2. Eliminate from the investors' effective required rate of return that portion which relates to the company's reinvestment of intrayear retained earnings.

3. Make the definition of the allowed rate of return consistent with the definition of rate base.

As it turned out, most of the discussion of the ratemaking rate in Order No. 442 focused on the adjustment for rate base considerations. (Objective 3) However, the discussion of the difference between effective and nominal rates indicates that the ratemaking rate also requires that the effective rate be converted to a nominal rate. (Objectives 1 and 2).

D. Arguments on Rehearing

The arguments of petitioners related to the ratemaking rate concept can be categorized as follows:

1. It is not fair for the Commission to adopt such a new concept as the ratemaking rate of return without giving parties notice and an opportunity to comment.

2. The Commission has not adequately explained and justified the basis for the ratemaking rate of return.

With regard to the latter arguments, the petitioners focused on the ratemaking rate adjustment to the effective rate solely as an adjustment for rate base considerations. Petitioners ignored or misunderstood that a portion of the ratemaking rate adjustment dealt with the conversion of the effective rate to a nominal rate.

E. Analysis

The 442 Effective Rate Model produces an estimate of the investors' effective required rate of return on common equity. This effective rate can be viewed as being composed of two components:

1. the dollar return investors expect from the firm (dividends and capital gains), *plus*.

2. the return investors expect from their own actions in reinvesting the quarterly dividends at the same effective rate.

What firms have to "pay out" to investors (or what investors require from the firm) is simply the effective rate less the return from reinvestment of dividends. The firm does not have to pay investors the income they receive from the reinvestment of dividends since investors produce this income by their own actions. Thus, at the least, the investors' effective required rate should be reduced by this dividend reinvestment income in developing the allowed rate of return. This is Objective 1 as described above.

Subtracting this reinvestment return component from the 442 Effective Rate Model results in the 420 Model.[3] This is an additional rationale for the 420 Model. In Order No. 420, the model was supported primarily as a compromise, as an average of two other models. 50 FR 21602 at 21305.

In Order No. 442, the Commission stated that the 420 Model was intended to be an estimate of the investors' nominal quarterly required rate of return.[4] It now appears that the 420 Model does not produce a nominal rate comparable to that discussed in Order No. 442. Nominal rates, as explained above, were distinguished from effective rates by their exclusion of both a reinvestment of intrayear dividends component and a reinvestment of intrayear retained earnings component. The 420 Model excludes only the first component.

Order No. 442 never addressed any separate rationale for excluding the second component—the reinvestment of retained earnings component—from the effective required rate. The rationale for adjusting the effective required rate for reinvestment of dividends is different from the rationale for adjusting for the reinvestment of retained earnings. The return component due to the former results from investors' own actions. In contrast, the return component due to the latter results from the utility's actions and is part of the return the utility pays out to the investor; it is part of the return that investors' expect/require from the utility. Based on our review of the reinvestment of retained earnings issue, it appears that what Order No. 442 referred to as an adjustment for the rate base definition (Objective 3) was really an adjustment for this reinvestment of retained earnings component (Objective 2).

In Order No. 442, the Commission referred to the need to make the rate of return consistent with the rate base definition. Different return allowances are obtained depending on whether the rate base is defined as a beginning of year, end of year, or some average for the test year. And the return component of the cost of service should not vary simply because of the way rate base is determined. It now appears that relating the ratemaking rate adjustment to rate base considerations may have been misleading or unnecessary.

It may have been misleading in the sense that, if a regulatory commission is using a rate base value other than an average for the test year, it might be more appropriate to adjust the rate base rather than the rate of return in order to obtain the correct value for the return component. For the FERC, this issue may be irrelevant since the Commission uses an average rate base for the test year.

It may have been unnecessary in that it now appears that just the exclusion of the dividend reinvestment component (Objective 1) and the exclusion of the reinvestment of retained earnings component (Objective 2) would have produced the same end result reached in Order No. 442. It seems that, because of the reinvestment of the intrayear retained earnings by the firm, it will always be able to pay out more and the shareholder will always get more than what the ratepayer paid in to the firm. In other words, the implication of this theory is that as long as the firm retains some of its earnings and earns a return on the intrayear retained earnings, the firm will always be able to realize a higher rate of return than the Commission allows.

On review, the notion that the firm has the opportunity to earn a higher rate of return than the Commission allows is the basis for the concept of the ratemaking rate adjustment. That is, the problem of determining the allowed rate of return has two parts. First, the determination of what investors require, or what the firm has to pay out as return. Second, the determination of what ratepayers have to pay in in order for the company to be able to meet its pay out requirements. The first part has to do with the traditional determination of the cost of common equity; the second with the notion of the ratemaking rate.

The process by which this difference in pay in and pay out occurs can be described as follows. The firm obtains its earnings throughout the year from its sales revenues, yet it is only obligated to pay a portion of these earnings out (as dividends) and at specific times during the year. For that portion of its earnings going ultimately to pay dividends, the firm can keep its earnings in an income yielding investment (like a bank account, or an investment in Treasury bills) until the day dividends have to be paid out and thereby earn more income. Similarly, during the course of the year, the firm can keep that portion of its earnings going to retained earnings in an income yielding investment and earn still more income. By both of these mechanisms, the firm would appear to have the opportunity to earn more than the rate that the Commission allows it, whatever that rate is based on.

To the extent that this concept of the ratemaking rate—i.e., that the "pay in" rate is different from the "pay out" rate—is valid, the Commission has some alternative ways of dealing with the issue. The investors' effective required rate could be adjusted beyond what is implied by going from the 442 Effective Rate Model to the 420 Model. For example, if the compounding of the average utility's intrayear earnings can be approximated by quarterly or monthly compounding at the effective required rate, the ratemaking rate may be estimated by the quarterly or monthly nominal required rates, respectively. (The ratemaking rate adopted in Order No. 442 is essentially the monthly nominal required rate.)

The Commission could deal with the issue through some other cost of service adjustment. This issue can be viewed in the context of cash working capital. The firm obtains revenues continuously in line with its provision of service. However, it has obligations to pay out a portion of the return component of its costs (dividends) only four times a year. In cash working capital parlance, this means the cash inflow "leads" the cash outflow and, on average, the firm has a cash balance which it can use to earn additional return. This analogy suggests that any potential overrecovery of costs due to the ratemaking rate concept described above can be handled by some adjustment to the cash working capital allowance in rate base.

Finally, the Commission could ignore the ratemaking rate issue in determining revenue requirements. This option could be argued on grounds such as (1) the return component of the cost of service is different from other costs and/or (2) the intrayear use of retained earnings is not something the Commission should be concerned about since it is investors' funds and they should be able to do whatever they want with them.

[3] *See* Attachment 1 for an algebraic derivation of the 420 Model from the 442 Effective Rate Model.

[4] *See* footnote 3 above.