOTE: The usage data for Westar came from the billing determinants for KCP&L's Residential sub-class that has two meters with one dedicated to space heating. The billing determinants came from the last KCP&L rate case: Docket No. 18-KCPE-480-RTS.					

In both cases the assumed energy usage is at the top of the table followed by the relevant rates. In Westar's case the retail energy cost adjustment is left out and in KGS's case the cost of gas rider is left out. Both of these are energy pass through riders which are not tied to fixed costs and do not reduce the per ratepayer fixed cost allocation. Below the rates is the calculation of the non-rider and rider monthly revenue.

The major difference between the Westar calculation and the KGS calculation is the number of relevant months. For Westar, only the winter is relevant, so the monthly revenue is multiplied by eight to calculate the annual revenue. For KGS, both the winter and summer are relevant. And since average monthly usage is significantly different, there are columns for summer and winter. Also, the customer charge for KGS is added because it would be additional revenue created by a new KGS ratepayer. The winter monthly averages are multiplied by eight and the summer monthly averages are multiplied by four and then both are added together to provide the annual revenue.

The total annual revenue is then multiplied by 15 to give the total 15-year revenue.⁵ Then the costs are subtracted from the 15-year revenue resulting in the net benefit for an individual ratepayer. Since the sub-division would have to have electric infrastructure anyway, the only cost for electric heating is the rebate to the developer. For KGS, the infrastructure must be added in order for customers to have access to natural gas. Staff estimated the per house infrastructure costs for natural gas at about \$3,000. In both the Westar and KGS case, Staff is ignoring administrative costs.

⁵ The 15-year time period is the same time period used in Ms. Fowler's workpapers.

STATE OF KANSAS)
) ss.
COUNTY OF SHAWNEE)

VERIFICATION

Robert H. Glass, being duly sworn upon his oath deposes and states that he is the Chief of Economics and Rates Section for the Utilities Division of the Kansas Corporation Commission of the State of Kansas, that he has read and is familiar with the foregoing *Direct Testimony*, and attests that the statements contained therein are true and correct to the best of his knowledge, information and belief.



Robert H. Glass
Chief of Economics and Rates
State Corporation Commission of the
State of Kansas

Subscribed and sworn to before me this 9 day of August, 2019.


Notary Public

My Appointment Expires: 4-28-21



CERTIFICATE OF SERVICE

19-WSEE-061-COM

I, the undersigned, certify that a true and correct copy of the above and foregoing Staff's Errata to Testimony of Staff Witness Robert H. Glass was served via electronic service this 9th day of August, 2019, to the following:

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