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AZ CORP COMMISSION
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EXCEPTION

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION
 OF CHAPARRAL CITY WATER
 COMPANY, INC., AN ARIZONA
 CORPORATION, FOR A
 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

On remand from the Arizona Court
of Appeals, No. 1 CA-CC 05-0002

Arizona Corporation Commission

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**CHAPARRAL CITY WATER COMPANY'S
 EXCEPTIONS TO RECOMMENDED OPINION AND ORDER**

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1 **I. BRIEF SUMMARY OF THE COMPANY'S EXCEPTIONS**

2 Chaparral City Water Company's ("Chaparral City" or "the Company") hereby
3 submits its exceptions to the recommended form of opinion and order ("ROO"), which
4 recommends a revenue increase of \$12,143.¹ This increase is only 0.17 percent greater
5 than the \$7,310,464 revenue requirement authorized in Decision No. 68176 (Sept. 30,
6 2005). The increase in operating income – the additional return dollars that would pay
7 capital costs – would be \$7,441, which is only 0.57 percent greater than the operating
8 income authorized in Decision No. 68176. Yet the Company's fair value rate base is
9 \$3,309,533 greater than its original cost rate base. The ROO would effectively authorize
10 a return on that rate base increment of only 0.22 percent.

11 In other words, despite the Arizona Court of Appeals' clear instruction to use the
12 fair value of the Company's property in setting rates,² and despite the fact that the
13 Company's fair value rate base is \$3.3 million larger than its original cost rate base, the
14 Company's operating income would be equivalent to the result produced by multiplying
15 the weighted average cost of capital by the original cost rate base. This result is achieved
16 by reducing the Company's cost of equity, which was set at 9.3 percent in Decision No.
17 68176 and affirmed on appeal, to 7.3 percent to account for "inflation."³ This
18 manipulation of the rate of return renders the use of fair value meaningless. Arizona
19 courts have indicated that adjusting the rate of return to ensure that the utility's earnings
20 remain at the same level when fair value is used would be illegal. *See Simms v. Round*
21 *Valley Light & Power Co.*, 80 Ariz. 145, 149-51, 294 P.2d 378, 385 (1956); *Ariz. Corp.*
22 *Comm'n v. Citizens Utilities Co.*, 120 Ariz. 184, 190 n.5, 584 P.2d 1175, 1181 n.5 (App.

23 _____
24 ¹ ROO at 41.

25 ² *Chaparral City Water Co. v. Ariz. Corp. Comm'n*, No. 1 CA-CC 05-002 (Feb. 13, 2007) (Ex.
A-R13) at 11-13, ¶¶ 13-16.

26 ³ ROO at 37.

1 1978).⁴ It is illegal here as well.

2 The Commission should apply the rate of return that was used to determine the
3 Company's operating income in Decision No. 68176, 7.6 percent, to the correct rate base
4 – the fair value rate base. This approach complies with the decision and mandate of the
5 Court of Appeals because it uses the fair value of Chaparral City's plant and property in a
6 meaningful way.⁵ Applying the rate of return to the correct rate base results in an
7 increase in operating income of \$251,525, and an increase in revenue of \$409,666, which
8 is a percentage increase of 5.6 percent. The Company would earn a 7.6 percent return on
9 its entire rate base, including the \$3,309,533 "Fair Value Increment" (to use Staff's term),
10 rather than an effective return of only 0.22 percent.⁶

11 The primary justification for rejecting the Company's recommendation is that
12 applying the WACC to the Company's fair value rate base "would over-compensate the
13 Company for inflation."⁷ This is erroneous for several reasons, including the fact that
14 half of the fair value rate base is based on the original cost of the Company's plant which,
15 by definition, contains no inflation, and the erroneous belief that the Company's fair
16 value rate base is simply "inflated" by some general measure of inflation.

17 The ROO also violates the prohibition against piecemeal ratemaking because it
18 considers the impact of inflation in isolation, while ignoring the overall cost of service.
19 *See Residential Utility Consumer Office v. Ariz. Corp. Comm'n*, 199 Ariz. 588, 593, 20

21 ⁴ *See Chaparral City Water*, at 10-11, ¶¶ 12-13 (discussing *Simms* and *Citizens Utilities*).

22 ⁵ *Id.* at 11-13, ¶¶ 13-16.

23 ⁶ Staff recommended that the Company be allowed to earn a 0.00 percent return on the Fair
24 Value Increment of its rate base or, alternatively, a 1.25 percent return. Ex. S-R5 at 5, 9. The
25 ROO does not literally adopt, but approves of Staff's approach. ROO at 34. Obviously, a return
of 0.22 percent is effectively zero.

26 ⁷ ROO at 41. *See also id.* at 30-32.

1 P.3d 1169, 1174 (App. 2001) (“RUCO”); *Scates v. Ariz. Corp. Comm’n*, 118 Ariz. 531,
2 535, 578 P.2d 612, 161 (App. 1978). In this case, the Commission relied on the “danger
3 of piecemeal regulation” in rejecting Chaparral City’s request for purchased power and
4 water adjustment mechanisms.⁸ Yet, in a complete reversal of that prior position, the
5 ROO considers only the limited impact of inflation on the Company’s fair value rate base
6 and its cost of equity, while ignoring the overall impact of inflation on the Company’s
7 earnings.⁹ The Commission cannot have it both ways.

8 In short, the ROO ignores both the economic and legal underpinnings of the fair
9 value standard and relies on methods based on the prudent investment/original cost
10 approach, which, as the Court of Appeals explained, cannot be used.¹¹ The ROO’s
11 approach eliminates any legitimate increase in the Company’s earnings, even though the
12 value of its property is at least \$3 million greater than its book cost. This makes fair
13 value meaningless. At the same time, the ROO ignores the impact of inflation on the rest
14 of the Company’s cost of service and rate of return. Consequently, the ROO should be
15 rejected.

16 **II. SPECIFIC EXCEPTIONS TO THE ROO**

17 **A. The ROO Violates the Fair Value Standard**

18 As stated, the ROO would authorize Chaparral City a revenue increase of only
19 \$12,143, and an increase in operating income (earnings) of only \$7,441, even though

20 _____
21 ⁸ Decision No. 68176 at 33.

22 ⁹ Chaparral City’s operating expenses, for example, are impacted by inflation to a greater extent
23 than either its rate base or the rate of return. *See, e.g.*, Ex. A-R4 at 42-43. A schedule that
24 compares the impact of inflation on return dollars and operating expenses is attached at Tab A.
25 Based on the ROO’s assumed inflation rate, operating expenses would increase 2.4 times more
26 quickly than the utility’s operating income.

¹¹ *Chaparral City Water*, at 13, ¶ 16.

1 Chaparral City's fair value rate base is \$3.3 million more than its original cost rate base.
2 This anomalous result is achieved by manipulating Chaparral City's cost of equity and
3 cost of capital/rate of return. The ROO justifies this manipulation on several grounds,
4 asserting that (1) as long as the rate of return is applied to a fair value rate base, the
5 prudent investment method can be used to set rates; (2) the weighted average cost of
6 capital cannot be applied to a fair value rate base; and (3) application of the cost of
7 capital to a fair value rate base "over compensates" for inflation. As explained below,
8 each of these justifications is erroneous, and demonstrates a fundamental
9 misunderstanding of the fair value standard.

10 1. Summary of the Fair Value Standard

11 In Arizona, utility rates must be established on the basis of the "fair value" of the
12 utility's property. Ariz. Const. art. 15, § 14. For example, in the seminal decision
13 *Simms*, the Arizona Supreme Court stated:

14 It is clear, therefore, that under our constitution as interpreted
15 by this court, the Commission is required to find the fair
16 value of the company's property and use such finding as a
17 rate base for the purpose of calculating what are just and
18 reasonable rates. ... While our constitution does not establish
a formula for arriving at fair value, it does require such value
to be found and used as the base in fixing rates. *The*
reasonableness and justness of the rates must be related to
this finding of fair value.

19 *Simms*, 80 Ariz. at 151, 294 P.2d at 382 (emphasis added). See also *US West Commc'ns,*
20 *Inc. v. Ariz. Corp. Comm'ns, Inc.*, 201 Ariz. 242, 244-46, ¶¶ 13-19, 34 P.3d 351, 354-55
21 (2001) (summarizing Arizona court decisions requiring the use of fair value).

22 Under the fair value method rates are set "according to the actual present value of
23 the assets employed in the public service." *Duquesne Light Co. v. Barasch*, 488 U.S.
24 299, 308 (1989). "Fair value means the value of properties at the time of inquiry,"
25 *Simms*, 80 Ariz. at 151, 294 P.2d at 382, not simply their historic cost or the amount
26 originally invested to build them. See also *Ariz. Corp. Comm'n v. Ariz. Water Co.*, 85

1 Ariz. 198, 203, 335 P.2d 412, 415 (1959) (“Under the law of fair value a utility is not
2 entitled to a fair return on its investment; it is entitled to a fair return on the fair value of
3 its properties devoted to the public use, no more and no less.”). Under the fair value
4 standard, a utility benefits from increases in the value of the property it devotes to public
5 service, but also bears the risk of obsolescence and other loss of property value:

6 In theory the *Smyth v. Ames* fair value standard mimics the
7 operation of the competitive market. To the extent the
8 utilities’ investments in plants are good ones (because their
9 benefits exceed their costs) *they are rewarded with an*
10 *opportunity to earn an “above-cost” return, that is, a fair*
11 *return on the current “market value” of the plant.* To the
12 extent utilities’ investments turn out to be bad ones (such as
13 plants that are canceled and so never used and useful to the
14 public), the utilities suffer because the investments have no
15 fair value and so justify no return.

12 *Duquesne Light*, 488 U.S. at 308-09 (emphasis added), *citing Smyth v. Ames*, 169 U.S.
13 466, 547 (1898). *See also McCardle v. Indianapolis Water Co.*, 272 U.S. 400, 4010-11
14 (1926) (“It is well established that values of utility properties fluctuate, and that owners
15 must bear the decline and are entitled to the increase.”); *Bluefield Waterworks &*
16 *Improvement Co. v. Pub. Serv. Comm’n*, 262 U.S. 679, 690 (1923) (“If the property,
17 which legally enters into the consideration of the question of rates, has increased in value
18 since it was acquired, the company is entitled to the benefit of such increase.”).

19 By allowing utility investors to be rewarded when the value of their plant
20 increases, but requiring them to bear the burden of when the value decreases, “fair value
21 standard mimics the operation of the competitive market.” *Duquesne Light*, 488 U.S. at
22 308. Their investment is analogous to an investment in the stock of unregulated firms or
23 other assets, which increase or decrease in value depending on various economic factors.

24 The fair value standard “gives utilities strong incentive to manage their affairs
25 well and to provide efficient service to the public.” *Id.* at 309. Nevertheless, it has been
26 replaced in most jurisdictions by what is called the “prudent investment” or “historical

1 cost” approach, under which “the utility is compensated for all prudent investments at
2 their actual cost when made (their ‘historical’ cost).” *Ibid.* Because the prudent
3 investment approach relies on the recorded, book cost of the utility’s plant and other
4 accounting information, rather than the current value of the plant, the use of this method
5 simplifies the rate-setting process.¹²

6 Arizona courts have made it clear, however, that under the express mandate of the
7 Arizona Constitution, the fair value method must be used in Arizona. In *US West*, for
8 example, the Arizona Supreme Court affirmed that the fair value standard continues to be
9 the standard by which utility rates must be set in a monopolistic setting, noting that on
10 three separate occasions, the voters have defeated proposed amendments to the fair value
11 provision of the Arizona Constitution. *US West*, 201 Ariz. at 245-46 & n.2, ¶¶ 10-19, 34
12 P.3d at 354-55 & n.2. *See also Ariz. Water*, 85 Ariz. at 203, 335 P.2d at 415; *Simms*, 80
13 Ariz. at 150-51, 294 P.2d at 381-82. In short, regardless of what is currently done in
14 other jurisdictions,¹³ the fair value standard applies to ratemaking in this State.

15 **2. It Is Unlawful to Manipulate the Rate of Return to Produce an**
16 **End Result That Is Equivalent to Using Original Cost**

17 The Commission has been ordered by the Court of Appeals to set rates that are
18

19 ¹² The “most serious problem” associated with using the fair value method in setting rates was
20 “the laborious and baffling task of finding the present value of the utility.” *Duquesne Light*, 488
21 U.S. at 309 n.5 (quoting *Missouri ex rel. Southwestern Bell Tel. Co. v. Public Serv. Comm’n*, 262
U.S. 276, 292-94 (1923) (Brandeis, J. dissenting)).

22 ¹³ While “original cost” rate bases are used in other jurisdictions, the methodologies used to
23 determine a utility’s rate base vary widely from jurisdiction to jurisdiction, and include, for
24 example, projected or forecasted test years. Ex. A-R2 at 12-13. The use of projected operating
25 expenses and rate base elements allows utilities a “hedge” against the inflationary impacts on
26 both operating expenses and rate base and provides a better opportunity for utilities to actually
earn their authorized rate of return. In this case, Chaparral City’s fair value rate base is only 19
percent greater than its original cost rate base, which is well within the range of valuation
differences resulting from different test year methodologies employed in “original cost”
jurisdictions. *Id.*

1 based on the fair value of Chaparral City's utility plant and property. As stated, under the
2 fair value standard, utilities are "rewarded with an opportunity to earn an 'above-cost'
3 return" when the value of their property increases, but must also accept a lower return
4 when the value of their property declines. *Duquesne Light*, 488 U.S. at 308-09. The
5 "return" to which utilities are entitled is the dollar amount that they are allowed to earn.
6 Thus, when the value of the assets financed by the capitalization increases, the owners of
7 the assets – the equity investors – expect a higher return. Conversely, when the value of
8 the assets decreases, the owners of the asset expect a lower return. This is the essence of
9 the competitive market, which the fair value standard is intended to mimic.

10 The ROO, unfortunately, misapprehends this basic rule, and in the process,
11 misstates the holdings of two important Arizona decisions, *Simms* and *Arizona Water*.
12 According to the ROO, these decisions stand for the principle that while "prudent
13 investment theory cannot be used in determining the fair value rate base," the prudent
14 investment theory can be used in determining the appropriate rate of return.¹⁴
15 Consequently, under the ROO, the rate of return is adjusted downward to produce
16 operating income that is virtually identical to the result produced by using an original
17 cost rate base. On two occasions, Arizona courts have indicated that such rate of return
18 manipulation would be illegal. For example, the Court of Appeals stated that the use of a
19 "fluctuating" rate of return in a fair value setting is unlawful:

20 Under our constitution, a utility is entitled to a fair rate of
21 return on the fair value of its properties, "no more and no
22 less." [Citation omitted.] Dr. Langum [the Staff cost of
capital witness] violated this principle by pegging his opinion

23 ¹⁴ ROO at 22-23. This discussion is further muddled by its erroneous description of the
24 Company's position on page 22, which states that the Company argues that the Commission
25 cannot use the weighted cost of capital to set rates. In fact, the Company contends that the
26 weighted cost of capital should be used to set rates. It has objected to the attempts by Staff and
RUCO to manipulate the cost of capital to produce an end result that is essentially identical to
setting rates based on original cost. The ROO adopts this same "end result" approach.

1 as to rate of return to the finding of fair value. This results in
2 a fluctuating rate of return. Thus, *under Dr. Langum's*
3 *theory, it makes no difference whether the Commission used*
original cost or reproduction cost as the base, the amount of
dollars in the Company's coffers is basically the same.

4 *Ariz. Corp. Comm'n v. Citizens Utilities Co.*, 120 Ariz. 184, 190 n.5, 584 P.2d 1175,
5 1181 n.5 (App. 1978) (emphasis supplied), *quoting Ariz. Water*, 85 Ariz. at 203, 335 P.2d
6 at 415. *See also Simms*, 80 Ariz. at 155, 294 P.2d at 385.

7 In sum, the fair value standard requires the Commission to set rates that are based
8 on the current value of the utility's property, not its original cost. The Commission
9 cannot use fair value as the rate base, and then manipulate the rate of return to produce an
10 end result than is equivalent to using original cost to set rates.

11 **B. The 7.6 Percent Rate of Return Determined in Decision No. 68176 Was**
12 **Not Based On the Company's Original Cost Rate Base and Should**
13 **Applied to the Fair Value Rate Base**

14 The ROO erroneously states that the 7.6 rate of return determined in Decision No.
15 68176 is tied to the Company's original cost rate base and therefore cannot be applied to
16 a fair value rate base.¹⁵ This discussion and finding conflict with Decision No. 68176
17 and prior Commission practice and policy. Chaparral City's 7.6 percent weighted cost of
18 capital or "WACC" is solely a function of the percentages of debt and equity in its capital
19 structure, and does not depend on either the amount of invested capital or rate base that is
20 used to set rates. In addition, the 9.3 percent cost of equity – which was affirmed by the
21 Court of Appeals – was based on two market-based finance models that are independent
22 of the rate base to which they are applied. Simple logic indicates that it is appropriate to
23 apply a market-based cost of equity to a market-based rate base.

24 When the WACC is applied to the rate base, it is implicitly assumed that the

25 ¹⁵ *E.g.*, ROO at 26-27, 41 ("The WACC of 7.6 percent determined in Decision No. 68176 was
26 based on OCRB.").

1 utility's invested capital is financing that particular rate base, just as in the real world, the
 2 investment in an asset (e.g., a parcel of land or common stock) is financing that asset
 3 regardless of the asset's current value. The asset's value is based on various economic
 4 factors and not the amount originally paid for it. Under the fair value standard, a utility is
 5 entitled to a return on the fair value of its assets, not a return on its original investment.
 6 See, e.g., *Duquesne Light*, 488 U.S. at 308-09. The cost of capital methodology can be
 7 used to derive that return, as courts have held. See *Union Elec. Co. v. Ill. Comm.*
 8 *Comm'n*, 396 N.E.2d 510, 516 (Ill. 1979); *State ex rel. Utilities Comm'n v. Duke Power*
 9 *Co.*, 206 S.E.2d 269, 281 (N.C. 1974); *City of Alton v. Commerce Comm'n*, 165 N.E.2d
 10 513, 519-20 (Ill. 1960). The Company's methodology is consistent with these decisions,
 11 which provide helpful guidance to the Commission, while the ROO ignores them.

12 **1. The WACC Methodology Is Not Linked to Chaparral City's**
 13 **Original Cost Rate Base**

14 In this case, the WACC calculation was based on Chaparral City's actual, adjusted
 15 capital structure as of December 31, 2003, and was determined to be as follows:

	<u>Amount</u>	<u>Cost</u>	<u>Weighted Cost</u>	<u>Dollar Return</u>
17 Long-Term Debt	\$8,363,309	5.1 %	2.1 %	\$426,529
18 Common Equity	<u>\$11,901,727</u>	9.3 %	<u>5.5 %</u>	<u>\$1,106,860</u>
19 Total Capital	\$20,265,036	--	7.6 %	\$1,533,390

21 These figures are taken from Decision No. 68176, at pages 16 and 26, and are not in
 22 dispute.¹⁶ By contrast, the original cost rate base approved by the Commission was
 23

24 ¹⁶ The column entitled "Dollar Amount" was calculated by multiplying the components of the
 25 capital structure by their authorized cost. Due to rounding, the total dollar amount, \$1,533,390,
 26 actually produces a return of 7.567 percent, rather than 7.6 percent. The total annual cost of
 capital expressed in dollars is actually \$1,540,143 (\$20,265,036 x 0.076).

1 \$17,030,765, while the fair value rate base approved by the Commission was
 2 \$20,340,298.¹⁷ Thus, the capital structure adopted in Decision No. 68176 does not match
 3 either the original cost rate base or the fair value rate base. Instead, total capital is greater
 4 than original cost by about \$3.2 million, and less than fair value by about \$75,000.

5 However, in Decision No. 68176, the Commission did not authorize rates that
 6 would produce Chaparral City's cost of capital or allow the utility's investors an
 7 opportunity to actually earn 9.3 percent on their equity investment. The nominal increase
 8 in operating income proposed in the ROO – \$7,441 – likewise fails to produce Chaparral
 9 City's cost of capital, as the following table shows:

	<u>Operating Income</u>	<u>Interest Expense</u>	<u>Net Earnings</u>	<u>Return on Equity</u>
11 Decision 68176	\$1,294,338	\$426,529	\$867,809	7.29 %
12 ROO	\$1,301,779	\$426,529	\$875,250	7.35 %
13 Staff (Alter. 1)	\$1,289,575	\$426,529	\$863,046	7.25 %

14
 15 The return on Chaparral City's equity produced by the Commission's 2005 decision
 16 (which relied on the Company's original cost rate base, and ignored fair value, in
 17 determining operating income) and the return on equity that would be produced by the
 18 ROO are not only well below the 9.3 percent return on equity authorized in Decision No.
 19 68176, but are virtually identical, highlighting the result-driven nature of the ROO.¹⁸

20 The foregoing table also highlights the disconnection between a WACC-derived
 21 rate of return and original cost. The Commission normally determines the rate of return

22
 23 ¹⁷ Decision No. 68176 at 9.

24 ¹⁸ For comparison purposes, Staff's preferred alternative, which is discussed and approved in the
 25 ROO, is also shown. The range of equity returns is only 10 basis points, i.e., they are for all
 26 practical purposes identical. Notably, Staff has admitted that its preferred alternative produces
 the same result as the method used in Decision No. 68176, which was found unlawful by the
 Court of Appeals. The difference is solely due to rounding. Ex. A-R14; A-R8 at 5-7.

1 (in dollars) by multiplying the WACC by the utility's rate base. The actual amounts of
2 debt and equity are irrelevant to this calculation. Instead, the key inputs are the
3 percentages of debt and equity and their respective costs. This is clearly shown on page
4 26 of Decision No. 68176, where Chaparral City's 7.6 percent cost of capital was
5 computed. In other words, the Commission assumes that the utility's rate base is
6 financed by the same percentages of debt and equity that comprise the utility's capital
7 structure, without regard to the actual amounts of debt and equity or the size of the rate
8 base. If Chaparral City's total capital was \$16,000,000, but the percentages of debt and
9 equity in its capital structure were the same, the WACC would still be 7.6 percent. And
10 if its total capital was \$26,000,000, but the percentages of debt and equity in its capital
11 structure were the same, the WACC would again be 7.6 percent. Because the WACC
12 depends on the percentages of debt and equity rather than the amount invested, a WACC-
13 derived return can be used with any rate base, not just an original cost rate base.

14 **2. The Cost of Equity Is Derived From Market-Based Models**
15 **That Are Unrelated to Original Cost**

16 The WACC is comprised of the weighted cost of debt (which is fixed and does not
17 change) and the weighted cost of equity. The cost of equity is unrelated to the rate base
18 that is used to set rates. The two finance models used to estimate the cost of equity in
19 this case and other cases involving Arizona water utilities, the Discounted Cash Flow
20 ("DCF") model and the Capital Asset Pricing Model ("CAPM"), rely on current stock
21 prices and other current market data for a proxy group of water utilities, the stock of
22 which is traded on major stock exchanges.¹⁹ Neither model considers the rate bases of

23
24
25 _____
26 ¹⁹ Ex. A-R7 at 10-12; Ex. A-R4 at 16-18, 22-26.

1 the utilities or Chaparral City's rate base, or uses "book" or accounting equity.²⁰

2 As a matter of common sense, the use of market-based models to estimate the cost
3 of equity is appropriate when the cost of equity is applied to a market-based rate base.

4 In a competitive market, investment decisions are taken on
5 the basis of market prices, market values, and market cost of
6 capital. If regulation's role was to duplicate the competitive
7 result perfectly, then *the market cost of capital would be
8 applied to the current market value of rate base assets
9 employed by utilities to provide service.*²¹

8 Yet the ROO seems to be arguing the opposite – that market-based equity cost estimates
9 can only be used in connection with an accounting-based rate base. In other words, in
10 Arizona, apples should be compared with oranges, not with other apples.²² This makes
11 no sense. The DCF and CAPM models rely solely on stock prices and market-based
12 data, and do not consider the utilities' "book" investment or the historic cost of building
13 plant. Consequently, a cost of equity that is estimated with those models can certainly be
14 applied to a fair value rate base. The court decisions discussed below explain how this
15 should be done.

16 **3. The ROO Erroneously Dismisses *Duke Power* and the *City of*
17 *Alton* Decisions, Which Explain the Proper Application of the
18 *Cost of Capital to a Fair Value Rate Base***

18 The Company provided two helpful decisions, *Duke Power* (which was also cited
19

20 ²⁰ In fact, in recent rate cases, the Commission has rejected equity cost estimates that are based
21 on book or accounting returns on equity. *E.g., Arizona Water Co.*, Decision No. 68302 (Nov.
22 14, 2005), at 37-38; *Arizona-American Water Co.*, Decision No. 67093 (June 30, 2004), at 29.

22 ²¹ Roger A. Morin, *New Regulatory Finance* 395 (Public Utility Reports, Inc. 2006) (emphasis
23 added).

24 ²² Yet at the same time, this Commission has refused to consider equity cost estimates based on
25 book value, such as Comparable Earnings. *E.g., Arizona Water Co.*, Decision No. 68302, 37-38;
26 *Arizona-American Water Co.*, Decision No. 67093, 29. Thus, the Commission insists on the use
of market-based estimates of the cost of equity, but the ROO indicates that these estimates must
be applied to a rate base based on book investment.

1 by Staff), issued by the North Carolina Supreme Court, and the *City of Alton*, issued by
2 the Illinois Supreme Court, that specifically discuss the use of WACC-derived approach
3 to determine the appropriate rate of return for a fair value rate base. Although these cases
4 demonstrate how a WACC-derived rate of return should be applied to a fair value rate
5 base, the ROO simply dismisses them as inapplicable.

6 In *City of Alton*, the court upheld the state commission's rate of return on a fair
7 value rate base, explaining that the lower court had erroneously assumed that the "return
8 on the original common stock investment was the relevant figure in determining the
9 reasonableness of an overall rate of return." 165 N.E.2d at 519. The court explained:

10 It is well established in Illinois that the utility is entitled to a
11 reasonable overall return on the fair value of its property, not
12 the original cost. This provides a flexible rate-making
13 standard which is equally applicable in periods of rising and
14 falling price levels. ... It would be inconsistent to judge the
15 overall return on the basis of fair value but judge the return
16 accruing to common shareholders on the basis of a par value
17 which is essentially original cost. *The significant figure is the
18 rate of return on common stock valued at fair value.*

19 *Id.* (emphasis added). The court also explained that, in determining the rate of return, the
20 "fair value attributable to the common stock might be determined by subtracting the par
21 [i.e., book] value of debt and preferred stock, to reflect the fact that all increments in
22 value belong to the equity, or by dividing fair value in the same percentages as book
23 value." *Id.* at 520. The first approach recognizes, consistent with the fair value standard,
24 that any increase (or decrease) in property value inures to the benefit (or detriment) of the
25 equity holders. The second approach assumes that the fair value rate base is funded
26 equally by all of the components of the capital structure, which reduces the potential
benefit to the equity holders when fair value is greater than original cost, but also reduces
the potential detriment to the equity holders when fair value is less than original cost.²³

²³ The ROO rejects *City of Alton* because the methods described "seem to be 'after-the-fact,' as opposed to methods to use" ROO at 25-26. That characterization is erroneous because

1 In *Duke Power*, the state commission used an approach similar to the “backing-in”
2 method used to set Chaparral City’s rates in Decision No. 68176. On appeal, the North
3 Carolina Supreme Court held that this approach violated the fair value standard because it
4 produced the same total dollar return as if “the fair value of the properties had been
5 exactly the same as Duke’s actual net investment in the properties.” *Id.* The court also
6 held that the increase (or decrease) in the fair value of the utility’s property must be
7 recognized as a component of the utility’s equity in determining the rate of return:

8 The “fair value” increment (fair value of the plant less
9 original cost, depreciated) found by the Commission was
10 approximately \$95,500,000. For rate of return purposes, this
11 increment must be added to the equity component of Duke’s
12 actual investment in its electric plant. *Duke is entitled to earn
the same rate of return on this increment as it is entitled to
earn on the retained earnings (surplus) which it has
reinvested in its plant.*

13 *Id.* (emphasis added). Thus, in *Duke Power*, the court held that the difference between
14 original cost and fair value should be recognized in determining the rate of return by
15 adjusting the utility’s equity balance up or down to account for the difference, and then
16 using the adjusted equity balance to determine the cost of capital.²⁴

17 In short, *City of Alton* and *Duke Power* provide two different ways to use the
18 WACC methodology to derive a rate of return that satisfies the fair value standard. The
19 approach advocated by Chaparral City is the more conservative approach described in

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21 courts normally review agency decisions “after-the-fact” and provide guidance for future
22 decision-making.

23 ²⁴ According to the ROO, “[t]he Court clearly indicated that, under the North Carolina statute,
24 the North Carolina Commission had to apply the cost of equity to the fair value increment.”
25 ROO at 25. That statement is wrong. In fact, at the time this case was decided, North Carolina’s
26 statute governing ratemaking provided that “the Commission shall fix rates which will enable a
well managed utility to earn a ‘fair rate of return’ on the ‘fair value’ of its properties ‘used and
useful’ in rendering its service.” 206 S.E.2d at 276. Thus, North Carolina law was analogous to
Arizona law; there was no statute mandating that the commission apply the cost of equity to the
fair value increment, as the ROO erroneously states.

1 *City of Alton*, i.e., the 7.6 cost of capital would be applied to the fair value rate base
2 without increasing the equity balance, which produces a lower revenue requirement than
3 the *Duke Power* approach. The ROO, unfortunately, dismisses both decisions, and
4 instead lowers the rate of return to 6.34 percent by reducing the Company's cost of equity
5 to only 7.3 percent. As shown below, the justification for doing so is both conceptually
6 and legally flawed and constitutes piecemeal ratemaking.

7 C. **Inflation Is Not "Over Counted" By Applying the Rate of Return to the**
8 **Fair Value Rate Base**

9 The principal justification given for reducing Chaparral City's return on equity
10 from 9.3 percent to 7.3 percent is that the application of the cost of capital to the fair
11 value rate base would "over compensate" Chaparral City for inflation. As explained
12 below, the evidence in the record does not support reducing the Company's cost of
13 equity, and even if such evidence existed, it would be unlawful to do so without also
14 considering the adverse impacts of inflation on the Company's overall cost of service,
15 including its operating expenses. In reality, inflation adversely impacts utilities to a far
16 greater extent than other businesses because they cannot adjust their rates in response to
17 price increases, and must wait until new rates are approved following a rate case. For
18 this reason, inflation is continually eroding the Company's earnings. To counteract the
19 erosion of earnings, some jurisdictions have authorized attrition allowances and
20 adjustments, such increasing the rate of return to provide the utility with a reasonable
21 chance of actually earning its authorized return on common equity.²⁵ Here, in contrast,
22 the ROO proposes to lower the 9.3 percent return on equity, which is already very low,²⁶

23 _____
24 ²⁵ Charles F. Phillips, Jr., *The Regulation of Public Utilities: Theory and Practice* 407-08 (1993).

25 ²⁶ Ex. A-R2 at at 14. In a survey of equity returns conducted by the National Association of
26 Water Companies, the average equity return authorized between 2002 and mid-2006 was 9.9
percent.

1 by 200 basis points to only 7.3 percent.

2 **1. The “Inflation” Adjustment Is Unsupported by Any Credible**
3 **Evidence**

4 The ROO concludes that inflation is being “over-counted” because the cost of
5 equity, estimated by means of the DFC and CAPM models, and the fair value rate base
6 both include an “inflation component.”²⁷ This “inflation component” is not clearly
7 identified or described, but is instead assumed to be 2 percent of the cost of equity, based
8 on the yields of certain Treasury securities.²⁸ The ROO then assumes that the fair value
9 rate base is growing larger each year by an amount equivalent to 2 percent, effectively
10 causing inflation to be counted twice – once in the cost of equity and once in the fair
11 value rate base. This speculation is erroneous for several reasons.

12 First, the Company’s fair value rate base is not simply the “inflated” cost of its
13 plant. Rather, it is based on the average of its original cost and its reconstruction cost
14 less depreciation (“RCND”) rate base. By definition, the original or book cost of the
15 Company’s plant contains no inflationary component. See ROO at 32, 37. Yet it is half
16 of the Company’s fair value rate base! If the rate of inflation is 2 percent, as assumed in
17 the ROO, and no more than 50 percent of the fair value rate base is actually affected by
18 inflation, the inflation adjustment is overstated by 50 percent.²⁹

19 Second, a substantial portion of the Company’s RCND rate base is not affected by
20 inflation. In determining its RCND rate base, the Company did not trend or otherwise
21 determine a current value for its real property, franchises, organizational costs and other
22

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24 ²⁷ ROO at 33.

25 ²⁸ *Id.* at 34-36.

26 ²⁹ Ex. A-R7 at 37-38; Ex. A-R4 at 44.

1 intangibles, and these rate base components therefore contain no “inflation.”³⁰ Moreover,
2 a significant portion of the Company’s fair value rate base – approximately \$3 million –
3 consisted of plant constructed during the test year, and was unaffected by inflation.³¹

4 Third, the Company also presented testimony from Harold Walker, who is an
5 expert on utility valuation techniques, and has personally conducted numerous valuation,
6 cost and depreciation studies for utilities.³² Mr. Walker reviewed the reconstruction cost
7 new (“RCN”) study prepared by the Company (and accepted by Staff). He determined
8 that this study likely understates the Company’s total RCN value and that the method
9 used to determine fair value in this case was a very conservative valuation approach.³³

10 Fourth, and contrary to the discussion in the ROO, the methodology used to derive
11 the RCND rate base was not based on inflation. The plant was valued by using Handy-
12 Whitman account-specific indexes for water utilities in the Plateau Region.³⁴ The
13 Handy-Whitman indexes do not measure inflation, nor are they based on general inflation
14 in the economy, but are affected by many variables, as the Company’s witnesses
15 explained.³⁵ For example, the Handy-Whitman average index for Total Gas Plant
16 declined by 4.4 percent during 2006, while other general measures of inflation, such as
17 the CPI, were increasing.³⁶ The reality is that current reproduction cost of Chaparral
18

19 ³⁰ Ex. A-4 at 8.

20 ³¹ Decision No. 68176 at 3-7 (discussing plant constructed during and after the test year).

21 ³² Ex. A-R2 at 1-2, App. A.

22 ³³ *Id.* at 3-7.

23 ³⁴ Ex. A-R2 at 3-4; Ex. A-4 at 7-8.

24 ³⁵ Tr. at 43-45, 50-51.

25 ³⁶ A-R7 at 17, 30.

26

1 City's system is affected by a number of different factors, not simply inflation.³⁷

2 Finally, the ROO erroneously assumes that Chaparral City has consistently earned
3 its authorized return on common equity, when there is no evidence supporting that
4 assumption.³⁸ For example, during calendar year 2006, which was the first full year after
5 the rate increases approved in Decision No. 68176 became effective, the Company's
6 return on equity was only 2 percent, prompting the Company to apply again for rate
7 increases.³⁹ If Chaparral City has been unable to consistently earn its authorized return
8 on equity, there is no basis on which to assume that inflation would be "over counted" by
9 applying the cost of equity to the fair value rate base. The ROO's assumption that the
10 Company has been recovering "inflation" in the rate of return is simply speculation.

11 **2. The ROO Engages in Piecemeal Ratemaking and, If Adopted,**
12 **Would Violate Arizona law.**

13 The ROO ignores the pernicious effect of inflation on the Company's ability to
14 actually earn its authorized rate of return, including the impacts of inflation on the
15 Company's overall cost of providing service. Because the Commission uses historic test
16 years with limited adjustments for post-test year changes, and does not allow water
17 utilities to implement surcharges and adjustment mechanisms to recover increases in key
18 costs such as purchased power and water,⁴⁰ most water utilities are unable to actually

19 ³⁷ E.g., Ex. A-R1 at 4-5; Ex. A-R4 at 45.

20 ³⁸ Ex. A-R4 at 46.

21 ³⁹ *Chaparral City Water Co.*, Docket No. W-02113A-07-0551, Schedules E-2 and E-9 (audited
22 financial statement). During calendar year 2006, the Company's net income was \$505,119,
23 which is about \$360,000 less than the net income produced by Decision No. 68176, and more
24 than \$1 million less than the earnings needed to actually produce a return of 9.3 percent on the
25 Company's common equity.

24 ⁴⁰ Decision No. 68176 at 31-34. Approximately 90 percent of the Company water is purchased
25 from the Central Arizona Project, the cost of which has consistently increased. *Id.* at 31-32. The
26 Company is provided power by both APS and SRP, whose rates have been steadily increasing.
Id. at 32.

1 recover their authorized equity return.⁴¹ Indeed, Chaparral City's return on common
2 equity during 2006 – i.e., immediately after receiving rate increases – was only 2 percent.

3 There is undisputed evidence in the record that the Company's operating expenses
4 are being impacted by inflation to much greater extent than inflation impacts the
5 Company's rate base or its return on equity.⁴² In fact, applying the ROO's reasoning, the
6 Company's operating expenses will increase 2.4 times faster than the Company's
7 operating income, as shown by the schedule attached at Tab. A. This schedule actually
8 understates the impact of inflation because while increases in operating expenses must be
9 immediately paid by the Company, any increase in its fair value rate base will only be
10 recognized in rates after another rate case has been completed and new rates established.
11 Thus, after three years, the Company's operating expenses will have increased by nearly
12 \$230,000 under the ROO's 2 percent inflation rate, but any increase in rate base will have
13 no impact on the Company's earnings until the next rate case has been concluded.⁴³

14 In short, the ROO is a prime example of piecemeal regulation. RUCO previously
15 argued in this case that “[b]iased rates result when incremental changes in any one
16 particular cost are adjusted without consideration of changes in all other elements of the
17 Company's cost of service.”⁴⁴ The Commission rejected Chaparral City's request to
18 implement adjustment mechanisms to recover increases in purchased power and water
19

20 ⁴¹ Ex. A-8 at 7.

21 ⁴² Ex. A-R4 at 42-43.

22 ⁴³ At present, for example, the Company's current rates are based on utility plant and operating
23 expenses as of December 31, 2003. The Company's new rate case, filed in September 2007, has
24 been stayed indefinitely. See *Chaparral City Water Co.*, Docket No. W-02113A-07-0551,
25 Procedural Order (Jan. 22, 2008). In the meantime, the Company's expenses have been
26 increasing, eroding the Company's earnings.

⁴⁴ RUCO Reply Br. at 7 (July 20, 2005).

1 expenses in Decision No. 68176 based on the “danger of piecemeal regulation.”⁴⁵ By
2 focusing solely on the cost of equity, and ignoring the impact of inflation on the other
3 elements of the Company’s cost of service and the resulting rate of return, the ROO is
4 likewise engaging in piecemeal regulation. *See RUCO*, 199 Ariz. at 593, 20 P.3d at
5 1174; *Scates*, 118 Ariz. at 535, 578 P.2d at 161.

6 For all of these reasons, the ROO’s adjustment to the Company’s cost of equity is
7 excessive and unlawful. The ROO has largely ignored the evidence submitted by the
8 Company’s witnesses, including evidence that explains how the Company’s fair value
9 rate base was derived, while speculating about the impact inflation might have on the
10 Company’s rate base. At the same time, the ROO ignores the impact of inflation on the
11 Company’s cost of service and ability to earn its authorized rate of return, and instead
12 engages in piecemeal ratemaking by at the cost of equity in isolation. The Commission
13 should reject this one-sided adjustment to the Company’s equity return.

14 **III. CONCLUSION**

15 For these reasons, the Commission should reject the result-driven and unsupported
16 findings and determination of the ROO, and adopt the Company’s recommendation and
17 apply the cost of capital, 7.6 percent, to the fair value rate base. The Company’s
18 recommendation is consistent with the Arizona Constitution and relevant law because it
19 uses fair value in an appropriate and meaningful way to set rates. The ROO, in contrast,
20 is contrary to fair value standard and, if adopted, would be unlawful.

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26 ⁴⁵ Decision No. 68176 at 33.

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RESPECTFULLY SUBMITTED this 10th day of July, 2008.

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A

Chaparral City Water Company
 Analysis of Inflation Impacts on RB and OE

	Per Decision 68176	Period in Years				
		1 2%	2 2%	3 2%	4 2%	5 2%
Annual Inflation FVRB	\$ 20,340,297					
FVRB after inflation	\$ 20,747,103	\$ 21,162,045	\$ 21,585,286	\$ 22,016,992	\$ 22,457,331	
Increase In RB	\$ 406,806	\$ 821,748	\$ 1,244,989	\$ 1,676,695	\$ 2,117,034	
ROR	7.60%	7.60%	7.60%	7.60%	7.60%	
Required Oper. Income due to increase in FVRB	\$ 30,917	\$ 62,453	\$ 94,619	\$ 127,429	\$ 160,895	
Operating Expenses ¹	\$ 3,722,696					
Operating expenses after inflation	\$ 3,797,150	\$ 3,873,093	\$ 3,950,555	\$ 4,029,566	\$ 4,110,157	
Increase in OE due to Inflation over TY operating expenses	\$ 74,454	\$ 150,397	\$ 227,859	\$ 306,870	\$ 387,461	
Excess (Shortfall) of return \$'s over increase in operating expenses	\$ (43,537)	\$ (87,944)	\$ (133,240)	\$ (179,441)	\$ (226,567)	

¹ Exclusive of depreciation, income taxes, and property taxes