

IN THE MATTER OF THE APPLICATION OF
ARIZONA PUBLIC SERVICE COMPANY FOR A
HEARING TO DETERMINE THE FAIR VALUE
OF THE UTILITY PROPERTY OF THE
COMPANY FOR RATEMAKING PURPOSES, TO
FIX A JUST AND REASONABLE RATE OF
RETURN THEREON, TO APPROVE RATE
SCHEDULES DESIGNED TO DEVELOP SUCH
RETURN.

Docket No. E-01345A-19-0236

**Surrebuttal Testimony of
Tyler Comings**

**On Behalf of
Sierra Club**

December 4, 2020

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1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Q. Please state your name, business address, and position.**

3 A. My name is Tyler Comings. I am a Senior Researcher at Applied Economics Clinic,
4 located at 1012 Massachusetts Avenue, Arlington, Massachusetts.

5 **Q. Are you the same Tyler Comings who filed direct testimony in this case?**

6 A. Yes.

7 **Q. What is the purpose of your surrebuttal testimony?**

8 A. My surrebuttal testimony primarily responds to the rebuttal testimony filed by
9 Arizona Public Service (“APS” or “Company”) witness Brad J. Albert. I focus on
10 Mr. Albert’s discussion of the retirement of Four Corners units 4 and 5. I also
11 briefly discuss the prudence of the SCR controls installed at the units.

12 **Q. Does your surrebuttal testimony fully address the Company’s response to**
13 **Chairman Burns’ request for an early retirement analysis of Four Corners**
14 **units 4 and 5?**

15 A. No. I discuss aspects of the analysis that are presented in Mr. Albert’s testimony. I
16 anticipate that Sierra Club will file a response to the Company’s analysis by the
17 December 31, 2020 date set by Chairman Burns.

18 **Q. Please summarize your surrebuttal findings.**

19 A. The Company largely mischaracterizes my testimony and uses these misplaced
20 criticisms to evade responsibility for considering retiring the Four Corners units
21 prior to 2031. While the Company provides a limited retirement analysis, it was
22 only done in response to a Chairman’s request and does not fully answer that

1 request, as the Company fails to evaluate a 2023 retirement. Additionally, the
2 Company undercuts this limited response to the Chairman by making unsupported
3 claims that early retirement of the units could be infeasible because of 1) the scale
4 of battery storage replacement, and 2) the required agreement of the other co-
5 owners. However, the amount of battery storage replacement was pre-determined
6 by the Company and its consultant (E3) rather than part of a cost-based plan. If APS
7 contends that its own portfolio is infeasible, it should have developed one that it
8 considered feasible. Regarding the units' co-owners, the Company has agency as
9 operator and majority owner to take a leadership role on evaluating the units' future
10 and fostering consensus.

11 Finally, the prudence of the SCR investment decision at Four Corners units has not
12 yet been determined by the Commission but there is reason to find imprudence for
13 APS's failure to re-evaluate this major investment decision.

14 **Q. Have your findings and recommendations from your direct testimony**
15 **changed?**

16 A. No.

17 **II. RESPONSES TO COMPANY REBUTTAL ON FOUR CORNERS RETIREMENT**

18 **Q. Does the Company falsely claim that you recommended that the Four Corners**
19 **units be replaced entirely with market purchases rather than steel-in-the-**
20 **ground resources?**

21 A. Yes. Mr. Albert states that my testimony recommended replacing the two Four
22 Corners units with "market purchases" and responds that "APS is opposed,

1 however, to relying on non-asset backed market purchases...”¹ However, Mr.
2 Albert’s testimony on this point is not responsive to any argument that I made. My
3 testimony explicitly recommended new steel-in-the-ground resource replacements
4 for the two coal units. Most notably, one subsection of my testimony was titled:
5 “Even After a Major Investment Was Completed, Continued Operation of the Units
6 Should Have Been Tested Against Competitively Priced Renewables and Storage
7 Resources.”² That section of my direct testimony discussed at length the costs of
8 new renewable and storage resources, and the process for procuring such resources
9 that other utilities have conducted. At no point did I recommend “non-asset backed
10 market purchases.” Thus, this criticism of my testimony is inaccurate and should be
11 ignored.

12 **Q. Does the Company claim it is likely unable to find reliable replacement**
13 **resources for Four Corners before 2031?**

14 A. Yes. Mr. Albert dismisses the idea of resource replacement for the two units, stating
15 that “the market is too tight to assume that it can provide for the reliable
16 replacement of Four Corners 4 and 5 if they were to retire early.”³ This conclusion
17 is misleading because the “market” for the steel-in-the-ground replacement
18 resources, like those I have recommended, is created by utilities (such as APS) or
19 power customers (such as cities or businesses) actively seeking new resources,
20 often for replacement of retiring resources. New resources are built in response to
21 (or in anticipation of) demand for such resources: that is how the market works.

¹ Rebuttal Testimony of Brad J. Albert at 4:18-26 [hereinafter “Albert Rebuttal”].

² Direct Testimony of Tyler Comings at 22:6-8 [hereinafter “Comings Direct”].

³ Albert Rebuttal at 4:15-17.

1 I recommended in my direct testimony that the Company solicit new resources, as
2 other utilities have done through an all-source request for proposals (RFP). The
3 stance that “the market is too tight” for replacing the coal units is unfounded and
4 indicative of passive planning. If the Company plans to simply wait for replacement
5 resources to appear, it could wait a long time. Instead, the Company should actively
6 solicit new resources to consider replacement of Four Corner prior to 2031; APS’s
7 rebuttal testimony indicates the Company is simply choosing not to do so. The
8 Company has issued RFP’s for specific resource types recently, but for replacing
9 Four Corners, it should be casting a wider net by including allowing all resource
10 types and ownership structures.⁴

11 **Q. Would you recommend that the Company pursue a reliable replacement for**
12 **the coal units?**

13 A. Of course. As I discussed in my direct testimony, in a recent case, I was part of a
14 team that proposed a portfolio composed of actual bids in response to an all-source
15 RFP issued by Public Service Company of New Mexico (“PNM”) to replace its
16 share of the retiring San Juan coal units (497 MW). PNM actively sought new
17 replacement resources, collecting hundreds of new resources bids, and conducted
18 modeling of many of those resources. My team and I used PNM’s bids to construct
19 a portfolio, conducting alternative modeling which accounted for reliability
20 requirements.⁵ Ultimately, our proposed portfolio (“CCA-E 1”), which included 650

⁴ See Press Release, Ariz. Pub. Service, APS issues RFPs for solar and wind energy resources (Sept. 12, 2019), *available at* <https://www.aps.com/en/About/Our-Company/Newsroom/Articles/APS-issues-RFPs-for-solar-and-wind-energy-resources>.

⁵ Order on Recommended Decision on Replacement Resources – Part II at 11, Docket No.

1 MW of solar and 300 MW of battery storage, was approved by the New Mexico
2 Commission instead of PNM’s preferred portfolio, which would have relied on less
3 solar and battery storage in favor of new natural gas. The New Mexico Commission
4 stated that our portfolio “satisfies the threshold requirement that a replacement
5 resource be reliable” and “should be the preferred resource among the reliable
6 resources presented for consideration by the Commission.”⁶

7 The thrust of my direct testimony in this case was that APS should seek new
8 resources to replace the Four Corners units and that such replacement is likely to be
9 lower-cost. I provided an analysis of the savings from different price points per
10 MWh, regardless of the type of resource, including a “breakeven” price of between
11 \$61.5 and \$84.1 per MWh (depending on the cost scenario) below which replacing
12 the units would be lower-cost.⁷ For replacement resources between \$30 per MWh
13 and \$50 per MWh, I found that retiring Four Corners in 2023 would save between
14 \$775 million and \$1.54 billion—using the Company’s 2020 IRP base case
15 assumptions.⁸ However, my analysis was a starting point for further exploration,
16 not a blueprint for exactly which replacement resources APS should use. If APS
17 solicited a competitive pool of new resources, it could develop a specific portfolio
18 for replacing Four Corners. Any replacement portfolio should meet minimum
19 reliability requirements; no intervenor is likely to suggest otherwise.

19-00195-UT, (N.M. Pub. Reg. Comm’n July 29, 2020), *available at*
https://edocket.nmprc.state.nm.us/AspSoft/HandlerDocument.ashx?document_id=1191982
(login credentials to the NMPRC docket site required for access).

⁶ *Id.*

⁷ Comings Direct at 37-40.

⁸ *Id.* at Section III.

1 **Q. Do you have concerns with the Company’s discussion of its response to the**
2 **Chairman’s request for an early retirement analysis?**

3 A. Yes, I have several concerns with the Company’s discussion. I intend to more fully
4 address the analysis in the Sierra Club’s response due December 31, 2020. At this
5 point, I am concerned that the Company is attempting to undercut the premise of
6 the Chairman’s request, in several ways, including by: 1) refusing to conduct an
7 analysis of 2023 retirement per the Chairman’s request; 2) attempting to debunk the
8 possibility of 2026 retirement based on a pre-determined portfolio that was not
9 optimized on a cost-basis; and 3) generally, offering further invalid excuses for why
10 APS cannot retire the units prior to 2031.

11 First, the Chairman requested a retirement analysis for several years including
12 2023. The Company, however, neglects to model 2023 retirement stating that 2023
13 would not provide enough time to reliably replace the units.⁹ However, if the
14 Company was skeptical about being able to fill a reliability need by 2023, it could,
15 for example, consider staggering the retirement of the units; but it has not done so.

16 Second, the Company and its consultant (E3) does not develop a cost-based
17 portfolio but rather assumes a pre-determined mix of replacement resources, yet
18 simultaneously claims that its own made up portfolio could be infeasible in 2026.

19 The Company expresses concerns about replacing the units in 2026 (i.e., in six
20 years) because of the 1,400 MW of battery storage replacement assumed by E3.¹⁰

21 However, the Company states that E3 “assumed it would take” this level of battery

⁹ Albert Rebuttal at 15 n.4.

¹⁰ *Id.* at 16:17-17:21.

1 storage (in addition to other resources in the portfolio) to replace the units. The
2 Company also states that the retirement analysis, including the 1,400 MW of
3 storage, “was not designed to create an optimized portfolio.”¹¹ Because the
4 portfolio was pre-selected before being vetted for costs and/or feasibility, the
5 purported barriers to its adoption should not be taken seriously. While the
6 Company’s response to the Commission is useful in that it shows substantial
7 savings from employing securitization to recover capital invested in the units, APS
8 did not attempt to find a cost-effective replacement alternative to the continued
9 operation of the units.¹² Thus, as it stands, the Company’s retirement analysis
10 should not be relied upon to draw conclusions about what the optimal (or feasible)
11 retirement dates are for the Four Corners units.

12 Even if the 1,400 MW of battery storage *were* part of an optimal portfolio, the
13 Company uses historical data on battery storage development to express skepticism
14 that a high level of new battery development could be achieved.¹³ The Company’s
15 comparison of battery storage developed in the U.S. from 2012-2019, however, is
16 not a fair one because the battery storage has only recently become a low-cost
17 resource option and capacity has increased rapidly as a result. These costs are
18 expected to continue to decline and, as a result, there are substantial battery storage
19 projects planned in the U.S.: according to the EIA, there will be 3,616 MW of new

¹¹ APS Response to SC 9.2e.

¹² Sierra Club witness Cheryl Roberto addresses securitization in more detail in her testimony.

¹³ Albert Rebuttal at 16:17-17:21.

1 installations between 2020 and 2023.¹⁴ In reporting this number, the EIA stated that
2 this is likely an underestimate:

3 Given the short planning period required to install a storage
4 facility, the reported planned capacity does not necessarily reflect
5 all the possible builds during this period, but the reported planned
6 capacity can be used as an indicator of trends.¹⁵

7 Battery storage has only recently become a prominent replacement resource. This
8 trend is only expected to accelerate in the future given the declining technology
9 costs. The Company's historic look is therefore irrelevant to whether a 2026
10 replacement is feasible. Even if the Company could persuasively show that 1,400
11 MW of battery storage is infeasible, then it should propose a different replacement
12 portfolio.

13 Finally, the Company's additional excuses for why it has not previously considered
14 retirement of the units prior to 2031 are not persuasive. The Company claims that it
15 has not conducted the analysis of pre-2031 retirement because it needs agreement
16 with the other co-owners and because community transition needs to be
17 considered.¹⁶ As with its discussion of the market for new resources, the Company
18 appears to take a passive position where it, in fact, could have sway. APS has
19 agency as the majority owner and operator of the Four Corners units; thus, it should
20 take a leadership role in evaluating the units' futures and initiating an agreement on
21 this future. Additionally, an assessment of the community impacts is important and

¹⁴ U.S. Energy Information Administration (EIA), U.S. Dept. of Energy, *Battery Storage in the United States: An Update on Market Trends* at 26 (July 2020), available at https://www.eia.gov/analysis/studies/electricity/batterystorage/pdf/battery_storage.pdf.

¹⁵ *Id.* at 26.

¹⁶ Albert Rebuttal at 13:3-12.

1 could be undertaken at the same time that the Company considers the costs and
2 risks to ratepayers that will result from continued operation of Four Corners.
3 Notably, APS's rebuttal testimony presents a coal community transition plan as part
4 of this rate case;¹⁷ demonstrating that transition can be considered in tandem with a
5 realistic retirement analysis. Moreover, as mentioned before, staggered unit
6 retirements have not been considered, yet these options would provide more time
7 for coal community transition planning. Ultimately, it is not clear why acquiring
8 agreement with co-owners and addressing community impacts cannot be achieved
9 for a retirement date earlier than 2031—eleven years from now.

10 **III. THE PRUDENCE OF THE SCR INVESTMENTS**

11 **Q. Has the prudence of the SCR controls at Four Corners been decided by the**
12 **Commission?**

13 A. No. As I discussed in my direct testimony, the Commission has not ruled on the
14 prudence of APS's decision to install SCRs.¹⁸ I also discussed how the Company
15 failed to re-evaluate the SCR decision prior to starting construction, in the face of
16 worsening economic conditions for the units.¹⁹ After starting the construction, as
17 conditions continued to disfavor coal generation, the Company still did not re-
18 evaluate the decision and claimed no responsibility for doing so.²⁰ For this reason,
19 although I did not take a position in my Direct Testimony about whether the

¹⁷ Rebuttal Testimony of Jeff Guldner at 8-10; Rebuttal Testimony of Barbara Lockwood at 19-23.

¹⁸ Comings Direct at 9:7-10:2, 17:4-9.

¹⁹ Comings Direct at 15:6-17:3.

²⁰ Comings Direct at 18:21-19:10.

1 Commission should disallow the SCRs, I noted that there were significant reasons
2 to be skeptical about the prudence of that investment.

3 **Q. How would a disallowance of the SCRs impact APS's rate request?**

4 A. Commissioner Márquez Peterson in her November 17 letter expressed concern
5 about costs to customers and the Company's performance.²¹ While disallowing the
6 SCR expenditures would not reduce APS's existing rates, the SCR investments are
7 a major investment that the Company is attempting to include in rates in this case.
8 A finding by the Commission that the SCRs were imprudent would thus
9 dramatically reduce APS's requested rate increase. As I presented in my direct
10 testimony, there is reason to think that the SCR decision or continuation of the
11 project's construction were imprudent: namely, the Company did not re-evaluate
12 the decision despite worsening economic conditions for coal generation at the time,
13 which a prudent utility would have done. New Mexico Public Regulation
14 Commission (NMPRC) disallowed costs associated with these same projects for
15 Public Service of New Mexico (PNM, a co-owner of Four Corners) citing that
16 utility's similar failure to update its analysis.²²

17 **Q. Does this conclude your surrebuttal testimony?**

18 A. Yes.

²¹ Commissioner Peterson Letter, Docket No. E-01345A-19-0236 (Nov. 17, 2020),
available at <https://docket.images.azcc.gov/E000010132.pdf>.

²² Comings Direct at 17:10-18:18.