

1 **BEFORE THE ARIZONA CORPORATION COMMISSION**

2 MIKE GLEASON
CHAIRMAN

3 WILLIAM A. MUNDELL
COMMISSIONER

4 JEFF HATCH-MILLER
COMMISSIONER

5 KRISTIN K. MAYES
COMMISSIONER

6 GARY PIERCE
COMMISSIONER

7
8 IN THE MATTER OF THE APPLICATION OF
9 CHAPARRAL CITY WATER COMPANY,
10 INC., AN ARIZONA CORPORATION, FOR A
11 DETERMINATION OF THE CURRENT FAIR
VALUE OF ITS UTILITY PLANT AND
PROPERTY AND FOR INCREASES IN ITS
RATES AND CHARGES FOR UTILITY
SERVICE BASED THEREON.

Docket No. W-02113A-04-0616

12 **RUCO'S CLOSING**
13 **BRIEF**

14 **INTRODUCTION**

15 The Residential Utility Consumer Office ("RUCO") submits this Brief on remand
16 in support of its position that the Arizona Corporation Commission ("Commission") should not
17 determine the Company's operating income by multiplying its weighted average cost of capital
18 ("WACC") by its fair value rate base ("FVRB"). RUCO recommends the Commission adopt a
19 methodology that adjusts the WACC for inflation to arrive at an appropriate rate of return to
20 apply to the FVRB. RUCO further recommends that the Commission adopt its 2.0% reduction

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1 for inflation as it is conservative, and results in a fair and reasonable recommended rate of
2 return of 5.6%¹.

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4 **THE COURT OF APPEALS LEFT IT TO THE COMMISSION'S DISCRETION TO ESTABLISH A METHODOLOGY FOR DETERMINING A FAIR RATE OF RETURN.**

5 The issue on remand concerns the appropriate rate of return to be applied to the FVRB.
6 The Court of Appeals was critical of the Commission's underlying Decision (Decision No.
7 68176) finding that the Commission's method for determining FVRB violated Arizona's
8 Constitution:

9
10 Here, the Commission determined Chaparral City's
11 operating income based on the OCRB and then mathematically
12 calculated a corresponding rate of return had the income been
13 based on the FVRB. Under this method, Chaparral City's operating
14 income, and therefore its revenue requirement and rates, were
15 based not on the fair value of its property, but on its OCRB, which
16 does not comport with the Arizona Constitution. A-R-13 at 12.

17 The Court of Appeals, however, stopped short on the Company argument that operating
18 income is the product of the FVRB and the rate of return, where the rate of return is generally
19 equal to a utility's weighted cost of capital. Id. at 7. While the Court found that the Constitution
20 required the Commission to find and meaningfully apply FVRB, the Court was clear that the
21 appropriate methodology to determine the rate of return to be applied to the FVRB is within the
22 Commission's discretion. Id. at 13.

23 The Commission asserts that it was not bound to use the
24 weighted average cost of capital as the rate of return to be applied
25 to the FVRB. The Commission is correct. If the Commission
26 determines that the cost of capital analysis is not the appropriate

23 ¹ During the hearing, Chairman Gleason asked whether the Commission could decide the rate of return on fair
24 value without any supporting data. Transcript at 19. The answer is no, the Commission must base its decision on
substantial evidence in the record. See for example: *Tucson Electric Power Co., vs. Arizona Corporation
Commission*, 132 Ariz. 240, 243, 645 P.2d 231, 244 (1982), *Rate Decisions: Judicial Review of the Arizona
Corporation Commission*, 19 Arizona Law Review, 488, 493 (1977).

1 methodology to determine the rate of return to be applied to FVRB,
2 the Commission has the discretion to determine the appropriate
3 methodology. **The same is true if the Commission were to**
4 **determine that applying the weighted average cost of capital to**
5 **the FVRB resulted in double counting inflation, as argued by**
6 **RUCO** (emphasis added). Id. at 13.

7 The Court of Appeals likewise acknowledged that an appropriate rate of return will vary
8 depending on the type of ratebase used². Id. at 7, footnote 5.

9 The Commission need not apply the weighted average cost of capital of 7.6% that it
10 found in Decision No. 68176 to the Company's FVRB. The Court has clearly indicated that the
11 Commission has the discretion to determine a rate of return other than the WACC.

12 **APPLYING THE WACC TO FVRB WOULD RESULT IN UNFAIR AND**
13 **UNREASONABLE RATES.**

14 In Decision No. 88176, the Commission determined that applying the WACC to the
15 Company's Original Cost Rate Base ("OCRB") provides the Company an opportunity to earn a
16 fair return. R-R2 at 3. A fair return would allow the Company's investors an opportunity to
17 earn a return that fully compensates them for their actual level of capital costs. Id. At the same
18 time, ratepayers would not be unduly burdened. Id. The Court of Appeals did not indicate to
19 the contrary in its Decision³.

20 If, as the Commission has determined, applying the WACC to the OCRB provides
21 investors with a fair return, applying the same rate of return to a significantly larger rate base
22 valuation would result in an unfair return – one that is larger than what is necessary to
23 compensate investors and places an unfair burden on customers. The Commission is charged

24 ² The Company acknowledges that the type of ratebase used is a factor that regulators should consider and the
Company does not disagree with Dr. Roger A. Morin, a renowned expert on the subject that a fair rate of return
will differ depending on the method used to compute ratebase. Transcript at 86, S-R-2.

³ While the Court concluded that the Commission must apply a fair rate of return to the FVRB, it did not determine
what a fair rate of return is in this case.

1 with determining what is fair and reasonable and applying the WACC to FVRB would result in
2 too high of a return. In fact, the Commission has already determined that applying the WACC
3 to the FVRB would produce an excessive return in this case. A-R6 at 39, Finding of Fact 18.
4

5 **THE WACC SHOULD BE ADJUSTED FOR INFLATION WHEN CALCULATING THE**
6 **COMPANY'S OPERATING INCOME.**

7 In order to determine what would be a fair rate of return, it is necessary to understand
8 why applying the WACC to FVRB would result in an unfair rate of return. In short, the
9 application of the Company's WACC to the FVRB would over-compensate investors for
10 inflation because the WACC and the FVRB both have incorporated the effects of inflation. The
11 OCRB is based on the historical cost, and thus does not consider inflation between the time
12 items of the utility's plant were purchased and the time rates are set. R-R3 at 3. The
13 Commission's fair value finding, however, requires consideration, where evidence has been
14 presented, of both the reconstruction cost new less depreciation ("RCND") rate base and the
15 original cost rate base ("OCRB"). See *Arizona Corporation Commission v. Arizona Water*
16 *Company*, 85 Ariz. 198, 202, 335 P.2d 412, 414 (1959) (Where there is evidence of both
17 original cost less depreciation and reconstruction cost new less depreciation, the Commission
18 must consider both when determining fair value). R-R3 at 2.

19 Historically, and consistent with the Arizona Constitution and *Arizona Water Company*,
20 the Commission averages a utility's OCRB and its RCND rate base to determine its FVRB.
21 The Commission made a finding of FVRB in this case based on the historic averaging method.
22 Id. Since the FVRB is partly tied to reproduction costs, it grows with inflation. R-R2 at 8.
23 The growth due to inflation will also cause the Company's income to grow, and the best and
24 most fair way to achieve a reasonable result given the inflation factor is to use a percentage
return that is lower than the WACC.

1 A lower percentage return is not only appropriate but necessary in this case to achieve
2 a reasonable result because the WACC considers inflation in the analyses of both the cost of
3 debt and the cost of equity. R-R2 at 3-4, Transcript at 332. Inflation, in the general sense, is
4 recognized by equity investors because it is compensated for within the cost of equity. R-R 2
5 at 16. Likewise, as Staff also willingly admits, inflation is a component of debt. Transcript at
6 332. In fact, it even appears logical to Staff to adjust the Company's cost of debt for inflation.
7 Transcript at 365. Thus, if the Commission applied a WACC to the FVRB, the result would be
8 an operating income that accounted for inflation in both the rate base and rate of return. The
9 double-counting of inflation would be unfair and over-compensate investors. Staff's witness
10 correctly summed it up in the underlying docket: "Windfall gains (losses) would result
11 whenever the FVRB is greater (less) than the OCRB if the Commission multiplied the ROR
12 [WACC] by the FVRB to determine earnings." Id.

13 **THE ARIZONA CONSTITUTION DOES NOT REQUIRE THE COMMISSION TO DOUBLE-**
14 **COUNT INFLATION.**

15 Article XV, § 14 of the Arizona Constitution on its face speaks only to the rate base
16 portion of the rate setting equation. It establishes, as the Court of Appeals recognized in its
17 Decision, no limitations on the Commission's discretion to determine the appropriate rate of
18 return to be applied the rate base. R-R3 at 4, AR-13 at 13. Any such limitations in setting a
19 rate of return arise under the Commission's general rate setting authority of Art. XV, § 3, or
20 under the federal and state due process standards. Id. The "fair value" requirement of Art.
21 XV, § 14 ensures that the Commission consider inflation in its final fair value determination of
22 the utility's investment, as opposed to only relying on historic values, when setting rates. While
23 the "fair value" requirement assures that inflation is taken into account in setting rates, nothing
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1 requires the Commission to consider inflation in both elements of the rate setting equation
2 (rate base and rate of return)⁴.

3
4 **RUCO'S PROPOSAL TO ADJUST THE WACC BY AN INFLATION FACTOR OF TWO**
5 **PERCENT IS FAIR AND REASONABLE TO BOTH RATEPAYERS AND SHAREHOLDERS**
6 **AND SHOULD BE ADOPTED BY THE COMMISSION.**

7 It is impossible to determine the precise portion of the FVRB and the WACC that is
8 inflation. Like many aspects of the cost of capital analysis, the Commission must use its sound
9 judgment in ascertaining what an appropriate inflation factor would be in any given situation.
10 RUCO has considered, and recommends that the Commission also consider several of the
11 data series that are publicly available. R-R at 34. For instance, data published by the Bureau
12 of Labor Statistics for the annual rate of change in the Gross Domestic Product Deflator, as
13 well as annual changes in consumer prices and various measures of producer prices, provide
14 insight into inflation levels going back to 1929. Id. at 34 - 35.

15 RUCO recommends that the Commission consider more recent data. Id. RUCO's
16 analysis considered data from 1975 forward. Since the annual changes in any measure of
17 inflation can vary significantly from one year to the next RUCO calculated the averages over
18 extended periods of time. Id. RUCO noticed that by using averages, the differences between
19 the various inflation measures are not extreme. Id.

20 The range of averages for the various inflation measures that RUCO considered were
21 from as low as 1.71% for the PPI-Finished Goods during 1995-2004, to 4.6% for the PPI-
22 Materials and Components for construction during 2002-2006. Id. at 36. This range is
23 historical in nature. In this context it is logical to also consider prospective inflation rates. Id.

24 ⁴ As noted above, the Court of Appeals confirmed that, if the Commission concluded that applying the WACC to
the FVRB resulted in a double-counting of inflation, it has the discretion to use another method to determine a fair
rate of return. A-R13 at 13.

1 RUCO believes that a useful measure of investor inflation expectations can be
2 determined by comparing the yields on Treasury Inflation-Protected Securities (“TIPS”) and
3 other securities issued by the Treasury Department with similar liquidity and duration. Id.
4 These securities provide useful insight into investor’s future expectations concerning inflation.
5 Id. at 37. As with the historical data, it is logical as well as practical to average the average
6 annual results of the TIPS and other analogous bonds which when averaged over the last 6.5
7 years result in a range from a low of 1.70% in 2001, to a high of 2.90% in 2004⁵. Id. The
8 overall expected increase in inflation is 2.34% which is derived by averaging the high and the
9 low ranges.

10 RUCO took a very conservative view of both the historical and prospective inflation
11 rates in coming up with its recommendation. RUCO considered the low end of both the
12 historical and prospective range of inflation rates and recommends a 2.0% inflation factor in
13 developing a fair rate of return in this proceeding. Id. at 39-40.

14 Subtracting the 2.0% inflation factor to the 7.6% WACC determined in Decision No.
15 68176 results in a fair value rate of return of 5.60%. RUCO’s recommended rate of return is
16 .80 percent lower than the 6.36 % rate of return decided in Decision No. 68176. The
17 application of a lower rate of return to a rate base value higher than the OCRB is not only
18 reasonable and fair but consistent with the Commission’s constitutional obligation under Article
19 15, section 3 to prescribe “just and reasonable rates”.

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24 ⁵ RUCO analyzed the average daily yields on the TIPS and the average yields on analogous bonds for 2001 – 2007. R-R2 at 38.

1 **THE DETERMINATION OF THE RATE OF RETURN IS NOT INDEPENDENT OF THE OCRB**
2 **AND FVRB.**

3 The Company argues that the WACC should be applied to the FVRB. The Company
4 provides little substantive evidence to support its recommendation and little meaningful
5 argument opposing RUCO's contention that applying the WACC to the FVRB would over-
6 compensate its investors because of the double-counting of inflation. The Company does,
7 however, distinguish the approaches of both Staff and RUCO from the Company's approach
8 by arguing that the rate of return is independent of the rate base. AR-7 at 3, 7. The
9 Company's argument is misplaced.

10 According to the Company, "Equity cost estimates are generally determined with market
11 data and thus are independent of the rate base to which they are applied." AR -7 at 10-11.
12 The Company's witness, Thomas Zepp, points out that the Commission relies on market
13 based method such as the Discounted Cash Flow Model ("DCF") and the Capital Asset Pricing
14 Model ("CAPM") when determining an appropriate cost of equity. AR-7 at 11. Dr. Zepp argues
15 that the Commission does not use comparable earnings or other approaches that rely on
16 accounting-based equity returns. Id. While RUCO believes that the Commission has
17 considered comparable earnings in the past, in a general sense RUCO agrees with Dr. Zepp's
18 argument that the Commission considers and tends to prefer market based models in its
19 determination of cost of equity. RUCO disagrees, however, with Dr. Zepp's conclusion that
20 market based finance models produce results that are independent of the rate base to which
21 they are applied. Id. at 12.

22 A company's operating income consists of two components, the rate base and the rate
23 of return. While the Court of Appeals held that the Commission must use the FVRB, it
24 specifically stated that it is in the Commission's discretion to determine the appropriate
methodology to determine the rate of return. A-R13 at 13. The Court did not hold that the

1 Commission could not consider the Company's OCRB in determining what would be a fair rate
2 of return or that applying the WACC to the OCRB resulted in unfair and/or unreasonable rates.
3 Thus, given the Commission's determination in Decision No. 68176 of what rates it believes
4 are fair it is only logical that applying the same WACC to a higher value rate base would result
5 in unfair rates.

6 It is entirely permissible for the Commission to consider OCRB in its determination of an
7 appropriate methodology for determining a fair rate of return. The WACC is not only consistent
8 but also comparable to the original cost valuation concept. RR-2 at 4. With the exception of
9 the cost of equity analysis, which relies on stock market data, the WACC and the OCRB are
10 largely derived from accounting data. Id. This tight analytical and conceptual linkage explains
11 why the Commission should consider both the OCRB and the WACC as a whole and not
12 independently in determining a just and reasonable rate of return.

13 The connection between FVRB and the rate of return is also linked through the OCRB.
14 As stated above, the Commission considers OCRB in arriving at its FVRB determination. R-
15 R3 at 2. The Commission typically averages a utility's OCRB and its RCND rate base to
16 determine its FVRB which is how the Commission determined FVRB in this case. R-R3 at 2.
17 In sum, the concept of rate base and rate of return are inextricably linked, and should not be
18 considered separately as the Company recommends.

19 **CONCLUSION**

20 The goal of regulation has always been, and remains, to produce results in the utility
21 sectors that parallels those obtained under conditions of competition. R-R2 at 9. If, as the
22 Commission has determined in Decision No. 68176, applying the WACC to the OCRB
23 achieves those results, then applying the OCRB to a higher valued rate base would result in
24 overcompensating for inflation. In order to achieve an appropriate and fair return, the
Commission should adjust the WACC for inflation. An inflation adjustment of 2% is

1 conservative and would allow the Company the opportunity to earn a fair rate of return (5.6%)
2 on its investment.

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4 RESPECTFULLY SUBMITTED this 5th day of March 2008.

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7 _____
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