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9 **BEFORE THE ARIZONA CORPORATION COMMISSION**

10 COMMISSIONERS

11 TOM FORESE, Chairman
12 BOB BURNS
13 ANDY TOBIN
14 BOYD DUNN
JUSTIN OLSON


15 IN THE MATTER OF:
16 STACEY CHAMPION, et al.,
17 Complainant,
18 v.
19 ARIZONA PUBLIC SERVICE COMPANY,
20 an Arizona Public Service Corporation,
21 Respondent.

DOCKET NO. E-01345A-18-0002

**ARIZONA PUBLIC SERVICE
COMPANY'S NOTICE OF FILING
REBUTTAL TESTIMONY**

22 APS provides notice that it is filing the attached rebuttal testimonies of
23 Mr. Leland Snook, Ms. Jessica Hobbick, Mr. Charles Miessner, and Dr. Ahmad Faruqui,
24 as Exhibits 1-4, respectively.

25 RESPECTFULLY SUBMITTED this 17th day of August 2018.

26 By: 
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1 ORIGINAL and thirteen (13) copies
2 of the foregoing filed this 17th day of
3 August 2018, with:

4 Docket Control
5 ARIZONA CORPORATION COMMISSION
6 1200 West Washington Street
7 Phoenix, Arizona 85007

8 COPY of the foregoing mailed/delivered this
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EXHIBIT 4

**Rebuttal Testimony of
Ahmad Faruqui**

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REBUTTAL TESTIMONY OF AHMAD FARUQUI
On Behalf of Arizona Public Service Company
Docket No. E-01345A-18-0002

August 17, 2018

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Table of Contents

I.	INTRODUCTION.....	1
II.	SUMMARY	1
III.	ADJUSTOR CHARGES.....	3
IV.	RATE SWITCHING BEHAVIOR	6
V.	CONCLUSION	8

1 **REBUTTAL TESTIMONY OF AHMAD FARUQUI**
2 **ON BEHALF OF ARIZONA PUBLIC SERVICE COMPANY**
 (Docket No. E-01345A-18-0002)

3 **I. INTRODUCTION**

4 **Q. PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.**

5 A. My name is Ahmad Faruqui. My business address is 201 Mission Street, Suite 2800,
6 San Francisco, California 94105. I am a Principal of The Brattle Group.

7 **Q. DID YOU PREVIOUSLY FILE TESTIMONY IN THIS MATTER?**

8 A. Yes, I filed Direct Testimony on behalf of Arizona Public Service (APS) on July 31,
9 2018.

10 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS**
11 **PROCEEDING?**

12 A. The purpose of my Rebuttal Testimony is to comment on the analysis presented in
13 Champion witness Abhay Padgaonkar's Direct Testimony and accompanying expert
14 report. My Rebuttal Testimony identifies some conceptual problems in Mr.
15 Padgaonkar's analysis of customer bills. APS witness Charles Miessner's Rebuttal
16 Testimony quantifies the empirical magnitude of these conceptual problems.

17 **II. SUMMARY**

18 **Q. WHAT ARE THE MAIN POINTS IN MR. PADGAONKAR'S TESTIMONY, AS**
19 **YOU UNDERSTAND THEM?**

20 A. Mr. Padgaonkar has calculated the change in bills for a sample of APS customers. His
21 analysis controls for changes in each customer's usage in order to isolate the effect of
22 rate changes. Mr. Padgaonkar's analysis is conducted for a variety of scenarios related
23 to (a) the rate effective date (i.e., 2015 Test Year, August 2016 - July 2017, August
24 2017), (b) rate schedule (e.g., 2015 Test Year rates, transitional rates, new rates), and (c)
25 customer rate-switching behavior (e.g., most-like rate, actual rate).
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1 Across the scenarios he has analyzed, Mr. Padgaonkar confirms that the average change
2 in a residential customer's base bill is consistent with the approved amount in the
3 Settlement (a 15.9% increase) for the transition rates. However, Mr. Padgaonkar finds
4 that the reduction in adjustor charges is lower than the amount specified in the
5 Settlement Agreement. He estimates that residential adjustor charges decreased by only
6 around 4.8%, rather than the 11.36% approved in Decision No. 76295 (August 18,
7 2017).¹ Mr. Padgaonkar concludes that this discrepancy caused customer bills to
8 increase on average by more than the approved amount.

9 **Q. ARE THERE ANY POINTS OF AGREEMENT BETWEEN YOUR DIRECT**
10 **TESTIMONY AND THAT OF MR. PADGAONKAR?**

11 A. Yes. Mr. Padgaonkar's testimony confirms two major points from my expert report.
12 First, Mr. Padgaonkar agrees that a simple comparison of bills, without controlling for
13 changes in usage, is not appropriate for determining if APS's rate increase was correctly
14 implemented.² He agrees that bill changes must be analyzed by controlling for other
15 "moving parts," which are independent of the approved changes. Second, Mr.
16 Padgaonkar's analysis confirms that the total change in base rates (independent of
17 adjustors) was consistent with the amount approved in Decision No. 76295 for the
18 transitional rates.³

19 **Q. ARE THERE ASPECTS OF MR. PADGAONKAR'S ANALYSIS WITH WHICH**
20 **YOU DISAGREE?**

21 A. Yes. I have identified two categories of inaccuracies in Mr. Padgaonkar's analysis.
22 First, his analysis does not account for the nuances of the process for changing adjustor
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25 ¹ Padgaonkar Direct Testimony, page 20, line 16. The adjustor change quantified by Mr. Padgaonkar
varies slightly across the various scenarios he has analyzed, but it is in the range of 4.8%.

26 ² Padgaonkar Direct Testimony, page 9, lines 7-8.

27 ³ Padgaonkar Direct Testimony, page 20, lines 14-15. Mr. Padgaonkar describes the change in
transitional rates to be "in line" with the approved increase. For the new rates (i.e., post-transitional
rates), he estimates a range of rate changes based on different assumptions about the customers'
28 assumed new rate schedule(s).

1 charges. As a result, Mr. Padgaonkar's analysis wrongly suggests that APS made rate
2 modifications that were not in accordance with the Settlement or the various adjustor
3 Plans of Administration (POAs) approved by the ACC. Second, Mr. Padgaonkar's
4 analysis does not fully account for the likely future bill impact of customers switching to
5 more beneficial rate options.

6 **III. ADJUSTOR CHARGES**

7 **Q. HOW DID YOU ADDRESS THE CHANGE IN ADJUSTOR CHARGES IN**
8 **YOUR DIRECT TESTIMONY?**

9 A. In my Direct Testimony, I qualitatively explained that annual changes in adjustor
10 charges are one factor that would cause a customer's bill to change by an amount
11 different than the approved 4.54% rate increase. As I describe below, this is a
12 significant point that is not correctly accounted for in Mr. Padgaonkar's analysis.
13 Specifically, in my expert report I noted the following:

14 Adjustors are charges that change in between rate cases, and therefore
15 change more frequently than total rates. Comparing bills from two
16 different years will capture changes in the adjustors which were not
17 within the scope of the 4.54% bill impact calculation, since it was based
18 on the 2015 test year and accounted for no other change in adjustor
19 levels.⁴

20 My quantitative analysis of Ms. Champion's bills did not directly quantify changes in
21 the adjustor values. The scope of my analysis was focused on explaining why a
22 customer's total bill change from one year to the next would be different than the
23 approved 4.54% change in base rates *after* netting out the effect of the adjustor transfer.
24 As such, my analysis focused on the net change in base rates and controlled for any
25 annual changes that may have occurred in the adjustor charges, as these changes to
26

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⁴ Faruqui Expert Report, page 10.

1 adjustors happen independently of the Rate Case outcomes by design. Specifically,
2 when netting out the impact of the changes to the adjustors, I noted the following
3 (emphasis added): “The result of this step reduces the net bill impact, suggesting that
4 year-to-year fluctuation in charges other than the base rate contributed to Ms.
5 Champion’s aggregate bill change.”⁵

6 **Q. HOW DOES MR. PADGAONKAR’S ANALYSIS ADDRESS CHANGES TO**
7 **ADJUSTORS?**

8 A. Mr. Padgaonkar’s analysis of customer bills suggests that adjustor charges decreased by
9 less than they should have. Based on the description of his analysis, Mr. Padgaonkar
10 has missed important details in APS’s process for modifying the adjustor charges.⁶

11 **Q. WHAT HAS MR. PADGAONKAR OVERLOOKED IN HIS ANALYSIS OF THE**
12 **CHANGE IN ADJUSTOR CHARGES?**

13 A. Mr. Padgaonkar’s analysis does not account for several changes that were made to the
14 adjustor charges outside of the specific context of the Rate Case. Adjustors are designed
15 specifically to modify APS’s revenues on a timescale that is more frequent than rate
16 cases (typically on an annual basis).⁷ As such, they are modified on an independent and
17 parallel track to that of the Rate Case.

18
19 In this instance, there were changes (in addition to the adjustor transfer) to some
20 adjustors that happened to occur concurrently with APS’s transition to the Settlement
21 rates. Additionally, the sweep of some adjustors did not occur at the time of the
22 transition to the new rates. The effect of these changes was to increase adjustors in the
23 new rates relative to the amount that would have otherwise been the case if these two
24 factors (concurrent changes and a lag in the sweep of some adjustor dollars) had not

25 ⁵ Faruqui Expert Report, page 13.

26 ⁶ I have not been able to review Mr. Padgaonkar’s workpapers and verify his calculations
independently, as there was insufficient time to do so after his workpapers were produced.

27 ⁷ This mitigates the customer bill impacts associated with changes in the costs that are recovered
28 through the adjustors.

1 occurred. While the adjustor transfer of 11.36% was revenue neutral, Mr. Padgaonkar
2 wrongly assumes there were no other changes to the adjustors as a result of the Rate
3 Case or subsequent to the Rate Case. The technical details and a quantitative description
4 of the impact of these changes are provided in the Rebuttal Testimony of Mr. Miessner.

5 **Q. DID MR. PADGAONKAR CORRECTLY ACCOUNT FOR THE POTENTIAL**
6 **IMPACT OF YEAR-TO-YEAR CHANGES IN THE ADJUSTORS?**

7 A. No. Mr. Padgaonkar did attempt to account for year-to-year changes in the adjustors,
8 but his analysis was incomplete. Mr. Padgaonkar recognized that year-to-year changes
9 in the adjustors will have impacts on customer bills that must be controlled for when
10 analyzing changes in APS's rates. Specifically, Mr. Padgaonkar stated that, in his
11 analysis: "The comparison of two pre-transition rates would help determine the
12 magnitude of the 'changes to the adjustor rates that occurred after the Test year' – so
13 they can be excluded."⁸

14
15 In the context of this discussion, Mr. Padgaonkar also highlighted an important point
16 made by APS in its Answer to Ms. Champion's Revised Complaint. Namely, APS
17 indicated that the 4.54% rate increase "does not include any changes to the adjustor rate
18 that occurred after the Test Year."⁹

19 In his attempt to account for the post-Test Year changes in adjustors, Mr. Padgaonkar
20 compared adjustor revenues produced by rates from the 2016-17 timeframe to revenues
21 produced by the rates that immediately preceded the transition to the rates approved in
22 Decision No. 76295. In making this comparison, Mr. Padgaonkar found that adjustors
23 increased by, at most, only 0.49% during that period. He concludes that this is a "fairly
24 miniscule" adjustment.¹⁰

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26 ⁸ Padgaonkar Expert Report, page 40.

27 ⁹ Ibid.

28 ¹⁰ Padgaonkar Expert Report, page 41.

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Q. WHAT IS MISSING FROM MR. PADGAONKAR'S ANALYSIS OF THE YEAR-TO-YEAR CHANGES IN ADJUSTORS?

A. Mr. Padgaonkar's analysis quantifies the changes in adjustors that occurred up until *right before* the transition to the Settlement rates. His analysis does not include changes to the adjustors that were *concurrent* with, but independent of, the switch to the Settlement rates. As I described above, changes were made to the adjustors concurrently with the switch to the Settlement rates. These changes had the effect of off-setting a portion of the reduction in adjustor revenue that Mr. Padgaonkar asserts should have been observed in customer bills.

Additionally, Mr. Padgaonkar has not accounted for the fact that the transfer of revenue from the Lost Fixed Cost Recovery (LFCR) adjustor occurred *after* the transition to the new rates, rather than at the same time. The later timing of the transfer is attributable to its unique characteristics, as described in further detail in Mr. Miessner's testimony.

Q. WHAT IS THE NET EFFECT OF THIS PROBLEM WITH MR. PADGAONKAR'S TREATMENT OF THE ADJUSTORS?

A. Mr. Padgaonkar neglected to account for parallel changes to the adjustors that were concurrent with or subsequent to the transition to the Settlement rates. As a result, he incorrectly concludes that APS has increased rates by more than the amount approved by the ACC.

IV. RATE SWITCHING BEHAVIOR

Q. YOU ALSO MENTIONED THAT MR. PADGAONKAR HAS NOT APPROPRIATELY ACCOUNTED FOR CUSTOMER RATE SWITCHING. PLEASE ELABORATE.

A. When new rate options are introduced to customers, as was ordered in Decision No. 76295, a portion of customers will switch to a rate that reduces their electricity bill.

1 This is referred to as “rate switching” or “rate migration.” Analysis of the average
2 impact of new rate options on customer bills should account for anticipated switching
3 rates.

4 **Q. HOW DID MR. PADGAONKAR ACCOUNT FOR RATE SWITCHING IN HIS**
5 **ANALYSIS OF CUSTOMER BILLS?**

6 A. Mr. Padgaonkar first calculated each customer’s bill change as if she/he was transitioned
7 to the rate that is “most like” her/his pre-settlement rate. This implicitly assumes that
8 customers do not proactively seek out the rate that minimizes their bill. Under this
9 assumption, Mr. Padgaonkar concluded that the average rate increase was 14.03%.¹¹
10 Although Mr. Padgaonkar’s analysis was already flawed for the reasons discussed
11 above, he has compounded the error with faulty assumptions about future rate selection.

12 **Q. WHAT HAS MR. PADGAONKAR OVERLOOKED IN HIS ANALYSIS OF**
13 **MOST-LIKE RATES?**

14 A. The implicit assumption that all customers will remain on their most-like rate is
15 illogical. Over time, a portion of customers would be expected to switch to rates that
16 benefit them financially by reducing their electricity bills. For many customers,
17 achieving these bill savings would not require any changes to their electricity
18 consumption patterns. The customers would experience lower bills simply by virtue of
19 better alignment of their load shape with their chosen rate design. Mr. Padgaonkar
20 focuses in this portion of his analysis on an incorrect assumption that all customers end
21 up on the most-like rate and therefore systematically overstates the average bill impact.

22 **Q. DOES MR. PADGAONKAR ANALYZE THE SUBSET OF CUSTOMERS WHO**
23 **HAVE SWITCHED TO A RATE OTHER THAN THEIR MOST-LIKE RATE?**

24 A. Yes, Mr. Padgaonkar did analyze bill changes for the subset of customers that switched
25 to a rate other than their most-like rate. For these customers, Mr. Padgaonkar concludes
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¹¹ Padgaonkar Direct Testimony, page 23, line 5.
28

1 that the average rate increase was 8.47%, much lower than the 14.03% increase cited
2 above.¹² I would expect this group of customers to grow over time, as more customers
3 become educated about the benefits of the new rate options. Note that, in spite of the
4 more limited bill impacts observed in this portion of Mr. Padgaonkar's analysis, the bill
5 increase estimates are still inflated due to his incorrect treatment of adjustor charge
6 modifications described previously in my Rebuttal Testimony.

7
8 V. CONCLUSION

9 Q. **DO YOU HAVE ANY FINAL COMMENTS?**

10 A. Mr. Padgaonkar has overlooked in his analysis nuanced but critically important factors.
11 Thus, the conclusions from my Direct Testimony are still my conclusions. APS's
12 ratemaking process is consistent with industry practices and consistent with the
13 provisions of the Settlement and Decision No. 76295.

14 Q. **DOES THIS CONCLUDE YOUR WRITTEN REBUTTAL TESTIMONY?**

15 A. Yes.
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28 ¹² Padgaonkar Direct Testimony, page 25, line 19.