OPEN MEETING ITEM

ORIGINAL

Executive Director

ARIZONA CORPORATION COMMISSION

Arizona Corporation Commission
DOCKETED

JUN 30 2008

DOCKETED BY

DATE: JUNE 30, 2008

DOCKET NO: W-02113A-04-0616

TO ALL PARTIES:

Enclosed please find the recommendation of Administrative Law Judge Lyn Farmer. The recommendation has been filed in the form of an Opinion and Order on:

CHAPARRAL CITY WATER COMPANY
(RATES)

Pursuant to A.A.C. R14-3-110(B), you may file exceptions to the recommendation of the Administrative Law Judge by filing an original and ten (10) copies of the exceptions with the Commission's Docket Control at the address listed below by **4:00** p.m. on or before:

JULY 10, 2008

The enclosed is NOT an order of the Commission, but a recommendation of the Administrative Law Judge to the Commissioners. Consideration of this matter has tentatively been scheduled for the Commission's Working Session and Open Meeting to be held on:

JULY 29, 2008 AND JULY 30, 2008

For more information, you may contact Docket Control at (602) 542-3477 or the Hearing Division at (602) 542-4250. For information about the Open Meeting, contact the Executive Director's Office at (602) 542-3931.

BRIAN C. McNEIL
EXECUTIVE DIRECTOR

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BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

MIKE GLEASON - Chairman
WILLIAM A. MUNDELL
JEFF HATCH-MILLER
KRISTIN K. MAYES
GARY PIERCE

IN THE MATTER OF THE APPLICATION OF CHAPARRAL CITY WATER COMPANY, 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 DECISION NO. _____ **OPINION AND ORDER**

DATE OF REMAND HEARING:	January 25 (Pre-Hearing Conference), January 28 and January 29, 2008
PLACE OF REMAND HEARING:	Phoenix, Arizona
ADMINISTRATIVE LAW JUDGE:	Lyn Farmer
IN ATTENDANCE:	Mike Gleason, Chairman Kristin K. Mayes, Commissioner
APPEARANCES:	Mr. Norman D. James and Mr. Jay L. Shapiro, FENNEMORE CRAIG, P.C., on behalf of Chaparral City Water Company; Mr. Scott Wakefield, Chief Counsel, and Mr. Daniel Pozefsky, Staff Attorney, on behalf of the Residential Utility Consumer Office; and Ms. Janet Wagner, Senior Staff Counsel, and Mr. Keith Layton, Staff Attorney, Legal Division, on behalf of the Utilities Division of the Arizona Corporation Commission.

BY THE COMMISSION:

On August 24, 2004, Chaparral City Water Company ("Chaparral City" or "Company") filed with the Arizona Corporation Commission ("Commission") an application 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.

Hearings on the application were held in May and June 2005.

On September 30, 2005, the Commission issued Decision No. 68176, granting a rate increase to Chaparral City. The parties to Decision No. 68176 include Chaparral City, the Residential Utility Consumer Office ("RUCO"), and the Commission's Utilities Division Staff ("Staff"). Chaparral City appealed Decision No. 68176 to the Arizona Court of Appeals.

The Arizona Court of Appeals, Division One, considered Chaparral City's appeal, and on February 13, 2007, issued its Memorandum Decision, which affirmed in part, vacated, and remanded Decision No. 68176 to the Commission for further determination. The Court of Appeals found that the Commission did not comply with Article 15, §14, of the Arizona Constitution when the Commission set the rates based on original cost instead of the fair value of Chaparral City's property.

On June 2, 2007, Staff filed a Request for Procedural Order.

On June 7, 2007, the Commission issued a Remand Hearing Procedural Order in this docket establishing a schedule for a remand proceeding in accordance with the Memorandum Decision. The Procedural Order set a hearing date of October 16, 2007.

On June 8, 2007, Chaparral City filed a Notice of Filing Revised Schedules of Rates and Charges for Utility Services and a Response in Opposition to Staff's Request for Procedural Order.

On June 11, 2007, Chaparral City filed a Motion to Vacate Remand Hearing Procedural Order and to Set Procedural Conference.

On June 13, 2007, a Procedural Order was issued setting a Procedural Conference for June 22, 2007.

On June 18, 2007, Chaparral City docketed its Filing Regarding Conflicts with Procedural Schedule.

On June 22, 2007, the Procedural Conference was held as scheduled.

On June 25, 2007, a Procedural Order was issued changing the hearing date to November 6, 2007, as agreed to by the parties at the June 22, 2007, Procedural Conference.

On July 6, 2007, Chaparral City filed its Amended Notice of Filing Revised Schedules of Rates and Charges for Utility Service.

On August 30, 2007, RUCO filed the direct testimony of Dr. Ben Johnson, and Staff filed the

direct testimonies of David C. Parcell and Ralph C. Smith.

On September 11, 2007, Chaparral City filed a Request to Change Procedural Schedule, which requested that additional time be allowed to file the Company's rebuttal testimony, that the hearing be rescheduled, and that a Procedural Conference to discuss modification of the existing procedural schedule be held.

On September 12, 2007, a Procedural Order was issued that scheduled a Procedural Conference for October 2, 2007; granted the extension to file the Company's rebuttal testimony; and continued the hearing and the remaining procedural deadlines.

On October 2, 2007, the Procedural Conference was held as scheduled.

On October 3, 2007, a Procedural Order was issued setting the remand hearing for January 28, 2008, as agreed by the parties.

On October 31, 2007, Chaparral City filed the rebuttal testimonies of Thomas J. Bourassa, Ernest A. Gisler; Harold Walker, III; and Dr. Thomas M. Zepp.

On November 5, 2007, Chaparral City filed the corrected rebuttal testimony of Mr. Walker.

On December 7, 2007, RUCO filed the surrebuttal testimony of Dr. Johnson, and Staff filed the surrebuttal testimonies of Mr. Parcell and Mr. Smith.

On December 21, 2007, the parties filed a Stipulation to Extend Discovery and Filing Deadlines.

On January 10, 2008, a Procedural Order was issued approving the Stipulation to Extend Discovery and Filing Deadlines and ordering Chaparral City to provide public notice of the January 28, 2008, Remand Hearing.

On January 18, 2008, Chaparral City filed the rejoinder testimonies of Mr. Bourassa and Dr. Zepp and filed its Notice of Certification of Publication indicating that notice of the Remand Hearing was published on January 16, 2008, in *The Fountain Hills Times*.

The Remand Hearing was held as scheduled on January 28 and 29, 2008, and witnesses testified on behalf of Chaparral City, RUCO, and Staff.

On February 14, 2008, Chaparral City filed a Request to Modify Briefing Schedule to allow the parties additional time to file post-hearing briefs.

On February 15, 2008, a Procedural Order was issued granting the request and extending the briefing schedule by one week.

On February 20, 2008, Staff filed a Request for an Extension of Time for Filing of Briefs.

On February 22, 2008, a Procedural Order was issued granting the request and extending the parties' briefing schedule by an additional week.

On March 5, 2008, Closing Briefs were filed by Chaparral City, RUCO, and Staff.[1]

On March 21, 2008, Reply Briefs were filed by Chaparral City, RUCO, and Staff.[2]

On March 25, 2008, Chaparral City filed a Motion to Expedite Decision on Remand.

DISCUSSION

Background

In its rate application filed in August 2004, Chaparral City submitted schedules reflecting both an Original Cost Rate Base ("OCRB") and an estimated reconstruction cost new less depreciation ("RCND") rate base. In Decision No. 68176, the Commission found the Company's adjusted OCRB and RCND for ratemaking purposes to be $17,030,765 and $23,649,830, respectively. Chaparral proposed a Fair Value Rate Base ("FVRB") based on the average of its OCRB and RCND, and Staff also proposed a FVRB based upon the average of OCRB and RCND. RUCO proposed a FVRB equal to the OCRB. The Commission found that an "average of the adjusted OCRB and RCND provides a reasonable measurement of the current value of the Company's property dedicated to public service."[3] Using a 50/50 weighting of the OCRB and the RCND, the Commission found Chaparral's FVRB to be $20,340,298. The Commission applied a cost of debt of 5.1 percent and cost of common equity of 9.3 percent to the Company's capital structure as of December 31, 2003[4] to determine the weighted average cost of capital ("WACC") of 7.6 percent. The Company requested that the Commission apply the WACC to the FVRB, but the Commission determined that the Company's proposed rate of return methodology and resulting revenue increase would produce an excessive return on FVRB. The Commission applied the fair

[1] On March 21, 2008, Staff filed a Notice of Errata correcting an error in its Closing Brief.
[2] On March 25, 2008, Chaparral City filed a Notice of Errata correcting an error in its Reply Brief.
[3] Decision No. 68176 at p. 9.
[4] 41.27 percent long-term debt and 58.73 percent common equity.

value rate of return of 6.36 percent to the FVRB, resulting in required operating income of $1,294,338, which was $680,091 more than the Company's adjusted test year operating revenue. The required revenue increase was $1,107,596, or a 17.86 percent net increase over test year adjusted revenues.

The Company appealed Decision No. 68176 to the Arizona Court of Appeals which found that the Commission did not comply with Article 15, § 14, of the Arizona Constitution when the Commission set the rates based on the original cost instead of the fair value of Chaparral City's property. The Court of Appeals also found that Chaparral City did not make a clear and convincing showing that the Commission's decisions regarding the methodologies the Commission used to determine the cost of equity were unlawful or unreasonable and therefore affirmed the Commission's methodologies used to determine the cost of equity. The Court of Appeals vacated the Commission's decision and remanded "for further determination of Chaparral City's rates consistent with our constitution."[5]

The Commission's Remand Hearing was held January 28 and 29, 2008, and witnesses for Chaparral City, RUCO, and Staff testified. Briefs were filed in March 2008.

Issues to be Decided on Remand

1. What rate of return methodology should the Commission use in this Remand proceeding to determine the appropriate rate of return on Chaparral City's FVRB?

2. What is the appropriate rate of return on Chaparral City's FVRB to be used to set rates in this Remand proceeding?

3. Should the Commission authorize the recovery of rate case expense the Company asserts it has incurred as a result of its appeal from Decision No. 68176 and this Remand proceeding?

Issue # 1 What rate of return methodology should the Commission use in this Remand proceeding to determine the appropriate rate of return on Chaparral City's FVRB?

The Court of Appeals found "the method employed by the Commission to determine the operating income in this case did not comport with constitutional requirements."[6] The Commission's

[5] Ex. A-R13, *Chaparral City Water Co. v. Arizona Corp. Comm'n*, 1 CA-CC 05-0002, Mem. Decision at 2 (Ariz. Ct. App. 2007).
[6] *Id.* at 11.

method of "translating" the OCRB's WACC into a rate of return on FVRB was found to be impermissible under the Arizona Constitution when the Commission first determined operating income (revenues) using OCRB (instead of FVRB) and then, using that revenue level, calculated the corresponding rate of return when applied to the FVRB. The Court of Appeals made clear that Article 15, § 14, of the Arizona Constitution requires the Commission to determine operating income using the FVRB.

Chaparral City's Method

The Company's final position is "the same position that it has had throughout the case," and that is for the Commission to apply the 7.6 percent WACC to the fair value rate base.[7] Chaparral City asserts that "the fact that the 7.6 percent rate of return was derived through weighted cost of capital methodology is essentially irrelevant. There is no conceptual link between a weighted cost of capital derived rate of return and an original cost rate base."[8] The Company argues that its capital structure does not match its OCRB and that the financial models used to estimate the cost of equity are market-based models that are unrelated to any particular rate base.

Company witness Dr. Zepp testified that a "fair rate of return is achieved when a utility is permitted to set rates and charges for service at levels where the expected return provides common stock investors a reasonable opportunity to earn the cost of common equity."[9] He argued that equity cost estimates are generally determined with market data and therefore are independent of the rate base to which they are applied. The use of market data allows an estimate to be made of the equity return an investor requires on dollars invested in shares of common stock.[10] According to Dr. Zepp, the Commission's use of the Discounted Cash Flow ("DCF") model and the Capital Asset Pricing Model ("CAPM"), which are market-based finance models, means that their results are independent of the rate base to which they are applied. Dr. Zepp therefore disagrees that the cost of equity is intertwined with the use of OCRB and testified that neither Staff witness Parcell nor RUCO

[7] Throughout his written testimony, Company witness Mr. Bourassa continually refers to Decision No. 68176's "authorized return of 7.6 percent," but when asked to locate where in Decision No. 68176 such a rate of return was authorized, he was unable to do so. Tr. at 109-11; *see* Bourassa Rebuttal Testimony, Ex. A-R4 at 6, 13, 14, 15, 22, 30, 31, 40; Rejoinder Testimony, Ex. A-R5 at 2, 4, 16.

[8] Tr. at 9.

[9] Ex. A-R7, Zepp Rebuttal Testimony at 9.

[10] *Id.* at 10-12.

witness Johnson "provide a shred of evidence to show there is a tie between the cost of equity estimates produced by the DCF and CAPM and Chaparral City's OCRB."[11]

Company witness Mr. Bourassa also testified that the cost of equity of 9.3 percent is based exclusively on market-based finance models and does not depend on the rate base to which it is applied. "The bottom line is that the percentage return on rate base is set, and should be set, *independent* of the determination of the rate base."[12] He believes that in "other states, where there is no fair value requirement, the WACC is appropriately applied to the rate base found according to that state's requirements."[13] He argues that, in Arizona, that means that the Commission must set rates that provide a reasonable opportunity to earn the cost of equity applied to the "value of the equity portion of the FVRB – not the value of the equity portion financing the original cost rate base."[14]

The Company argues that because "the WACC is applied to the rate base, regardless of whether the resulting return produces the dollar cost of capital, there is no theoretical or practical reason why the WACC cannot be applied to a FVRB, given that under Arizona law, rates must be based on the fair value of the utility's property."[15]

In its Closing Brief, the Company argues that the Commission does not use cost of equity estimation approaches that rely on accounting-based equity returns. It believes that using the DCF model and the CAPM to determine the rate of return on FVRB would be appropriate because in "order to duplicate the competitive market, 'the market cost of capital would be applied to the current market value of rate base assets employed by utilities to provide service.'"[16] This is what the Company is proposing and what the Company believes the fair value standard requires.

The Company's method results in operating income of $1,545,863, an additional $410,000 in gross revenue over the amount determined in Decision No. 68176. This would increase the bill for an average residential customer with a ¾ inch meter that uses a little over 9,000 gallons of water per

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[11] *Id.* at 13.
[12] Ex. A-R5, Bourassa Rejoinder at 4 (emphasis in original).
[13] *Id.*
[14] *Id.*
[15] Chaparral City Closing Br. at 27 (emphasis in original).
[16] *Id.* at 29-30, (citing Roger A. Morin, *New Regulatory Finance* 395 (2006)) (emphasis added).

month an additional $1.95, or a 5.7 percent increase over the rates established in Decision No. 68176.[17] Chaparral City also requests the Commission implement a temporary surcharge to recover the lost revenue it believes it should have begun collecting on October 1, 2006 when Decision No. 68176's new rates were effective. The Company calculates the amount to be collected as approximately $1.1 million, which includes carrying costs and $100,000 in additional rate case expense. The proposed surcharge would be $0.56 per thousand gallons, collected over 12 months, and the typical monthly bill would reflect a surcharge of approximately $5.14.[18]

Chaparral City argues that Staff and RUCO have ignored the economic and legal underpinnings of the fair value standard and instead propose methods based on the prudent investment/original cost approach, which it argues cannot be used.

Dr. Zepp criticizes Staff's proposed method as an "OCRB-earnings method that superficially base[s] rates on FVRB but in fact tie[s] the utility's earnings to OCRB" and argues that RUCO's method is flawed because it is "either another OCRB-earnings method – and thus could not survive an appeal – or is based on an arbitrary rate of return that produces lower earnings than would result if rates were based on OCRB."[19]

Dr. Zepp disagrees with the assertion by Staff's witness, Mr. Parcell, that applying a zero cost/return to the FVRB increment of the capital structure is appropriate from a financial perspective because the fair value increment was not supplied by investors, stating that "[u]nder the law of fair value a utility is not entitled to a return on its investment; it is entitled to a return on the fair value of its properties devoted to public service."[20] He also criticizes as "arbitrary" the Staff alternative proposal which assigns a cost of 1.25 percent to the fair value increment.

Mr. Bourassa criticizes Staff's proposed first alternative as "just another version of the 'backing-in' method" because it produces the same operating income,[21] and argues the second alternative should be rejected because, in his opinion, the rate of return on the fair value increment is

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[17] Although the Company stated that the court vacated the Commission's decision (Tr. at 287, 290) the Company is still charging and collecting the rates established therein (Tr. at 261).
[18] *Id.* at 3, and attached Final Remand Schedule A-1 at 2.
[19] Ex. A-R7, Zepp Rebuttal Testimony at 14-15.
[20] *Id.* at 20. *See also* Ex. A-R8 at 4 explaining that "[t]he amount of capital invested is immaterial" (citing *Arizona Corp. Comm'n v. Arizona Water Co.*, 85 Ariz. 198, 203, 335 P.2d 412, 415 (Ariz. 1959)).
[21] Ex. A-R5, Bourassa Rejoinder Testimony at 6.

arbitrary and is far below the return required by investors.

Dr. Zepp testified that RUCO's witness, Dr. Johnson, "analyzed the wrong problem and thus his analysis has no bearing on the correct approach to take in this remand proceeding."[22] He states that the foundation of Dr. Johnson's analysis requires three facts that Dr. Zepp believes are false or do not exist: (1) that the determination of FVRB is subject to "circularity"; 2) that the *Hope*[23] decision concerning "end result" applies in Arizona; and (3) that the determination of the rate of return is directly related to the rate base used by the Commission.

Dr. Zepp testified that Dr. Johnson's inflation rate is flawed because it is not the plant-specific cost factors used to determine the RCND and is not the future plant-specific cost factors that will affect the FVRB in the future.[24] He argues that this causes a mismatch between FVRB determined at the time of inquiry, the FVRB expected in the future, and RUCO's revenue requirement. Dr. Zepp also testified that Dr. Johnson's method was arbitrary because there is no reason to believe that FVRB increased by 2 percent per year in the past or do so will in the future.

Although Dr. Zepp disagrees with Dr. Johnson's position that debt contains an inflation component, he states that "[a]ssuming, for the sake of argument that the 7.6% rate of return contains an inflationary component, it is attributable to the cost of equity, not the cost of debt."[25] In response to Dr. Johnson's assertion that Arizona investors would be overcompensated if the Company's methodology were accepted, Dr. Zepp indicated that "investors in Arizona would receive the returns that the Arizona Constitution requires."[26]

RUCO's Method

RUCO recommends that the Commission adopt a rate of return methodology that uses the Company's WACC, adjusted to remove the inflation component, as the rate of return applied to FVRB.

RUCO's witness Dr. Johnson testified that the key issue is to determine the amount of money

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[22] Ex. A-R7, Zepp Rebuttal Testimony at 22.
[23] *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).
[24] Ex. A-R7, Zepp Rebuttal Testimony at 31.
[25] *Id.* at 33. Dr. Zepp makes the same error as Company witness Bourassa, testifying repeatedly that Decision No. 68176 authorized a rate of return of 7.6 percent. *Id.* at 4, 5, 12, 18, 20, 21, 29, 30, 32, 33, 34, 38 33; Ex. A-R8, Zepp Rejoinder Testimony at 3.
[26] Ex. A-R7, Zepp Rebuttal Testimony at 33.

the Company should be given an opportunity to earn and that the rate base and the rate of return calculations are vital steps to resolving the key issue. He testified that:

> . . . it is generally agreed that the amount of dollars that the utility should be given an opportunity to earn should be largely, if not entirely, determined by a competitive market standard. In essence, the utility should be allowed to recover its actual cost of capital – a dollar amount that is approximately equivalent to the amounts being earned by other firm's [sic] on their investments of comparable magnitude, adjusted for any differences in risk."[27]

RUCO argues that applying the weighted average cost of capital to the FVRB is not appropriate because it would over-compensate the Company's investors and unfairly burden the Company's customers. According to RUCO, because the FVRB is partly tied to reproduction costs, and because reproduction costs increase due to the effects of inflation, the return on FVRB as advocated by the Company includes the effects of inflation. Likewise, the cost of capital advocated by the Company includes the estimated cost of equity, which relies in part on analysts' judgments and stock market data that compensate investors for inflation.

RUCO's witness, Dr. Johnson, testified that although the weighted average cost of capital is developed to be used with a return on OCRB, it could be the starting point for developing an appropriate rate of return with FVRB. RUCO argues that without some adjustment to the cost of capital, the effects of inflation would be double counted – once in the FVRB and again in the rate of return. Specifically, RUCO recommends that the Commission adopt a rate of return that excludes an inflation component, thereby providing an operating income that fairly compensates investors and is also fair to customers.

Dr. Johnson testified that inflation is a major factor influencing the both the FVRB and the WACC, which creates a concern about the potential for double counting inflation's effects. Because the RCND study is developed by applying plant-specific inflation indices to utility-specific balances, these "industry-specific inflation rates are one of the most important factors causing the fair value to exceed original cost."[28] Dr. Johnson testified that without an adjustment for inflation, using the WACC as a return on FVRB would cause astronomical increases in rates for electric and other utilities in the state, skyrocketing stock prices for utilities in the state, and enormous repercussions

[27] Ex. R-R1, Johnson Direct Testimony at 11.
[28] *Id.* at 24.

and impact on the local economy.[29]

Dr. Johnson testified that where a FVRB is employed, great care must be taken to avoid the potential for circularity, to ensure that customers are treated fairly, and to preclude unregulated monopoly profits. More specifically, he believes that it is imperative to ensure that the return applied to the FVRB is, in fact, a "fair" return – one that is fair to customers as well as stockholders, one that does not provide a windfall to utility stockholders, and one that does not defeat the core purpose of protecting customers from monopoly power.

In response to the Company's argument that the WACC is not tied to any particular rate base, Dr. Johnson testified:

> [I]f the "fair return" is computed independently of the "fair value," the sale of utility properties at higher and higher inflated prices would eventually defeat the entire purpose of rate regulation. Absent successful effort to solve the circularity problem by ensuring that the "fair return" is truly "fair" to both customers and stockholders, the fair value method of regulation can easily lead to a spiral of ever-increasing property valuations, and correspondingly increasing rate levels. Unless this problem is solved, utility rates can eventually escalate to a level approaching pure monopoly levels, defeating the core purpose of rate regulation, and greatly deviating from the goal of simulating the results of an effectively competitive market.[30]

Dr. Johnson testified that in a properly functioning regulatory regime, the determination of a utility's rate base and the estimated cost of its capital are not purely independent of each other. Dr. Johnson testified that "[t]he value of a utility's property is partly a function of the dollar amount of income that it generates. Thus, if the value and return concepts are developed independently, there is no assurance that the purpose of regulation will be achieved, or that the return will be fair to both customers and stockholders."[31]

Dr. Johnson testified that the "final result of changing rate base valuation methods without rethinking the rate of return methodology would be a huge windfall for stockholders – one that is clearly not justified, assuming the prior methodology had generated an income level that was fair

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[29] Tr. at 202.

[30] Ex. R-R1, Johnson Direct Testimony at 7-8. The "circularity problem" reference speaks to the idea that, with the use of FVRB, a vicious circle can be created where "valuation is dependent upon capitalization of earnings that are being set in a rate case, and those earnings depend in large part on the regulatory commission's finding of fair value." *Id.* at 5-8; Tr. at 181-184.

[31] Ex. R-R1, Johnson Direct Testimony at 12-13.

and reasonable. The fair return in dollar terms cannot suddenly double merely because regulators adopt a different rate base valuation methodology."[32]

Dr. Johnson recommended that, to maintain consistency with the core purpose of regulation and the United States Supreme Court's applicable standard, the Commission should recognize that the fair rate of return will appropriately change depending upon the method used to develop the rate base. He testified that a fair value cost valuation tends to be higher than an original cost valuation because it reflects the impact of inflation and other factors that tend to contribute to an upward growth in value over time. According to Dr. Johnson, "[e]conomists have long recognized that inflation and other factors which increase the value of an investment will significantly impact an investment's expected return. In turn, these factors affect the present value of the investment."[33] Dr. Johnson explains that this is because the growth in the value of the investment is a component of the total return that is realized by the investor.

According to Dr. Johnson, most theorists agree that the primary objective of regulation is to produce results in the utility sectors of the economy that parallel those that would be obtained under competition. He testified that:

> the general economic goal of utility regulation is to provide an opportunity for an efficiently managed utility to recover its full costs, including a fair (or normal) return on its capital – but it is generally precluded from earning profits in excess of a normal return. When rates are adopted in accordance with this objective, the result will be an equitable and efficient balance between the interests of the utility and its investors, and the interests of the utility's customers. Such a balance occurs naturally in the world of competition, and is clearly a desirable goal for regulation in the public interest."[34]

In response to the Company's argument that the "fair rate of return" for application to the FVRB should be the same percentage that would be applied to the OCRB, Dr. Johnson testified that if regulation is going to achieve reasonable consistency with the competitive market standard, applying the same percentage figure to both rate bases is not appropriate. He concludes that a valid finding of the fair value rate of return will depend in part upon the method used to determine rate base. To the extent that a fair rate of return is developed for an OCRB using the weighted average

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[32] *Id.* at 14.
[33] *Id.* at 17.
[34] *Id.* at 20-21.

cost of the utility's cost of debt, preferred stock, and equity - where the cost rates are calculated by referring to amounts recorded in the company's accounting records, thereby meeting the competitive market standard - Dr. Johnson testified that "there is no reason to assume that the same percentage figure can appropriately be applied to a fair value rate base which is grows [sic] over time, and is intended to reflect current values (including the impact of inflation). To the contrary, if the fair value rate base is higher than the original cost rate base, and that value is expected to continue to escalate in the future (e.g. due to inflation), a lower percentage rate would be appropriately applied to the fair value rate base. The direction of the difference is obvious – the only question to be pondered is how much lower."[35] Dr. Johnson testified that:

> [I]t is clear that the appropriate magnitude of the difference between the appropriate rate of return in an original cost jurisdiction and the fair rate of return in a fair value jurisdiction is closely related to the rate of growth in the utility's fair value rate base relative to the original cost of its property. The more rapidly fair value is growing relative to original cost, the less need there is to immediately provide a high level of current income in the form of high percentage return for application to the fair value rate base. This is exactly what we observe in the stock market, where investors are satisfied with relatively lower levels of current income and dividends in growth industries, where the value of stock and the anticipated future levels of dividends are expected to grow over time.[36]

According to Dr. Johnson, another way to see why the return on FVRB must be lower than the WACC, if the return is going to be fair to both customers and stockholders, is to look at the utility industry nationwide. Nearly all jurisdictions accept the competitive market standard for utility regulation, whether they use original cost or fair value to determine rate base. As explained by Dr. Johnson, utilities in Arizona are competing with utilities in other states for investment capital in the national market. If Arizona utilities have the same percentage rates of return applied to FVRB as are applied to OCRB in all other jurisdictions, it is clear that investors in Arizona utilities would be overcompensated. According to Dr. Johnson, if "the weighted average cost of capital were applied to the fair value rate base, Arizona utilities would be provided with an opportunity to earn windfall profits, in comparison with the treatment of utilities in other states, where firms are only given the opportunity to earn a normal, competitive return (as required by the United States Supreme

[35] *Id.* at 23.
[36] *Id.* at 32.

Court in the Hope Natural Gas case)"[37] Dr. Johnson recommended that while the Arizona Constitution requires the use of a FVRB, it is not necessary or appropriate to provide Arizona utilities with earnings that consistently exceed the earnings of the average unregulated firm which operates in competitive markets, adjusted for differences in risk.

Dr. Johnson recommended that the Commission reject the Company's proposed method to establish a fair rate of return because it would not be fair to customers and would undermine the core purpose of regulation, which is to protect customers from monopoly power. He believes that the Staff approach appears in this case to provide a fairly reasonable result, but that his recommended method of subtracting an inflation factor from the weighted average cost of capital is the best alternative.

Staff's Method

Staff proposed two alternative methods that adjust the WACC in order to find an appropriate fair value rate of return. Both methods develop a "fair value capital structure" and assign cost rates to the various components, with the first alternative applying a zero cost to the fair value increment of the capital structure and the second alternative applying a real risk-free rate of return to the fair value increment of the capital structure.

Staff's first alternative, using a zero cost component applied to the fair value portion of the capital structure, is based upon Staff's recommendation that because that portion has not been financed by investors, a zero cost rate is appropriate.

If the Commission finds that it is appropriate to apply an above-zero cost rate to the fair value increment of the capital structure, Staff recommends its second alternative and that the proper return should be no larger than the real (i.e., after inflation is removed) risk-free rate of return.

Staff witness Mr. Smith testified that according to the Court of Appeals decision, a "superfluous mathematical exercise cannot be used, i.e., there must be appropriate economic and financial logic and support underlying the determination of the fair value rate of return that is applied to FVRB" and that the Commission has the discretion to determine the appropriate methodology.[38]

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[37] *Id.* at 30-31.

[38] Ex. S-R3, Smith Direct Testimony at 15.

Staff witnesses Smith and Parcel testified concerning the economic and financial logic supporting the use of a zero cost rate to the portion of the fair value increment of the capital structure.

Staff witness Mr. Parcell testified in support of Staff's recommended methodology to determine the rate of return to be applied to FVRB. Both of Staff's witnesses disagree with the Company's assertion that there is no tie between OCRB and WACC. Mr. Parcell testified that, based upon his more than 35 years of providing cost of capital testimony, the concept of cost of capital is designed to apply to an OCRB:

> [T]he cost of capital is derived from the liabilities/owners' equity side of a utility's balance sheet using the book values of the capital structure components. The cost of capital, once determined, is then applied (i.e. multiplied by) the rate base, which is derived from the asset side of the balance sheet (i.e. OCRB). From a financial perspective, the rationale for this relationship is that the rate base is financed by the capitalization. Under this relationship, a provision is provided for investors (both lenders and owners) to receive a return on their invested capital. Such a relationship is meaningful as long as the cost of capital is applied to the original cost (i.e., book value) rate base, because there is a matching of rate base and capitalization. When the concept of fair value rate base is incorporated, however, this link between rate base and capital structure is broken. The amount of fair value rate base that exceeds original cost rate base is not financed with investor-supplied funds, and indeed, is not financed at all. As a result, a customary cost of capital analysis cannot be automatically applied to the fair value rate base since there is no financial link between the two concepts. . . . The link is important since financial theory indicates that investors should be provided an opportunity to earn a return on the capital they provided to the utility. Since the capital finances the rate base (in an original cost world), the link between the cost of capital and rate base satisfies this financial objective.[39]

Mr. Smith also testified:

> Because both the capital structure and the OCRB are based largely upon amounts recorded on a utility's balance sheet, i.e., on recorded accounting information, there is a connection. Typically, the major items of original cost rate base, such as Plant in Service and Accumulated Depreciation, are derived from the asset side of the utility's balance sheet. Conversely, the major components of the capital structure, such as debt and equity, are derived from the liability and capital side of the utility's balance sheet. The focus for developing these is typically on the recorded accounting data. In other words, the liabilities and capital recorded on the company's balance sheet finance the assets recorded on the balance sheet.[40]

[39] Ex. S-R5, Parcell Direct Testimony at 4-5.
[40] Ex. S-R4, Smith Surrebuttal Testimony at 14.

As a result, Staff recommends that the WACC developed for application to the OCRB must be adjusted for application to a FVRB by recalculating the capital structure ratios and assigning a zero financing cost to the component of the fair value capital structure that is not supported by debt and equity on the utility's books.[41] As explained by Mr. Parcell, "[s]ince the increment between fair value rate base and original cost rate base is not financed with investor-supplied funds, it is logical and appropriate, from a financial standpoint, to assume that this increment has no financing cost."[42] By using the capital structure, the cost of capital can account for this level of cost-free capital. Mr. Parcell testified that such a procedure would still provide for a return being earned on all investor-supplied funds and therefore would be consistent with financial standards.[43]

Mr. Parcell testified that, from a financial perspective, it should not be necessary to provide for any costs associated with the fair value increment of the capital structure. If the Commission chose to do so from a public policy perspective, however, he would recommend the cost be no larger than the real (i.e. after inflation is removed) risk-free rate of return. Mr. Parcell explained that the real risk-free rate must be used because the Company's investors are already receiving an inflation factor due to the inclusion of inflation in the FVRB, and it would be double-counting to also include the inflation components in the cost to be applied to the fair value increment of the capital structure. Mr. Parcell testified that any value above zero percent should be justified in policy considerations instead of pure economic or financial principles. For that reason, Mr. Parcell believes that the selection of an appropriate cost rate is within the Commission's discretion.

Mr. Smith testified that under the two alternatives proposed by Staff, the methodology for determining fair value rate of return is based upon sound reasoning and appropriate financial, economic, and ratemaking theory and that the Commission, in its discretion, can choose to use either method. Mr. Smith testified that, theoretically, if the OCRB were higher than the FVRB, the cost factor applied to the fair value increment of the capital structure could be negative. Mr. Smith added that after looking at "quite a few different utility filings in Arizona here, and virtually every instance in which I am aware, the fair value rate base is considerably higher in most instances than the

[41] Ex. S-R3, Smith Direct Testimony at 16-17.
[42] Ex. S-R5, Parcell Direct Testimony at 5.
[43] *Id.*

original cost rate base. For example, in Arizona Public Service I believe the difference was somewhere in excess of $1.6 billion."[44] Mr. Parcell testified that if the Company's method of applying the WACC were applied to APS, "the extra dollars, the impact on rates would be almost staggering, I would think. $1.6 billion times any incremental, that's a lot of zeros."[45]

In response to the Company's criticism that Staff's method for determining fair value rate of return uses a hypothetical capital structure, Mr. Smith disagrees that it is hypothetical, as it is the same capital structure that the Commission adopted in Decision No. 68176, with what he believes is an appropriate adjustment to account for how the difference between OCRB and FVRB was financed. He argues that, even if it were hypothetical, it is not inappropriate for the Commission to use hypothetical capital structures for ratemaking purposes. Further, Mr. Smith testified that Company witness Bourassa's proposed "market value capital structure" is inappropriate because the $35.737 million revised capital structure exceeds actual capital by $15.472 million and exceeds the FVRB by $15.397 million, or 75.7 percent. In response to the Company's criticism that Staff is changing the capital structure adopted in Decision No. 68176, Mr. Parcell explains that the capital structure that was used in the decision was "part of the framework that matched capital structure to an OCRB" and that in this remand proceeding, Staff is proposing an alternative capital structure that is directly applicable to the FVRB.[46]

In response to Company witness Bourassa's testimony, Mr. Parcell states that although Mr. Bourassa "appears to be maintaining that, since the Commission is not 'prohibited' from applying the WACC to the FVRB, it should do so. Yet, he has not indicated 'why' the Commission 'should' do so."[47] Mr. Parcell disagrees with Mr. Bourassa's argument that there is no link between cost of capital and OCRB because the utility's capital structure does not equal the OCRB in many cases. Mr. Parcell lists the various reasons why a utility's capitalization may not exactly equal its rate base, including the existence of non-utility assets which are not included in rate base, construction work in progress, disallowance of rate base items, existence of non-investor-supplied capital, customer

[44] Tr. at 122-23.
[45] Tr. at 358.
[46] Ex. S-R6, Parcell Surrebuttal Testimony at 13.
[47] *Id.* at 6.

deposits and advances for construction, and goodwill. He states that none of these reasons invalidate the premise of OCRB rate of return regulation.

In response to Mr. Bourassa's testimony that the accounting values of common equity are not used in traditional cost of equity models and that there is then no link between OCRB and the cost of capital, Mr. Parcell explained that the cost of equity is a prospective cost because it must be estimated and that just because traditional "market-based" cost of equity models such as the DCF and CAPM use the market price of utility stocks, that does not invalidate the conceptual link between OCRB and WACC. Mr. Parcell testified that Mr. Bourassa's assertion that DCF and CAPM derived costs of equity can only be applied to OCRB when the market-to-book ratio of a utility's stock is 1.0 "defies utility ratemaking practices throughout the U.S. Virtually all public utility commissions apply DCF and CAPM model results to the book value capital structures to determine the WACC."[48] Mr. Parcell cited two independent, academic-related sources that identify the relationship between the OCRB and the capital structure of a utility: Charles F. Phillips, Jr., *The Regulation of Public Utilities: Theories and Practice*, (3rd ed. 1993) and Roger A. Morin, *New Regulatory Finance*, (2006).

In response to Mr. Bourassa's proposed conversion of a market-based equity return to a book value return, Mr. Parcell testified that such a conversion is inappropriate. "Knowledgeable utility investors are aware that utility rates are established on the book value of the utility's capital in the WACC. As a result, the stock prices of utilities reflect this recognition. To make an adjustment to the market-based cost of capital amounts would lead to the provision of an excessive return."[49] Mr. Parcell noted that Mr. Bourassa had indicated in response to a data request that he had never recommended an adjustment to his market-based models to reflect a difference between a utility's or proxy group's book value of equity and the market value of equity and was also unaware of any Commission decisions in Arizona or elsewhere where such an adjustment was made.

Mr. Parcell testified that when Staff asked Company witness Mr. Walker whether he had ever testified that a utility's WACC should be applied to its FVRB, Mr. Walker answered "none" and also

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[48] *Id.* at 10.
[49] *Id.* at 11.

that he had not proposed in any cost of capital testimony that rates be set based on a "market value" capital structure. [50]

Mr. Parcell testified that neither the capital attraction, financial integrity, nor the comparable earnings standards justify or require that a 7.6 percent cost of capital be applied to the Company's FVRB. He further testified that determining a fair value rate of return is a process that requires judgment and that while certain aspects of estimating the cost of equity are relatively well established in financial theory, no such parallel exists for determining the fair value rate of return, which is why Staff has provided the Commission with a range for what fair value rate of return methodology may be appropriate in this case.[51]

Staff witness Smith testified that the Company's witnesses "apparently believe that any results produced by the application of the fair value rate of return to the FVRB that are not substantially higher than the results produced by applying the WACC to the OCRB would somehow mean that the FVRB was not adequately considered, and the Company would apparently characterize all such results as a mere superfluous mathematical exercise."[52] Mr. Parcell added:

> From a financial and economic perspective, it does not matter whether the ratemaking impact of using Staff's first alternative is nearly the same or even exactly the same as the so-called backing in method. Chaparral City seems to conclude that these nearly identical results mean that Staff's first alternative is a superfluous mathematical exercise, as the court used that term in a Chaparral City case. I do not agree with this conclusion because Staff's first alternative expressly considers how to independently calculate and determine the fair value rate of return.[53]

Staff states that Decision No. 68176 rejected the Company's argument that the Commission should adopt the WACC as the rate of return and found that doing so would produce an excessive rate of return on FVRB. Staff argues that the "court did not in any way criticize or even discuss the Commission's conclusion that applying the weighted average cost of capital of 7.6 percent to the fair value rate base would result in an excessive return on fair value rate base. And the court also expressly stated that the Commission doesn't have to adopt the weighted average cost of capital as the fair value rate of return, but may use its discretion to determine the appropriate method for

[50] *Id.* at 15.
[51] *Id.* at 20-21.
[52] Ex. S-R4, Smith Surrebuttal Testimony at 10.
[53] Tr. at 340-41.

making that determination."[54]

Analysis

Article 15, § 14, of the Arizona Constitution states:

> The corporation commission shall, to aid it in the proper discharge of its duties, ascertain the fair value of the property within the state of every public service corporation doing business therein; and every public service corporation doing business within the state shall furnish to the commission all evidence in its possession, and all assistance in its power, requested by the commission in aid of the determination of the value of the property within the state of such public service corporation.

Article 15, § 3, of the Arizona Constitution states:

> The corporation commission shall have full power to, and shall, prescribe just and reasonable classifications to be used and just and reasonable rates and charges to be made and collected, by public service corporations within the state for service rendered therein, and make reasonable rules, regulations, and orders, by which such corporations shall be governed in the transaction of business within the state, and may prescribe the forms of contracts and the systems of keeping accounts to be used by such corporations in transacting such business, and make and enforce reasonable rules, regulations, and orders for the convenience, comfort, and safety, and the preservation of the health, of the employees and patrons of such corporations; Provided, that incorporated cities and towns may be authorized by law to exercise supervision over public service corporations doing business therein, including the regulation of rates and charges to be made and collected by such corporations; Provided further, that classifications, rates, charges, rules, regulations, orders, and forms or systems prescribed or made by said corporation commission may from time to time be amended or repealed by such commission.

The traditional public utility ratemaking "formula" applies the rate of return to the rate base and uses the resulting revenue as the required operating income. Rates and charges for service are then developed to collect that revenue from customers. As interpreted by Arizona courts, the Arizona Constitution requires that when setting rates, the Commission must find the fair value of a public service corporation's property and use that value to set just and reasonable rates.[55] The Constitution therefore, requires and instructs the Commission on one piece of that ratemaking formula – the rate base – to use the "fair" value of the utility's property as the rate base. The Constitution is silent as to how the Commission is to determine the rate of return, thereby leaving that duty to the Commission and allowing it to use its knowledge and expertise, with the caveat that the resulting rates and charges must be just and reasonable.

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[54] Tr. at 15.

[55] "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." *Simms v. Round Valley Light & Power Co.*, 80 Ariz. 145, 151, 295 P.2d 378, 382 (1956).

As discussed by Staff and RUCO witnesses, since the early 1900s, the regulation of public utilities has evolved along with standardized accounting procedures and economic and financial theory.[56] When Arizona's constitutional framers adopted Article 15, § 14, the National Association of Regulatory Utility Commissioners' Uniform System of Accounts did not exist, and no modern day finance models to estimate the cost of equity were in use. As the Arizona Supreme Court discussed in *Arizona Corp. Comm'n v. State ex rel. Woods,* 171 Ariz. 286, 830 P.2d 807 (1992), the progressive and labor forces shared a strong distrust of corporate powers and combined to give the Commission strong powers to regulate public service corporations. "The founders expected the Commission to provide both effective regulation of public service corporations and consumer protection against overreaching by those corporations."[57]

Nationally, the fair value method of ratemaking was prominent during the first half of the twentieth century. Then a trend developed for regulators to begin using original cost information, which was more reliable, easier to interpret, and less susceptible to problems. In 1944, the United States Supreme Court's decision in *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591, freed most state and federal jurisdictions from the requirement to use a specific "fair value" formula when setting public utility rates.[58] Once regulators had the appropriate controls in place to regulate accounting and the double dealing transactions, the original cost was given more weight because it was a more reliable and trustworthy number.

Today, Arizona is apparently the only remaining state jurisdiction that requires rates to be set upon the FVRB. Most of the case law related to ratemaking in Arizona focuses upon issues involving the FVRB, and the parties have cited few cases from other jurisdictions that concern the appropriate rate of return on a FVRB.

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[56] Dr. Johnson's testimony included a history of "fair value" in the context of rate regulation with an explanation of how in the early 1900s, a distrust of the book cost information provided by the utilities due to the practice of trading utility properties back and forth at escalating "values," recording "cost" that included the profit of an affiliate, and the lack of standardized accounting methods led state commissions to favor "fair value" over "original cost" rate base determinations. Ex. R-R1, Johnson Direct Testimony at 5-8; Tr. at 181-184.

[57] *Woods* at 290, 830 P.2d 807 at 811. *see generally* Deborah Scott Engelby, Comment, *The Corporation Commission: Preserving its Independence,* 20 Ariz. St. L. J. 241 (1988).

[58] Ex. R-R1, Johnson Direct Testimony at 8.

No expert witness was able to identify or support any existing financial theories or economic analysis designed to calculate a return on rate base other than through the use of a WACC analysis.[59] No party proposed that the Commission adopt a fixed return on fair value to be applied to every utility's rate base, as was done when fair value was the predominant rate base methodology used during the first half of the twentieth century.[60] To comply with the Court's remand, however, we must employ a method of determining operating income that comports with constitutional requirements. Accordingly, we will analyze the methods proposed by the parties to determine whether they will result in an appropriate and reasonable rate of return to apply to the Company's FVRB in this case.

We previously found in Decision No. 68716 that the Company's rate of return methodology (adopting the WACC as the fair value rate of return) and resulting revenue increases would produce an excessive return on FVRB.[61] The Company continues to advocate for its methodology and requests that the Commission apply the WACC to the FVRB in this Remand proceeding. We will again consider its arguments.

In support of its position that the WACC should be applied to the FVRB, the Company attempts to apply Arizona law concerning FVRB to the determination of fair value rate of return ("FVROR"). The Company's criticism - that Staff's and RUCO's positions are based upon the "prudent investment" theory - takes that rate base theory and tries to apply it to a cost of capital determination.[62] The Arizona Supreme Court in *Simms* stated that "[i]rrespective of the merits, if any, of the prudent investment theory, because of our constitution the commission *cannot use it as a*

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[59] Although Mr. Bourassa presented two other methods to determine rate of return, both used a weighted cost of capital, and both restricted recovery to actual debt costs, with the increases going solely to the cost of equity and the percent of equity. Ex. A-R4, Bourassa Rebuttal Testimony at 24-29. Dr. Zepp testified that he could "imagine that there are other schemes that someone could devise" Tr. at 242, but that other than a cost of capital analysis, he "couldn't think of a way that would also give us a reasonable opportunity for investors to earn the 9.3 ROE that the Commission has already found is reasonable," Tr. at 244. Mr. Smith testified that "the cost of capital is a probably a necessary intermediate step, but it is not the final result," Tr. at 300, and Mr. Parcell testified that it would not be possible to set a fair value rate of return without determining cost of capital "because the fair value rate of return has to have capital cost components or capital components and cost rates," Tr. at 362-63.

[60] Tr. at 202-03.

[61] Decision No. 68176 at 39, Findings of Fact No. 18.

[62] See Chaparral City Closing Br. at 8, 25, 31, 32, 34, 35; Chaparral City Reply Br. at 2, 11, 28; Ex. A-R4, Bourassa Rebuttal Testimony at 16; Ex. A-R5, Bourassa Rejoinder Testimony at 7, 8, 10, 11, 17, and 22; Ex. A-R7, Zepp Rebuttal Testimony at 15 and 20.

guide in establishing a rate base."[63] Three years later, the Court cited its *Simms* decision: "This court has held that under our constitution the Corporation Commission must find the fair value of the properties devoted to the public use, and *that in determining the fair value the Commission cannot be guided by the prudent investment* theory . . . ."[64] These cases both establish that the prudent investment theory cannot be used in determining fair value rate base. Neither case discusses the prudent investment theory in the context of determining the appropriate rate of return. However, the Company stated that the Court of Appeals "strongly cautioned that it would be illegal to rely on Chaparral City's historic investment in plant in setting rates, citing both *Simms* and *Arizona Water*."[65] The Court of Appeals stated:

> The Commission also argues that the use of the method employed here was appropriate given that Chaparral City requested a rate of return based on a cost of capital analysis. The Commission contends that, because the cost of capital analysis is based on Chaparral City's capital structure, it measures the cost of the funds that Chaparral City actually invested in the plant. The Commission argues that applying the weighted average cost of capital as a rate of return to the fair value rate base would be applying a figure based on investment to a rate base figure not based on investment. By this argument, the Commission appears to be advocating the setting of rates based on the investment made in the plant. However, rates cannot be based on investment, but must be based on the fair value of the utility's property. *Simms,* 80 Ariz. At 151, 294 P.2d at 382; *Ariz. Water Co.*, 85 Ariz. at 203, 335 P.2d at 415. [66]

Apparently the Company is arguing that this discussion by the Court of Appeals is warning the Commission not to use the WACC to set rates because that would be basing rates on investment. And yet, the Company is advocating that the Commission use the WACC, which is a figure based upon the Company's investments, to set rates.[67] The Company has offered no explanation why the "illegality" would only apply to Staff or RUCO's use of WACC and not to the Company's use of WACC. If it believes that the Court of Appeals meant that the use of WACC would impermissibly be setting rates based on investment, then the Company should have proposed a different method of determining an appropriate rate of return.

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[63] *Simms* at 151, 294 P.2d at 382 (emphasis added).
[64] *Ariz. Water Co.*, 85 Ariz. at 203, 335 P.2d at 415.
[65] Chaparral City Reply Br. at 7.
[66] Exhibit A-R13 at 12-13.
[67] It does not matter that the WACC uses percentages, as opposed to amount of debt, as argued by the Company, (Ex. A-R4, Bourassa Rebuttal Testimony at 19) as both are based upon the historical investment.

No party has provided the Commission with any method that does not use some form of a weighted cost of capital to determine a return on fair value. Arguably, Staff's modified weighted capital structure comes closest to not relying on the Company's investment because it results in component percentages that do not reflect the Company's investment. Yet the Company objects to Staff's proposed modified capital structure.

We believe that this issue of historic/prudent investment is a FVRB issue and has not and should not "bleed" into the rate of return determination. If the historic/prudent investment issue were to apply to the determination of the cost of capital, there would be no economic or financial basis upon which to set a return. In this Remand proceeding, neither Staff nor RUCO has recommended modifying FVRB to reflect investments. In fact, no party is disputing our finding of FVRB in the amount of $20,340,298, and both RUCO and Staff recommend applying their respective recommended fair value rates of return to that amount.

The Company relies on case law from other state jurisdictions to support its argument that the WACC should apply to FVRB. The Company's reliance on *State ex rel. Utilities Comm'n v. Duke Power Co.,* 206 S.E.2d 269, 281 (N.C. 1974) is misplaced. In that case, the North Carolina Supreme Court remanded the issue of the appropriate fair rate of return on the fair value of Duke Power's properties because it was apparent to the Court that the North Carolina Commission had made its determination "through a misunderstanding" of another decision by the Court. The Court stated that:

> [T]he capital structure of the company is a major factor in the determination of what is a fair rate of return for the company upon its properties. There are, at least, two reasons why the addition of the fair value increment to the actual capital structure of the company tends to reduce the fair rate of return as computed on the actual capital structure. First, treating this increment as if it were an actual addition to the equity capital of the company as we have held G.S. § 62-133(b) requires, enlarges the equity component so that the risk of the investor in common stock is reduced. Second, the assurance that, year by year, in times of inflation, the fair value of the existing properties will rise, and the resulting increment will be added to the rate base so as to increase earnings allowable in the future, gives to the investor in the company's common stock an assurance of growth of dollar earnings per share, over and above the growth incident to the reinvestment in the business of the company's actual retained earnings. As indicated by the testimony of all of the expert witnesses, who testified in this case on the question of fair rate of return, this expectation of growth in earnings is an important part of their computations of the present cost of capital to the company. When these matters are properly taken into

> account, the Commission may, in its own expert judgment find that a fair rate of return on equity capital in a fair value state, such as North Carolina, is presently less than 11 percent. This is for the Commission, not for this Court, to determine.[68]

The Court clearly indicated that, under the North Carolina statute, the North Carolina Commission had to apply the cost of equity to the fair value increment, but remanded the matter to the Commission to determine an appropriate cost of equity that considered the reduced risk associated with adding the fair value increment to the capital structure. Arizona has no such statute or constitutional provision directing that a cost of equity must be applied to the fair value increment in the capital structure.

In its Reply Brief, the Company cites *Union Elec. Co. v. Ill. Comm. Comm'n*, 396 N.E.2d 510, 516 (Ill. 1979), to support its argument that the "cost of capital methodology can be used to derive that return [return on fair value of assets], as courts have held." [69] The *Union Elec.* case concerned the Illinois Commerce Commission's use of the "original cost method" when the statute required the "fair value method" in establishing rate base. The only issue addressing the rate of return to be used concerned the Illinois statute, which required a "reasonable return on the value of the property," and whether the Illinois Commission had unlawfully delegated that authority to the Missouri Public Service Commission.[70] Nothing in *Union Elec.* holds that the cost of capital methodology can be used to derive any particular rate of return.

The Company also cites *City of Alton v. Commerce Comm'n*, 165 N.E.2d 513 (Ill. 1960), as holding that the cost of capital methodology can be used to derive a return on the fair value of its assets. Although the Supreme Court of Illinois does discuss the rate of return with FVRB, it finds that several methods of computing the appropriate rate of return might be used, such as subtracting out debt and operating costs from revenues to "produce net income allocable to equity,"[71] "subtracting the par value of debt and preferred stock, to reflect that all increments in value belong to equity,"[72] or "dividing fair value in the same percentages as book value."[73] These methods seem to

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[68] *Duke Power* at 282.
[69] Chaparral City Reply Br. at 3.
[70] 396 N.E.2d at 519.
[71] This seems to be a "fall out number" after revenues have already been determined.
[72] This also seems to be a "fall-out" calculation.
[73] *City of Alton v. Commerce Comm'n*, 165 N.E.2d 513, 520 (Ill. 1960).

be "after-the-fact" determinations, as opposed to methods to use or determinations made to set rates. As such, they are not helpful in Arizona.

Staff cites an Indiana Utility Regulatory Commission decision[74] for its discussion of the use of a cost of capital with a FVRB:

> As the Commission has frequently noted, the capital structure is related to the book value of utility property. Therefore, the cost of capital calculated in the manner above, is related primarily to an original cost depreciated rate base. If the fair value rate base reflects the current value of Petitioner's utility property, as it must, determining a fair return by multiplying the cost of capital, including a consideration of prospective inflation by a fair value rate base, which includes historic inflation, *may overstate the required return by reflecting inflation twice. In order to avoid any such redundancy, it is necessary to make an adjustment to the cost of capital in arriving at reasonable rate of return to be applied to the fair value rate base.* On the basis of the evidence presented, the Commission finds the prospective rate of inflation, 2.5% should be removed from Petitioner's 12.0% cost of equity, *to arrive at a deflated cost of common equity capital* of (9.5%) to be used in computing a fair rate of return on the fair value of Petitioner's utility property. When this is done, the resulting rate of return, which we find should be applied to Petitioner's fair value rate base of $10,700,000, is 6.10%.[75]

The cases cited by the Company and by Staff illustrate the complex issues involved in setting a rate of return on a FVRB. Although they are informative, they do not compel this Commission to adopt any particular method.

The Company also argues that its method of determining FVROR is supported by economic and financial theory. It asserts that there are no theoretical or practical reasons for the Commission not to apply the WACC to FVRB.

The Company argues that there is no conceptual tie between WACC and OCRB and therefore the "WACC can be applied to any rate base because (1) the WACC method relies on the percentages of debt and equity in a utility's capital structure, not the amounts of invested capital . . . and (2) the cost of equity is estimated with market-based finance models that use information on publicly traded stocks and do not depend on the rate base to which the cost of equity is applied . . ."[76]

We disagree with the Company's position that the determination of a utility's rate base and the estimate of the cost of capital are independent of each other. As explained by Dr. Johnson, the

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[74] *Harbour Water Corp.*, Case No. 41661, 2001 WL170550 (Jan. 10, 2001 Ind. Util. Reg. Comm'n).
[75] *Id.* at 10 (emphasis added).
[76] Chaparral City Reply Br. at 10 (emphasis in original).

value of a utility's property is partly a function of the dollar amount of income that it generates, and if these value and return concepts are developed independently of each other, there is no assurance that the return will be fair to stockholders or that resulting rates will be fair and reasonable to customers. As explained by Staff witness Parcell, financial theory links the cost of capital with the OCRB, and not with the FVRB. The WACC is developed using the Company's balances on its balance sheet to appropriately weight the capital components.[77] In this manner, WACC is very particularly tied to investments. Because not all items on the balance sheet are in rate base, there may be some differences between OCRB (which is also derived from the company's books) and the capital structure's dollar amounts of debt and equity.[78]

The examples cited by the Company in its Reply Brief do little more than show that rates are not set based upon the company's actual capital structure,[79] but upon the rate base associated with that capital structure, and that to the extent that parties recommend different adjustments to plant that result in different rate bases, the revenues generated will differ. Staff and RUCO have not asserted that their methods allow the Company to earn a return on the dollars of book equity and debt that comprise the company's actual capital structure, but that the unadjusted WACC corresponds with the rate base derived from the Company's books. The traditional development and use of the WACC is designed to allow the utility the opportunity to earn, in dollars, the amount of its estimated capital costs associated with its appropriate OCRB as determined by the regulatory commission. If this were not the intent, then why would a commission not just impose a fixed rate of return and the utility may or may have an opportunity to earn its cost of capital. "Cost" is applied to an object, event, or service, and the cost of such object, event or service depends on the value of the object, event or service. Investors in utilities know that rates and charges are set by regulatory commissions using a return on rate base and the cost of capital of a particular utility reflects such investor knowledge and value.

The Company also argues that a cost of equity that is estimated using market-based finance

[77] Unless a hypothetical capital structure is used, which the Company is not advocating here.
[78] *See* Ex. R-R2, Johnson Surrebuttal Testimony at 7; Ex. S-R6, Parcell Surrebuttal Testimony at 9.
[79] Capital structure here means the dollar amount of debt and equity.

models can be applied to FVRB because both the rate of return and the FVRB would be market-based.[80] We disagree. An investor purchases stock in a utility based upon what that investor expects to be the dividend income stream of the utility, knowing that the income is a result of the rate of return on rate base authorized by the public utility commission. Therefore, using market-derived estimates of cost of equity captures investors' expectations that the utility will be earning based upon its return on OCRB,[81] and no "conversion" to a "book value return" is appropriate.[82] To apply those market-based costs of equity estimates to a different value would not accurately or appropriately compensate the utility for the fair value of its property, would not be consistent with the competitive market standard,[83] and would pose the circularity problems discussed by Dr. Johnson. Further, the Arizona Supreme Court has found that the market value is not, as a matter of law, the fair value.[84]

The Company also argues that when the value of the assets financed by the capitalization increases, the equity owners expect a higher return; and when the value of the assets decreases, the expected return is lower. According to the Company, this "is the essence of the competitive market, which the fair value standard is intended to mimic."[85] However, as Dr. Johnson explains, in jurisdictions where the OCRB is used:

> [R]egulators have found that the WACC approach provides a reasonable result – since the cost of equity includes adequate compensation for the effects of inflation and no further compensation is needed. In contrast, where the rate base is growing with inflation, because it is partly tied to reproduction cost, the utility's income will be systematically growing with increases in reproduction cost, and thus a reasonable result can best be achieved by using a lower percentage return – thereby avoiding overcompensating for inflation."[86]

Further, although the Company argues that its return on fair value method mimics competition, and that higher values should bring higher returns and lower values lower returns, were the "value" of the Company's assets to fall below OCRB - meaning the Company was unable to

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[80] Chaparral City Reply Br. at 11.
[81] Although the Company argued that different state commissions use different methods of determining OCRB, it did not argue that state commissions have set rates using FVRB that are then reflected in market-based finance models.
[82] Ex. S-R6, Parcell Surrebuttal Testimony at 11.
[83] *See* Ex. R-R1, Johnson Direct Testimony at 21.
[84] "[T]he purchase price of a public utility does not constitute, as a matter of law, its fair value." *Arizona Corp. Comm'n v. Arizona Water Co.*, 85 Ariz. at 202-03, 335 P.2d at 414.
[85] Chaparral City Reply Br. at 17 (quoting *Duquesne Light*, 488 U.S. 299, 308-09 (quoting *Smyth v. Ames*, 169 U.S. 466, 547 (1898)).
[86] Ex. R-R2, Johnson Surrebuttal Testimony at 8.

recover the capital costs needed to continue to provide the monopoly utility service thereby putting the public health and safety at risk - it is very unlikely that the Company would agree that a lower return is required or that a Commission would allow a return that would not cover the cost of capital in such a situation. Such a method that merely "mimics competition" could place the public health and safety at risk and defies the basis and foundation for the need to regulate monopolies providing services essential to life and public safety.

The Company has not presented any legal, economic, financial, or policy reasons that convince us that we should adopt its recommended use of WACC applied directly to FVRB. We are not convinced that the framers of the constitution envisioned or intended that the "fair value" requirement would allow a utility the opportunity to earn its estimated cost of equity (that includes inflation) on a rate base value that has also increased due to inflation.

Staff and RUCO both propose methods that use an adjusted WACC as the FVROR.

Staff's method adjusts the capital structure to reflect the additional component that is neither debt nor book equity. Based upon financial theory, Staff believes that the cost of this component should be reflected in the cost of capital used to establish a return on FVRB. The Company criticizes Staff's method, calling it "another backing-in method" that fails to meaningfully use the FVRB in setting rates. As discussed above, the Company improperly attempts to apply the case law prohibiting the use of the historic/prudent investment theory in setting a rate base to the determination of the cost of capital and rate of return. Additionally, the Company appears to argue that the Commission is precluded from using a FVRB capital structure: "[N]either the FVRB nor the Company's capital structure were at issue in the initial phase of this case, nor were the FVRB or the capital structure challenged on appeal. Therefore, these matters are outside the scope of the Court of Appeal's mandate and cannot be re-litigated."[87] Apparently, the Company believes that given the procedural posture of this Remand proceeding, the Commission has no option other than to adopt the Company's position. If such were the case, the Court of Appeals would not have said: "If the Commission determines that the cost of capital analysis is not the appropriate methodology to

[87] Chaparral City Closing Br. at 2.

determine the rate of return to be applied to the FVRB, the Commission has the discretion to determine the appropriate methodology. The same is true if the Commission were to determine that applying the weighted average cost of capital to the FVRB would result in double counting inflation, as argued by RUCO."[88] Staff's proposed method does not affect the FVRB determination; it modifies the cost of capital analysis to determine the rate of return to be applied to the FVRB. Accordingly, it falls within the scope of the Court of Appeal's mandate.

RUCO's method is designed to develop a WACC that can be applied to FVRB without double counting inflation. The Company argues that inflation is not "double counted" when the cost of capital is applied to a FVRB. The Company does not dispute that inflation may impact both the cost of equity and the RCND, but argues that RUCO's adjustment to the cost of capital is "not only grossly excessive, but constitutes piecemeal ratemaking."[89]

The Company argues that any adjustment to account for inflation should take into account that the OCRB portion of FVRB is unaffected by inflation; that the RCND did not contain a current value for land, franchises, organization costs, and other intangibles;[90] that RUCO's adjustment is overstated because the entire WACC is adjusted, not just the equity component; that inflation, although relevant to the lender at the time the loan is made, has nothing to do with the current expectations of investors; that debt is a fixed cost; that operating expenses are also affected by inflation; that depreciation on FVRB will negatively offset the inflation increase in FVRB;[91] and that it has not been shown that the Company is actually earning its authorized return.

In its Closing Brief, the Company compares regulated utilities to unregulated capital intensive industries, arguing that regulated utilities depend on utility commissions to "recognize the adverse affects of inflation in setting rates" and citing a 1957 Missouri case to support that during periods of inflation, considerable weight must be given to reproduction costs in arriving at fair

[88] Ex. A-R13 at 13.
[89] Chaparral City Reply Br. at 29.
[90] Chaparral City Closing Br. at 42.
[91] *Id.* at 41.

value.[92] The Company argues that the impact of inflation is acute for water utilities because they are capital intensive, and their assets have long useful lives.

While the arguments posed by the Company are informative, they do not compel us to reject Staff's or RUCO's method. Dr. Zepp's explanation of why applying the WACC to FVRB would not be double counting of inflation did not address the concerns expressed by Staff and RUCO. His response to Staff's position focused on the value of the rate base, not the inflation currently included in the WACC. His and Mr. Bourassa's responses to RUCO's position incorrectly asserted that RUCO had reduced the rate of return by expected future increases in FVRB, when the adjustment was actually to eliminate current inflation embedded in the WACC.[93] The calculation the Company relies upon to argue depreciation will offset inflation was based upon a misunderstanding of RUCO's position and incorrectly calculated earnings as if FVRB changed yearly.

Dr. Zepp's criticism that RUCO's method requires speculation about how much FVRB has and will change due to inflation[94] and that there is a mismatch between the FVRB at the time of inquiry and in the future because the inflation rate is not the future plant-specific cost factors, is misplaced, and is apparently based upon his and the Company's misunderstanding of RUCO's method. RUCO's recommended method does not adjust FVRB for inflation; RUCO's adjustment is a reduction in the inflation rate contained in the current cost of capital. In Decision No. 68176, the Commission adopted the Company's proposed method of averaging OCRB with RCND to determine the FVRB, and did not reduce the OCRB, RCND, or FVRB for inflation. The Company did not appeal or dispute the FVRB determination.

Although the Company states in its Reply Brief that RUCO has not "presented any credible evidence that the RCND valuation method depends on inflation,"[95] Company witness, Mr. Walker did not dispute that inflation exists in RCND values,[96] and additionally, Staff and RUCO witnesses

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[92] *Id.* at 39. We also note that the support cited by the Company is from a 1976 Law Review article discussing the "constant inflation of recent years." Chaparral City Closing Br. at 38 (citing Robert A. Webb, *Utility Rate Base Valuation in an Inflationary Economy*, 28 *Baylor L. Rev.* 823, 825 (1976)). The Company has not asserted that the current inflation rate is comparable to the inflation rates being discussed in 1976.

[93] Ex. A-R4 at 40; Ex. A-R7 at 20-31.

[94] Ex. A-R7, Zepp Rebuttal at 25; *see also* Chaparral City Closing Br. at 41- 42.

[95] Chaparral City Reply Br. at 3.

[96] Tr. at 41-46, 50-51. The Handy-Whitman indexes are not tied specifically to the Consumer Price Index, but are item specific.

testified concerning the inflation component of FVRB, which is a weighting of OCRB and RCND.[97] Further, we note that in the Company's Direct Testimony, Mr. Bourassa testified:

> RCN plant bases were developed using the Handy-Whitman Bulletin 155 Plateau Region (HW Bulletin 155) and the U. S. Department of Labor Consumer Price Index for All Urban Consumers (CPI-U). The plant-in-service or plant asset listing at the end of the test year was first summarized by asset class (account) and vintage year. An appropriate cost index number was assigned to each class asset and vintage year. Handy-Whitman Bulletin 155, Plateau Region was used as the cost index source for construction plant, and the CPI-U was used as the cost index source for certain non-construction plant items such as computers and transportation equipment. To restate the original cost in current dollars, the original cost was multiplied by a cost factor for each asset class and vintage year.[98]

Clearly, the RCND value proposed by the Company and adopted by the Commission in Decision No. 68176 included inflation, and that inflation component carries into the FVRB.

There is no evidence that inflation has eroded the Company's earnings or that the level of operating expenses from the test year did not reflect the current costs (and therefore the effects of inflation). We note that in Decision No. 68176 we allowed almost three million in post test-year plant to be included in rate base. Removing inflation from the return is no more "piecemeal ratemaking" than is adding inflation to the rate base. As explained in this discussion, the effects of inflation are accounted for in the FVRB, and they need not be "doubly counted" in either the return or in operating expenses. While in retrospect, the Company may wish that it had analyzed its RCND value more thoroughly and proposed a different weighting of OCRB and RCND, there is no evidence that the FVRB is not reasonable and appropriate, and the Company did not appeal that finding.

As a final note, it appears that the Company is actually arguing that the traditional rate making formula does not work, so the Commission should give it an extra opportunity to earn a reasonable return on its FVRB by allowing inflation in the rate of return *and* in the FVRB.[99] We

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[97] Dr. Johnson testified "that there are other things that go into a fair value rate base; it is not purely a question of inflation. But clearly a component of that is inflation, as indicated by things like the Handy-Whitman Index, which is simply a measure of inflation in a very specific narrow field. They have a whole series of data series. This is inflation in steel prices, this is inflation in other specific components, things that utilities buy." Tr. at 157-58; *see also*, Tr. at 299, 300, 320, 330; Ex. R-R1, Johnson Direct Testimony at 17, 23, 24, 28, 29, 34; Ex. R-R2, Johnson Surrebuttal Testimony at 3-4, 8, 10, 13, 14-16.

[98] Ex. A-4, Bourassa Direct Testimony at 7-8.

[99] Ex. A-R4, Bourassa Rebuttal Testimony at 31-32, Chaparral City Closing Br. at 38-44.

disagree. There is no evidence that inflation has eroded the Company's earnings and there are no legal or policy reasons to allow rates and charges in excess of what is just and reasonable.

Accordingly, Staff's method of adapting the cost of capital analysis to a FVRB, and RUCO's method of insuring that inflation is not double-counted, are in accordance with the Court of Appeals' discussion and may be considered in this Remand proceeding.

Conclusion

We believe that there are many ways to analyze and calculate an appropriate rate of return on FVRB. Arizona is apparently the only remaining state that continues to have a FVRB requirement. Other state jurisdictions use some form of OCRB in the rate setting process. Consequently, economists and analysts have developed and applied methods for estimating the cost of equity and the weighted cost of capital that are applicable to developing a rate of return on an OCRB rate base. Since this process uses costs and estimates of costs that reflect inflation, the application of this return to an OCRB would indirectly compensate the utility for that impact on the value of its assets. These methods are not directly applicable for use with our FVRB because the FVRB includes an inflation component also. Our previous method was a shorthand method of ensuring that inflation would only influence one piece of the ratemaking formula – the rate of return. However, the Court of Appeals has made it clear that, under our constitution, the "inflation component" belongs in the FVRB. Accordingly, in order to avoid over-counting the effect of inflation, it is necessary for us to ensure that the rate of return does not also carry an inflation component. In *The Principles of Public Utility Rates*,[100] Professor Bonbright discusses the rate of return to be applied to a FVRB and states: "*But the rate of return should include no allowance for price inflation, realized or anticipated, since any such allowance would be incorporated in the rate base.*"[101] Because the weighted average cost of capital includes inflation, if the Commission were to apply that cost of capital as the FVROR to the FVRB (which includes inflation in the RCND portion), then the impact of inflation would be overstated, and the resulting revenues would compensate the utility for more than the fair value of its property, resulting in rates and charges that were not just and reasonable.

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[100] James C. Bonbright, *The Principles of Public Utility Rates* (1961) (emphasis added).
[101] *Id.* at 281.

Both Staff's and RUCO's methods adjust the WACC derived from the OCRB to develop a rate of return that can be applied to the FVRB. Staff's method adjusts the cost of capital to reflect the cost of the portion of the capital structure that is funded by neither debt nor equity, but exists due to inflation. RUCO's method analyzes the inflation contained in the estimates of cost of equity and adjusts the cost of capital to eliminate the inflation component. Neither method modifies the FVRB we found in Decision No. 68176, and both methods apply a FVROR derived from a financial analysis of the Company's cost of capital directly to that FVRB to determine required operating income.

Accordingly, while we find that either Staff's or RUCO's method would result in a fair rate of return on FVRB, in this case we will use RUCO's method, with modifications as discussed below, to reduce the inflation embedded in the cost of capital in order to determine a fair return on FVRB.

ISSUE # 2 What is the appropriate rate of return on Chaparral City's FVRB to be used to set rates in this Remand proceeding?

Having determined that both RUCO's and Staff's methodologies are appropriate for the Commission to use to set rates in this Remand proceeding, the Commission must determine what rate of return is derived from those methods and what rate is appropriate for use in this Remand proceeding.

RUCO's Recommended Rate of Return

RUCO's method requires that the weighted average cost of capital be reduced by an inflation component. The Company conceded that the cost of equity may have an inflation component, but criticized RUCO's recommendation to reduce the entire WACC by the inflation component. Further, the Company argued that only one half of the FVRB (the RCND portion) includes inflation.

RUCO's witness, Dr. Johnson, testified that a useful measure of investor inflation expectations can be derived by comparing the yields on Treasury Inflation-Protected Securities ("TIPS") and the yields on other comparable government security that is not linked to inflation. His analysis of this comparison for the years 2001 to 2007 shows an average difference ranging from a low of 1.70 percent in 2001 to a high of 2.90 percent in 2004. By averaging the annual averages, he determined an overall expected future inflation rate of 2.34 percent during the most recent 6.5 years.

He recommends that the Commission choose an inflation rate that is conservative and falls toward the low end of the historical data and the recent level of investor expectations concerning future inflation rates. Dr. Johnson recommends that the Commission use an inflation factor of 2 percent applied to the weighted average cost of capital, with a resulting fair rate of return of 5.60 percent. Applying the 5.6 percent FVROR to the FVRB results in an operating income of $1,132,278, [102] which requires a revenue decrease of approximately $263,931 from the gross revenues granted in Decision No. 68176.

Staff's Recommended Rate of Return

Staff's first alternative, using a zero cost component applied to the fair value portion of the capital structure is based upon Staff's recommendation that a zero cost rate is appropriate because that portion has not been financed by investors. Under this method, the overall fair value rate of return is 6.34 percent which when applied to the FVRB, results in a $7,734 downward revision to the revenue increase of $1,107,596 granted in Decision No. 68176. Staff does not recommend revising the Company's rates for such a small change.

Staff recommends its second alternative if the Commission finds that it is appropriate to apply an above-zero cost rate to the fair value increment of the capital structure. Mr. Parcell testified that from a financial perspective, it should not be necessary to apply a cost to the fair value increment of the capital structure, but that if the Commission chose to do so from a public policy perspective, he would recommend the rate be no larger than the real (i.e. after inflation is removed) risk-free rate of return. Using a 5.0 percent nominal risk-free rate (2007-2008 forecasts of U.S. Treasury securities) and removing the rate of inflation as measured by the Consumer Price Index ("CPI") of 2.5 percent, Mr. Parcell reaches a real risk-free rate of 2.5 percent. He explains that the real risk-free rate must be used because the investors in the Company are already receiving an inflation factor due to the inclusion of inflation in the FVRB, and it would be double-counting to also include the inflation components in the return to be applied to the FVRB increment. Mr. Parcell testified that any value between zero percent and 2.5 percent could be used as the cost rate on the

[102] This is approximately $162,060 less than the operating income of $1,294,338 that the Commission authorized in Decision No. 68176.

FVRB increment of the capital structure, but that anything above zero percent should be justified in policy considerations instead of pure economic or financial principles. For that reason, Mr. Parcell believes that the selection of an appropriate cost rate is within the Commission's discretion. He proposes a mid-point of the range, or 1.25 percent.

Under this method, the overall fair value rate of return is 6.54 percent, which when applied to the FVRB, results in a revenue requirement of $1,166,116, an increase of $58,520 over the revenues granted in Decision No. 68176. This alternative would produce a total amount to be recovered of $138,750, through a surcharge of 7.1 cents per thousand gallons, based upon gallons sold in 2007.[103]

In response to Mr. Bourassa's criticism that the 1.25 percent return on the FVRB increment hardly compensates investors for the fair value of their investment, Mr. Parcell responds that because Mr. Bourassa has made no independent analysis of what investors require for FVRB compensation, he has not provided any useful information that would discredit the 1.25 percent return.

Conclusion

As noted in Staff's Closing Brief, the Commission considers all the evidence and uses its expertise to analyze and reconcile that evidence in order to develop a reasonable resolution. The "Commission is not bound to adopt the specific recommendation of any particular expert, but instead may use its expertise to synthesize the evidence and arrive at a reasoned policy judgment."[104]

We find that the Company's proposed method inappropriately allows inflation to be reflected in both the WACC and in the FVRB, and that while the inflation is not necessarily "doubled," it is overstated. Although we believe that the cost of debt may reflect the effects of inflation, we are not convinced that the evidence presented in this proceeding is developed sufficiently to make that determination with certainty.[105] Accordingly, while we agree with RUCO that the WACC should be adjusted to remove the inflation component, we believe that the appropriate adjustment in this case is

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[103] These are the updated amounts from Staff's March 5, 2008, filing, assuming rate change in June 2008.

[104] Staff Closing Brief at 11, citing *Maine v. Norton*, 257 F.Supp.2d 357, 389 (D. Me. 203); *Citizens Tel. Co. v. Public Service Comm'n of Kentucky*, 247 S.W.2d 510, 514 (1952).

[105] Staff's witness Smith testified that based upon a comparison of two data sets, the treasury inflation protected securities and normal treasury debt of similar duration, he believes that inflation is a component of the cost of debt. Tr. at 331-32. Staff witness Parcell testified that he had not considered the issue until the day before, but that while it seemed logical, he had not run the numbers. Tr. at 364-65.

to adjust only the cost of equity component of the WACC. We also believe that Staff's method is an appropriate way to adjust the WACC associated with OCRB for use with the FVRB, as it is based upon sound economic and financial theory. Staff's method also supports the return that we adopt.

In making our determination of the appropriate rate of return, we have evaluated and weighed the following considerations: that the FVRB reflects a 50/50 weighting of OCRB and RCND; that the RCND proposed by the Company includes inflation; that the market-based models used to estimate equity are related to the utility's OCRB; that the Arizona Constitution requires the Commission to consider the fair value of the property; the Company's argument that the effects of inflation on regulated utilities can affect whether the utility earns its authorized return; our allowance of post-test-year adjustments to the Company's rate base in Decision No. 68176; our acceptance of the Company's proposed RCND values and method for determining FVRB; and the guidance provided by the Court of Appeals in its Remand Decision.

After consideration of all the testimony, evidence, and argument presented by the parties, and using RUCO's proposed method as modified herein, we find that a reasonable return on the Company's FVRB is 6.40 percent. Using the capital structure adopted in Decision No. 68176 of 41.27 percent debt and 58.73 percent equity, and applying the previously determined 5.1 percent cost of debt to the debt portion of the capital structure, results in a weighted cost of debt of 2.11 percent. Using the previously determined 9.3 percent cost of common equity and subtracting a 2 percent inflation factor[106] results in a 7.3 percent cost of equity not including inflation. Applying the 7.3 percent equity cost to the equity portion of the capital structure results in a weighted cost of equity excluding inflation of 4.29 percent. Adding the weighted cost of debt of 2.11 percent and the weighted cost of equity excluding inflation of 4.29 percent results in a total adjusted WACC of 6.40 percent, which we find is an appropriate rate of return on FVRB.

The Arizona Constitution states that the Commission has full power to, and shall, prescribe . . . just and reasonable rates and charges to be made and collected by public service corporations. As the United States Supreme Court said in *Duquesne Light*, the "economic judgments required in rate

[106] We agree with RUCO's witness Dr. Johnson that this inflation rate is conservative and falls toward the low end of the historical data.

proceedings are often hopelessly complex and do not admit of a single correct result."[107] Another way to test and analyze the reasonableness of a 6.40 percent FVROR is to compare it to the range of fair value rates of return recommended during the proceeding. Those recommendations ranged from a low of 5.6 percent to a high of 7.6 percent. The 6.40 percent adopted herein fits within that range and reflects our exercise of discretion in the ratemaking process. We find that the use of this FVROR will result in rates and charges that are just and reasonable.

ISSUE #3 Should the Commission authorize the recovery of rate case expense the Company asserts it has incurred as a result of its appeal from Decision No. 68176 and this Remand proceeding?

In this Remand proceeding, the Company requests that the Commission authorize recovery of $100,000 in rate case expense it claims to have incurred since October 2005 related to the appeal and the Remand proceeding. Mr. Bourassa testified that the expected costs are "at least $200,000" and that the Company is "seeking approximately one-half of the amount it expects to actually incur. The Company is willing to accept that amount to avoid further disputes on this issue."[108] In response to the Staff's recommendation to deny recovery, Mr. Bourassa testified that the amount of rate case expense included in Decision No. 68176 did not include the costs of appeal or a Remand proceeding, and that since the Company was requesting the additional rate case expense be recovered through a surcharge, there would be no change in the normalized level of rate case expense. The Company believes that refusal to award a reasonable amount of rate case expense for the appeal and Remand proceeding would be arbitrary and unfair. The Company also argues that the exclusion of rate cases from A.R.S. § 12-348 is logical when interpreted to mean that the Legislature was aware that utilities would likely recover the costs of a rate case as rate case expense. The Company points out that rate case expense is based on actual costs, not a "normalized" amount, and is annualized over a period of time that correlates with the utility's expected rate case cycle. According to the Company, the amount of rate case expense allowed in Decision No. 68176 is immaterial to the Company's request for rate case expenses incurred subsequent to that Decision.

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[107] *Duquesne Light*, 488 U.S. at 314.
[108] Ex. A-R4, Bourassa Rebuttal Testimony at 9.

Staff recommends that the Commission deny the Company's request for additional rate case expense, arguing that the Company is already recovering the normalized level of reasonable and prudent rate case expense through rates set in Decision No. 68176. Staff also points out that A.R.S. § 12-348 prohibits the Company from recovering attorneys' fees in a court action appealing rates set by the Commission and that the Commission's exercising its ratemaking authority to allow recovery of additional rate case expense may frustrate the legislative policy prohibiting recovery under A.R.S. § 12-348. In its Reply Brief, Staff indicates that it may be appropriate for the Company to seek recovery of its rate case expenses in its pending rate case, which has a test year ending 2006. Staff notes that this would provide the Company an opportunity to recover some of the expenses in the context of an audited rate case.

We find that some of the expenses associated with the appeal of Decision No. 68176 and this Remand proceeding might appropriately be recovered by the Company. However, the Company has not provided any documented evidence in this Remand proceeding that it has incurred and paid any such expenses or that the expenses were appropriate and reasonable. Accordingly, we will allow the Company to seek recovery of such expenses in its pending rate case, where the expenses and payment can be audited and verified and a determination can be made to their appropriateness and reasonableness. The Company will bear the burden to show that the expenses should be recoverable from ratepayers.

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Having considered the entire record herein and being fully advised in the premises, the Commission finds, concludes, and orders that:

FINDINGS OF FACT

1. Chaparral City is a public service corporation engaged in providing water utility service to approximately 12,000 customers located in the northeastern portion of the Phoenix metropolitan area, including the Town of Fountain Hills and a small portion of the City of Scottsdale, under authority granted by the Commission in Decision No. 41243 (April 20, 1971).

2. Chaparral City is an Arizona corporation wholly owned by American States Water Company, which is publicly traded on the New York Stock Exchange.

3. On August 24, 2004, Chaparral City filed an application requesting an increase in revenues of $1,797,182.

4. On September 30, 2005, the Commission issued Decision No. 68176 granting Chaparral City a rate increase of $1,107,596.

5. Decision No. 68176 found Chaparral City's FVRB to be $20,340,298 and a fair rate of return on FVRB to be 6.36 percent.

6. Chaparral City appealed Decision No. 68176 to the Arizona Court of Appeals, which ruled that the Commission did not comply with Article 15, §14, of the Arizona Constitution when the Commission set the rates based on original cost instead of the fair value of Chaparral City's property. The Court of Appeals also found that Chaparral City did not make a clear and convincing showing that the Commission's decisions regarding the methodologies the Commission used to determine the cost of equity were unlawful or unreasonable and therefore affirmed the Commission's methodologies used to determine the cost of equity. The Court of Appeals vacated the Commission's decision and remanded for further determination of Chaparral City's rates consistent with the Arizona Constitution.

7. The Commission conducted a Remand Hearing on January 28 and 29, 2008, and took evidence and heard testimony from witnesses on behalf of Chaparral City, RUCO, and Staff.

8. The parties filed Closing and Reply Briefs.

9. Chaparral City recommends that the Commission use the WACC determined in Decision No. 68176 of 7.6 percent as the rate of return on the FVRB of $20,340,298.

10. RUCO recommends that the Commission use the WACC determined in Decision No. 68176 of 7.6 percent, minus an inflation factor of 2 percent, to set a rate of return of 5.6 percent on the FVRB of $20,340,298.

11. Staff recommends that the Commission use a fair value capital structure to determine a WACC to be used as the rate of return on the FVRB of $20,340,298.

12. Staff's recommendation included two alternatives whereby the increment in the fair value capital structure that was not financed by capital would be assigned either a cost of zero (first alternative, rate of return 6.34 percent) or a real risk-free rate ranging between zero and 2.5 percent,

with Staff recommending the mid-point of 1.25 percent (second alternative, rate of return 6.54 percent).

13. The WACC of 7.6 percent determined in Decision No. 68176 was based upon the OCRB.

14. Because both the OCRB-based WACC and the FVRB include inflation, applying the WACC from Decision No. 68176 to the FVRB would over-compensate the Company for inflation.

15. The application of the OCRB weighted average cost of capital to the FVRB would produce an excessive return on FVRB and result in rates and charges that would not be just and reasonable.

16. There are many methods the Commission can use to determine an appropriate FVROR, including adjusting the WACC to exclude the effect of inflation in the cost of equity.

17. After consideration of all the issues and arguments raised by the parties, we find that a rate of return of 6.40 percent on the FVRB of $20,340,298 is reasonable and appropriate for Chaparral City. The 6.40 percent FVROR adopted herein falls within the range of recommendations in this proceeding and reflects our exercise of expertise and discretion in the ratemaking process.

18. Multiplying the $20,340,298 FVRB by the 6.40 percent FVROR produces required operating income of $1,301,779. This is $687,532 more than the Company's test-year adjusted operating income. Multiplying the deficiency by the gross revenue conversion factor of 1.6286 results in an increase in revenues of $1,119,739, or an 18.00 percent net increase over test-year adjusted revenues.

19. The revenue increase authorized herein is, on an annual basis, $12,143 more than was authorized in Decision No. 68176, and Chaparral City should be authorized to implement a surcharge designed to collect the current deficiency and the past revenue deficiency, with interest, over twelve months, through a charge to the commodity rate calculated using the number of gallons sold during 2007.

20. Chaparral City may seek recovery of its rate case expenses in its pending rate case, where the expenses and payment can be audited and verified and a determination can be made to their appropriateness and reasonableness. Chaparral City will bear the burden to show that the

expenses should be recoverable from ratepayers.

CONCLUSIONS OF LAW

1. Chaparral City is a public service corporation within the meaning of Article XV of the Arizona Constitution and A.R.S. §§ 40-250 and 40-251.

2. The Commission has jurisdiction over the Company and the subject matter of the application and this Remand Proceeding.

3. Notice of the Remand Hearing was provided in compliance with the Commission's requirements.

4. Chaparral City should be authorized to implement a surcharge in accordance with the discussion and findings herein.

5. The rate of return methodology adopted herein complies with the Arizona Constitution and the decision of the Court of Appeals.

6. Application of a 6.40 percent FVROR to the FVRB will result in rates and charges that are just and reasonable.

ORDER

IT IS THEREFORE ORDERED that Chaparral City Water Company, Inc. is hereby directed to file with Docket Control, as a compliance item in this docket, on or before August 1, 2008, a surcharge tariff in conformance with the findings and conclusions contained herein.

IT IS FURTHER ORDERED that the surcharge tariff shall be effective for all service provided on and after August 1, 2008.

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IT IS FURTHER ORDERED that Chaparral City may request recovery of its rate case expenses in the pending rate case matter, Docket No. W-02113A-07-0051.

IT IS FURTHER ORDERED that this Decision shall become effective immediately.

BY ORDER OF THE ARIZONA CORPORATION COMMISSION.

CHAIRMAN COMMISSIONER

COMMISSIONER COMMISSIONER COMMISSIONER

IN WITNESS WHEREOF, I, BRIAN C. McNEIL, Executive Director of the Arizona Corporation Commission, have hereunto set my hand and caused the official seal of the Commission to be affixed at the Capitol, in the City of Phoenix, this _____ day of _____, 2008.

_____
BRIAN C. McNEIL
EXECUTIVE DIRECTOR

DISSENT _____

DISSENT _____

SERVICE LIST FOR: CHAPARRAL CITY WATER COMPANY

DOCKET NO.: W-02113A-04-0616

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