

BEFORE THE CORPORATION COMMISSION OF OKLAHOMA

IN THE MATTER OF THE APPLICATION OF)
OKLAHOMA GAS AND ELECTRIC COMPANY)
FOR AN ORDER OF THE COMMISSION)
AUTHORIZING APPLICANT TO MODIFY ITS)
RATES, CHARGES, AND TARIFFS FOR RETAIL)
ELECTRIC SERVICE IN OKLAHOMA)

CAUSE NO. PUD 201700496



Rebuttal Testimony

of

Dr. Russell R. Evans

Associate Professor of Economics, Oklahoma City University,
Executive Director of the Steven C. Agee Economic Research and Policy Institute, and
Director of the Center for Regional Economic Forecasting and Policy Analysis

on behalf of

Oklahoma Gas and Electric Company

May 29, 2018

Dr. Russell R. Evans
Rebuttal Testimony

1 Q. **Please state your name, business address, and occupation.**

2 A. My name is Dr. Russell R. Evans. My business address is Meinders School of Business
3 Ste. 301, Oklahoma City University, 2501 N. Blackwelder, Oklahoma City, OK 73106. I
4 hold multiple positions in the school of business including: associate professor of
5 economics, executive director of the Steven C. Agee economic research and policy
6 institute, and director of the center for regional economic forecasting and policy analysis.
7 Outside of the university I am a partner with the firm the Economic Impact Group and a
8 distinguished fellow at the E Foundation for Oklahoma.

9
10 Q. **Are you the same Dr. Russell R. Evans that previously filed direct testimony in this**
11 **proceeding?**

12 A. Yes.

13

14 Q. **What is the purpose of your testimony in this proceeding?**

15 A. The general purpose of my testimony is to provide context to this cause by highlighting
16 key economic principles relevant to the proceeding. The specific purpose of this rebuttal
17 testimony is to address a few economic concerns presented in responsive testimony.

18

19 Q. **What are the broad areas in which Dr. Griffing has responded to your testimony?**

20 A. Dr. Griffing's testimony includes an assertion that my testimony emphasizes only the
21 benefits of an optimal allocation of resources to the firm (page 58, line 10). He also
22 critiques my comments on the outlook for long-term interest rates (page 56, line 19), and
23 he seems to dispute that a relationship exists between economic growth and regional
24 headquarter activity (page 61, line 19).

1 Q. **Is Dr. Griffing correct that your testimony emphasizes the benefits of optimally**
2 **determining OGE's allowable ROE and therefore optimally allocating resources**
3 **into the firm?**

4 A. Yes. This is the primary point of my testimony! When resources are optimally allocated,
5 benefits will result. In fact, offering the economic context to step back from the focus on
6 ratepayers vs. shareholders and customers vs. investors and to understand that this cause
7 is, at its core, setting a policy that determines the allocation of resources into a regional
8 headquarters is the unique (and nonredundant) contribution of my testimony.

9
10 Q. **How does Dr. Griffing respond to your presentation of the idea that ROE**
11 **determination is directly tied to the allocation of resources into the firm?**

12 A. Dr. Griffing agrees with and endorses this perspective. He affirms in his responsive
13 testimony that, "the effects that Dr. Evans discusses are all possible outcomes of OGE
14 obtaining an optimal allocation of resources. However, his emphasis is all on the benefits
15 that will flow through the economy if OGE receives an authorized ROE that enables it to
16 gain its optimal allocation of resources." (page 58, lines 9-12) Dr. Griffing's testimony
17 supports my own in underscoring the link between authorized ROE and the allocation of
18 resources into the firm.

19
20 Q. **Is Dr. Griffing correct that your testimony ignores the consequences of authorizing**
21 **and ROE for OGE that is too high (page 58, line 13)?**

22 A. No. My testimony refers to optimal and suboptimal ROE determinations and the
23 consequent optimal and suboptimal allocation of resources into the firm. An ROE
24 determination that is too high and a ROE determination that is too low are simply
25 different forms of suboptimal. Dr. Griffing's testimony is that there "are the lost
26 opportunities for other firms if OGE's ROE is too high, causing an overallocation of
27 resources to the Company and higher than necessary rates for the firms, which prevent
28 them from obtaining the optimal allocation of resources for their enterprises" (page 58
29 lines 12-15). That is mostly correct and precisely the point of my testimony. His
30 testimony that an ROE that is too high over-allocates resources to the Company
31 underscores again that an ROE that is too low must under-allocate resources to the

1 Company, and that an ROE that is optimal must optimally allocate resources to the
2 Company.

3
4 **Q. How do you respond to Dr. Griffing's examples of lost opportunities if OGE is over-**
5 **allocated resources?**

6 A. It's noteworthy that the Dr. Griffing views lost opportunities through the lens of firms
7 paying "electricity rates that are above the optimal level because OGE's ROE is higher
8 than the ROE that would result in an optimal allocation of resources to OGE." (page 58,
9 line 20-22). The converse of this is also true. If firms pay electricity rates that are below
10 the optimal level because OGE's ROE is lower than the ROE that would result in an
11 optimal allocation of resources to OGE, then there are opportunities gained by these firms
12 at the expense of the utility. Again, this is the key contribution of my testimony. Policy
13 should seek to avoid over-allocating resources to OGE, allowing the Company to earn
14 excess returns at the expense of regional firms, and also seek to avoid under-allocating
15 resources to OGE, allowing regional firms to earn excess return at the expense of OGE.
16 The key contribution of my testimony is that a focus on the allocation of resources rather
17 than a focus on rates is more likely to achieve this balance.

18
19 **Q. Can you summarize Dr. Griffing's position on the future of long-term interest**
20 **rates?**

21 A. Dr. Griffing argues that "current yields are a good indicator of where the market believes
22 yields are headed" (page 53, line 10-11) and expresses confidence that Federal Reserve
23 policy with regards to the unwinding of its balance sheet will be both gradual and
24 immaterial in future long-term yield considerations.

25
26 **Q. Do you provide in your testimony a specific interest rate forecast?**

27 A. No, I do not.

1 Q. **Do you endorse or reject in your testimony the risk-free rate used in Dr. Morin's**
2 **models?**

3 A. No, I will defer to Dr. Morin to justify the assumptions and parameters of his financial
4 models.

6 Q. **What is your testimony with regard to long-term interest rates and Dr. Griffing's**
7 **testimony as summarized previously?**

8 A. It is my testimony that evaluating competitive financial models of ROE is best
9 accomplished by evaluating the assumptions and parameters of those models that are at
10 the discretion of the modeler. Among those parameters is a measure of the risk-free rate
11 for which long-term yields serve as a proxy.

12 Dr. Griffing's testimony that current yields are a good predictor of future yields
13 fails to appreciate that current low yields are supported artificially by historic and
14 unprecedented monetary policy. To believe his statement requires one to believe that the
15 current yields, held low through unprecedented monetary policy, are a good predictor of
16 what future yields will be in the absence of unprecedented policy.

18 Q. **Are you alone in expressing reservation about the effect of unwinding monetary**
19 **policy on interest rates?**

20 A. No. For the sake of brevity I have included only 3 examples of similar concerns.
21 The first excerpt is from an article from *Business Insider* from November 2017¹. The
22 article discusses analysis recently published by Benn Steil, director of international
23 economics at the Council on Foreign Relations.

25 In reality, selling bonds from the central bank's portfolio, or allowing
26 maturing securities to roll off the balance sheet, pushes interest rates
27 higher just like, well, pushing interest rates higher.

28 Benn Steil, director of international economics and the Council on Foreign
29 Relations, thinks Fed officials and financial markets are seriously

1 <http://www.businessinsider.com/fed-balance-sheet-reduction-unlikely-to-go-smoothly-2017-11>

1 underestimating the amount of monetary tightening that will result from
2 the central bank's scheduled asset reduction.

3 'But is Yellen right that the Fed's gradual approach to balance-sheet
4 reduction makes it relatively unimportant in its impact on monetary
5 conditions?' Steil asks, in a piece co-written with his colleague Benjamin
6 Della Rocca. '***Our analysis suggests that it will be, in fact, considerably***
7 ***more important than the market, or the Fed itself, realizes.***' (emphasis
8 added)

9
10 The second excerpt comes from a May, 2018 CNBC.com article summarizing an on-air
11 interview with Peter Boockvar, chief investment officer of Bleakley Advisory Group².

12
13 Boockvar expects tighter monetary policy will have a far greater impact
14 than the Fed is telegraphing, and the market is anticipating.

15 'Regardless of how they tell us, regardless of how they do it, there's still a
16 rise in the cost of capital, there's still a drain of liquidity,' he said.

17 Even worse, it's more like two blows: While the Fed hikes interest rates,
18 it's also shrinking its balance sheet, Boockvar points out.

19 '***The biggest risk to the market is that they're really tightening twice***
20 ***through the reduction in the size of their balance sheet,***' said Boockvar.
21 (emphasis added)

22
23 The third excerpt is from a May, 2018 *Business Insider* article covering a recent
24 presentation by JPMorgan CEO Jamie Dimon.³

25 He told Bloomberg TV in Beijing that if the Federal Reserve decided to
26 boost short-term interest rates 'it might force the 10-year up,' referring to
27 10 year US treasury bonds.

28 'You can easily deal with 4% bonds and I think people should be prepared

2 <https://www.cnbc.com/2018/05/11/fed-is-about-to-deliver-a-punch-in-the-face-peter-boockvar-says.html>

3 <https://www.businessinsider.com/jpmorgan-ceo-jamie-dimon-yields-more-market-volatility-2018-5>

1 for that,' he said.

2 But Dimon warned that US borrowing could shoot up to \$400 billion per
3 quarter, which is 'a lot', he said, adding that the extra borrowing combined
4 with reductions in bond purchases from central banks around the world
5 *'may cause more volatility, higher rates in a way we don't fully*
6 *understand.'*

7 Dimon also talked about a potential end to quantitative easing. *'We've*
8 *never had QE, we've never had reversal,'* Dimon cautioned. (emphasis
9 added)

10
11 My testimony simply echoes the caution of these and many other experts in the
12 field. At this particular moment in our economic history it is untenable to argue that
13 current yields are a good predictor of future yields and unwise to assume that the
14 unwinding of unprecedented monetary policy will be immaterial in the determination of
15 interest rates.

16
17 **Q. Dr. Griffing criticizes your Exhibit RRE-2 in your direct testimony. What is the**
18 **purpose of Direct Exhibit RRE-2 as submitted in your direct testimony?**

19 **A.** The exhibit illustrates regions in the southwest with regard to headquarter relocations into
20 that region and that region's share of total economic growth in the BEA's southwest
21 region. The exhibit uses two different data sources to answer two different questions.
22 The first question is, of the MSAs in the BEA's southwest region, which ones accounted
23 for the greatest share of economic growth between 2000 and 2007 and again between
24 2007 and 2014. The second question is, of these same MSAs, which ones accounted for
25 the greatest share of HQ relocations. By plotting both answers together we see that the
26 two questions might be related. There appears to be a correlation between HQ
27 relocations and economic growth.

28 The purpose is simply to underscore the importance of optimal ROE
29 determination and resource allocation in this cause, as OGE serves as a headquarter firm
30 in the regional economy.

1 Q. Does Dr. Griffing's testimony refute the idea that headquarters are uniquely
2 important to a regional economy?

3 A. I don't think so. Dr. Griffing's criticisms focus on the exhibit itself and not on the
4 economic argument of headquarter importance. There is a substantial economic literature
5 on what motivates headquarter locations, the headquarter effect on regional multipliers,
6 the headquarter effect on local philanthropy, etc. I do not read in Dr. Griffing's
7 testimony a disagreement with this literature. His criticisms are focused on the exhibit
8 itself – that data is insufficiently defined, that comparisons between variables in levels
9 and percent don't have meaning, etc.

10
11 Q. Are there specific criticisms of Direct Exhibit RRE-2 that merit addressing?

12 A. Yes. Two criticisms stand out as meriting a response.

13 The first is Dr. Griffing's assertion that "since the share of growth is reported as a
14 percentage, the Change in Headquarters count should also be reported as a percentage for
15 the relationship to have meaning." (page 60, line 22-23 and page 61, line 1).

16 This assertion is demonstrably false. There is an entire subset of statistical
17 models for economic applications designed to estimate the relationship between the level
18 of one variable and the percent change in another variable. These models are called
19 semilog models.⁴ Imagine, for example, that we were discussing a child's reading
20 comprehension and her years of education. If we found that as a child moved from second
21 to third grade her reading comprehension increased by 15%, we wouldn't dismiss the
22 relationship because both variables aren't measured as a percent change. In fact,
23 converting both to a percent change would lead to the difficult to interpret conclusion that
24 a 50% increase in education leads to a 15% increase in reading comprehension.

25 For completeness, the data in Direct Exhibit RRE-2 is resubmitted as Rebuttal
26 Exhibit RRE-1. In Rebuttal Exhibit RRE-1, HQ relocations are converted from levels to
27 percent share of total. Now the exhibit plots for each MSA answers to the same two
28 questions: over the time periods, what share of all HQ relocations into the southwest
29 region were accounted for by an MSA, and over the same period what share of southwest

4 Gujarati, Damodar N. and Dawn C. Porter, *Basic Econometrics*, 5th Ed., McGraw-Hill Irwin

1 region economic growth was accounted for by the MSA. As would be expected, there is
2 no meaningful difference between the information reported in Direct Exhibit RRE-2 and
3 Rebuttal Exhibit RRE-1.

4 The second criticism is that “the changes for these two metropolitan areas do not
5 support a conclusion that Headquarters count change and regional growth share are
6 directly related.” (page 61, line 18-20). Dr. Griffing is referring specifically to the
7 Albuquerque and Phoenix metropolitan areas. This criticism relies on a common
8 misconception that the outlier in the data disproves the broader relationship apparent in
9 the data.

10
11 **Q. Is the relationship between headquarter activity and economic activity limited to the**
12 **academic literature?**

13 A. No. The exhibits submitted are not intended to be academic. Instead, the exhibits simply
14 reinforce the intuitive conclusion generally reached the research literature and supported
15 by the data – that a relationship exists between headquarter activity and economic
16 activity. This relationship is recognized by the economic developers experiencing the
17 reality of recruiting and losing headquarters. Two recent columns in the *Wichita Eagle*
18 recounting the experience of Wichita, Kansas summarize nicely key pieces of this
19 headquarter discussion.⁵ It is worth emphasizing that this headquarter discussion is
20 intended only to reinforce the central theme of my testimony concerning the importance
21 of the ROE determination in influencing the allocation of productive resources into a
22 regional headquarters firm.

23
24 **Q. What is the principle area in which Mr. Rush has responded to your testimony?**

25 A. The general response of Mr. Rush is that my testimony is redundant and fails to make a
26 unique contribution to the ROE determination piece of this cause.

⁵ <http://www.kansas.com/news/business/article117979403.html>
<http://www.kansas.com/news/business/biz-columns-blogs/business-perspectives/article188760864.html>

1 Q. **In your opinion, what is the unique contribution of your testimony with regards to**
2 **the ROE determination?**

3 A. Borrowing the expression of having trouble appreciating the forest for the trees, expert
4 ROE witnesses in this cause will testify to the various aspects of individual trees.
5 Various experts will cover common ground, but presumably each makes a nonredundant
6 contribution to the ROE determination decision. The unique contribution of my
7 testimony is to offer context to this testimony by looking at the forest – the broad
8 economic context underlying this cause.
9

10 Q. **Can you provide an example of how your unique contribution – providing economic**
11 **context – is useful to this cause?**

12 A. Yes. Mr. Rush uses the word competition in several places of his testimony. He uses this
13 word in reference to the economics of the cause. For example, Mr. Rush references the
14 duty of the commission to stand in for competition (see page 3, line 19; page 19, line 12;
15 page 34, line 11; page 43, line 17; page 44, line 19). He also references a regulated utility
16 not having to endure the weight or restraints of competition (page 34, line 11; page 66,
17 line 13). But absent the relevant economic context, the use of the word competition
18 leaves incomplete an important thought.
19

20 Q. **What is incomplete about the use of the economic principle of competition in Mr.**
21 **Rush's testimony?**

22 A. Consider the following excerpt from a widely-used principles of microeconomics
23 textbook.⁶
24

25 The price-taker model highlights the importance of the competitive process.
26 Competition puts pressure on producers to operate efficiently and use resources
27 wisely.
28

29 The sentences above fit nicely with Mr. Rush's use of the word competition, specifically

6 Gwartney, Stroup, Sobel, and Macpherson, *Microeconomics, Private and Public Choice, 16th Ed.*, Cengage

1 that the commission has a duty to stand in for the competitive process to ensure that the
2 regulated utility operates efficiently and uses resources wisely. However, the textbook
3 presentation continues to offer the following.
4

5 Similarly, firms in competitive markets have a strong incentive to discover and
6 produce goods and services that consumers value highly relative to cost. Thus,
7 resources will be drawn to those uses where they are most productive, as judged
8 by the consumers' willingness to pay. The ability of firms to freely expand or
9 contract their businesses and enter or exit markets means that resources will not
10 be trapped unproductively in a particular industry when they're valued more
11 highly elsewhere.
12

13 The discussion above emphasizes the natural incentive in the competitive process to
14 discover goods and services that maximize the difference between the price of the good
15 and the cost of the resources to produce the good. This difference is effectively economic
16 profit. The final sentences emphasize that, in the competitive process, economic returns
17 (economic profits) serve as a signal that attracts and retains productive resources. A
18 commission duty to stand in for competition would imply a duty to create an incentive to
19 use resources at their highest value and a duty to reward the effective use of resources
20 with a profit that signals resource markets for an optimal allocation of resources. The
21 discussion on competition concludes with the following.
22

23 If firms are going to be successful in competitive markets, they must also be
24 innovative and forward-looking. The production techniques and product offerings
25 that lead to success today will not necessarily pass the competitive market test
26 tomorrow. Producers who survive in a competitive environment cannot become
27 complacent. On the contrary, they must be willing to experiment and quick to
28 adopt improved methods.
29

30 The section concludes with the natural forces of the competitive process to incentivize
31 and reward innovation. As with the effective use of resources, the reward for innovation

1 is economic profit and a signal for additional resources into the firm. A duty to stand in
2 for competition implies a duty to replicate and reward the forces of innovation.

3 The section from which these excerpts are pulled is subtitled *Competition*
4 *Promotes Prosperity*. A duty to stand in for competition implies a duty to promote
5 prosperity.

6 The preceding discussion is an illustration of the importance of economic context.
7 Absent a more complete context, competition can be narrowly inferred to mean putting
8 pressure on the firm to operate efficiently. But with more complete context, competition
9 can be correctly inferred to mean not only pressure to operate efficiently but also an
10 incentive to identify high value relative to cost products and services and motivation to be
11 innovative and forward looking. The unique contribution of my testimony is the
12 economic context that suggests the commission's duty to stand in for competition is more
13 likely to be achieved through a focus on social prosperity and resource allocation than a
14 focus exclusively on rates.

15
16 Q. **Does this conclude your rebuttal testimony?**

17 A. Yes.