UNITED STATES OF AMERICA 93 FERC ¶ 61,266
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 342

[Docket No. RM00-11-000]

Five-Year Review of Oil Pipeline Pricing Index

(Issued December 14, 2000)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Order Concluding Initial Five-year Review of the Oil Pipeline Pricing Index

SUMMARY: The Federal Energy Regulatory Commission (Commission) is issuing this final order concluding its five-year review of the oil pricing index, established in Order No. 561, Revisions to Oil Pipeline Regulations Pursuant to the Energy Policy Act of 1992, FERC Stats. & Regs. [Regs. Preambles, 1991-1996] ¶ 30,985 (1993). After consideration of all the initial and reply comments, the Commission has concluded that the PPI-1 index has reasonably approximated the actual cost changes in the oil pipeline industry during the preceding five year period, and that it should be continued for the subsequent five year period. At the end of this period, in July 2005, the Commission will once again review the index to determine whether it continues to measure adequately the cost changes in the oil pipeline industry.

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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: James J. Hoecker, Chairman;
William L. Massey, Linda Breathitt,
and Curt Hébert, Jr.

Five-Year Review of Oil Pipeline Pricing Index Docket No. RM00-11-000

ORDER CONCLUDING INITIAL FIVE-YEAR REVIEW OF THE OIL PIPELINE PRICING INDEX

(Issued December 14, 2000)

On July 27, 2000, the Commission issued a notice of inquiry (NOI) in this proceeding on its five-year review of the oil pricing index.[1] The oil pricing index was established in Order No. 561, Revisions to Oil Pipeline Regulations Pursuant to the Energy Policy Act of 1992.[2] The Commission invited comments regarding the results of its review of the Producer Price Index for Finished Goods minus one percent (PPI-1) as an index to measure actual cost changes in the oil pipeline industry.[3]

For the reasons appearing below, the Commission affirms that the PPI-1 index has closely approximated the actual cost changes in the oil pipeline industry as reported in FERC Form No. 6, and concludes that this index continues to satisfy the mandates of the Energy Policy Act of 1992.[4]

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[1]FERC Stats. & Regs. [Notices] ¶ 35,536 (2000).

[2] Revisions to Oil Pipeline Regulations Pursuant to the Energy Policy Act, FERC Stats. & Regs. [Regs. Preambles, 1991-1996] ¶ 30,985 (1993), 58 F.R. 58753 (Nov.4, 1993); order on reh'g, Order No. 561-A, FERC Stats. & Regs. [Regs Preambles, 1991-1996] ¶ 31,000 (1994), 59 F.R. 40243 (Aug.8, 1994), affirmed, Association of Oil Pipelines v. FERC, 83 F.3d 1424 (D.C. Cir. 1996).

[3]Excluding the Trans-Alaska Pipeline System (TAPS).

[4]42 U.S.C.A. 7172 note (West Supp. 1993).

Background

This is the first of the Commission's five-year reviews of the effectiveness of the oil price index established in Order No. 561. As the Commission stated in Order No. 561, the selection of the PPI-1 was not necessarily a choice for all time. The Commission recognized that its responsibilities, to both shippers and pipelines, required it to monitor the relationship between the change in the PPI-1 index and the actual cost changes experienced by the industry. The Commission undertook to review the effectiveness of the index every five years.

In Order No. 561-A, the Commission reaffirmed its decision to use the annual change in the PPI-1 index to establish rate ceilings under the indexing system, and renewed its commitment to review this decision every five years, beginning with the year 2000.[5] The Commission's adoption of the PPI-1was affirmed by the U.S. Court of Appeals for the District of Columbia Circuit on May 10, 1996.[6] Wide-ranging arguments were raised by both pipelines and shippers with respect to the Commission's determination to use the PPI-1 index as the proper index. For example, the Association of Oil Pipelines (AOPL) argued that the Gross Domestic Product - Implicit Price Deflator (GDP-IPD) should be used. The court determined that AOPL had failed to show why the Commission's rejection of the GDP-IPD in any way was arbitrary or capricious.[7] AOPL also challenged the Commission's decision to use the PPI-1 rather than simply the PPI. The court found that the Commission had ample evidence to support its determination.[8] Shippers, on the other hand, argued that the Commission erred in deciding to index all pipeline costs without adequately considering the option of selectively indexing only those costs driven by inflation. The court determined that the Commission had fully articulated reasoned grounds for its choice of a full rather than a selective indexing scheme.[9] As the Commission found in Order No. 561, application of

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[5]FERC Stats. & Regs. [Regs. Preambles, 1991-1996] ¶ 31,000 (1994) at 31,009.

[6]Association of Oil Pipelines v. FERC, 83 F.3d 1424 (1996).

[7]83 F.3d at 1435.

[8]Id.

[9]83 F.3d at 1436.

the PPI-1 to the total rate was a better measure of pipelines' cost experience.[10] Moreover, the Commission found that selective indexing would be more complex and difficult to administer.[11] Finally, the Commission stated that selective indexing could create incentives for pipelines to reduce their capital investments in pipelines.[12] The court upheld the Commission in all respects on its choice of an index and the application of that index to the total rate of the pipelines, and cited with approval the Commission's determination to review the index formula after five years' experience.[13]

Comments and Reply Comments

Comments on the NOI were filed by AOPL, an unincorporated trade association of 56 common carrier oil pipelines, whose member companies transport nearly 80 per cent of the crude oil and petroleum products that moves by pipeline in the United States; jointly by Sinclair Oil Corporation, Crown Central Petroleum Corporation, Lion Oil Company and Tesoro Petroleum Company, Inc. (Sinclair); the Canadian Association of Petroleum Producers, a trade association representing approximately 165 producers in Canada; Equilon Pipeline Company LLC (Equilon); Williams Pipeline Company (Williams); and Platte Pipe Line Company. Reply comments were filed by AOPL, Sinclair, the Canadian Association of Petroleum Producers and Alberta Department of Resource Development (jointly, CAPP), and by Colonial Pipeline Company (Colonial). The issues raised in these comments are discussed below.

Issues

Staff's study presented a review of the effectiveness of the change in the PPI-1 index[14] as an index to measure actual cost changes in the oil pipeline industry. The

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[10]Order No. 561 at 30,951-52.

[11]Id. at 30,952.

[12]Id.

[13]83 F.3d at 1437, 1445.

[14]The PPI represents the Producer Price Index for Finished Goods, also written PPI-FG. The PPI-FG is determined and issued by the Bureau of Labor Statistics, U.S. Department of Labor. Pursuant to 18 CFR Section 342.3(d)(2), "The index will be calculated by dividing the PPI-FG for the calendar year immediately preceding the index year by the previous calendar year's PPI-FG, and then subtracting 0.01." Multiplying the

(continued...)

Commission stated in the NOI, it appeared that, based on Staff's review, the changes in the PPI-1 index have closely approximated the changes in the reported cost data for the oil pipeline industry during the five-year period covered by this review. In light of Staff's review, the Commission elicited comments from interested parties on this review.

AOPL presented comments and a study and testimonial declaration by Dr. Alfred E. Kahn, and recommended that the Commission utilize the PPI, rather than PPI-1, as the index to govern oil pipeline rate changes in the next five years.[15] Sinclair, on the other hand, presented comments and a study by Professor F.M. Sherer, and concluded that the appropriate index should be PPI-2.[16]

Several of the commenters raised miscellaneous issues which are not relevant to the inquiry in this proceeding. Such miscellaneous issues include the extent of exceptions to the indexing methodology, constraints proposed in considering cost-of-service and market-based ratemaking, revision and simplification of complaint procedures, and the effectiveness of the index to deal with anticipated but unknown future cost changes in the industry. These issues are for other proceedings and will not be discussed herein.

The primary issues raised by the commenters and replies to those comments are set forth in detail, followed by the Commission's discussion and conclusions. In summary, those issues are:

1. Study Methodology Using Year-to Year Changes in Annual Weighted Average Cost

2. Adequacy of the Number of Pipelines Included in the Study

3. Adequacy of Costs Considered in Staff's Study

4. The Index of Choice

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[14](...continued)
rate ceiling on June 30 of the index year by the resulting number gives the rate ceiling for the year beginning the next day, July 1.

[15]AOPL Initial Comments, p.17. AOPL's recommendation was supported by Colonial, Equilon, Platte and Williams.

[16]Sinclair Reply Comments, p. 22.

Discussion

This discussion begins by reciting AOPL's initial comments, including the testimony of Dr. Alfred E. Kahn, and Sinclair's reply comments, including the testimony of Professor F.M. Sherer, regarding use of the PPI-1 as the oil pipeline index. All other parties who commented on the relevant issue made essentially the same points or made comments that were not relevant in our review of the adequacy of the index to reflect industry cost changes.[17] The initial comments of Sinclair are essentially the same as contained in its reply comments. Likewise, the reply comments of AOPL reflect its views expressed in its initial comments. Issues raised concerning the choice of the PPI-1 index and the timing of future review of the index in the initial and reply comments of CAPP, Colonial, Platte, Williams and Equilon are also discussed.

1. Study Methodology Using Year-to Year Changes in Annual Weighted Average Cost

In its review Staff examined the year-to-year percent changes in the annual weighted average cost of the oil pipeline industry, each pipeline firm's cost being weighted by its share of the total barrel-miles shipped during that year. Staff compared those changes with the year-to-year percent changes in the PPI-1 index. Staff made the comparison after adjusting the period during which the index changes occurred to match the period for which the cost data were available.[18] Staff then computed a simple average of those year-to-year percent changes and compared the two averages.

AOPL argues that Staff erred in focusing on the year-to-year changes in the annual weighted average cost of the entire pipeline industry. AOPL maintains this is the main error in Staff's analysis, accounting for most of the difference between AOPL's and Staff's results. AOPL asserts that the correct measure of costs to be examined is the (weighted or unweighted) average of the year-to-year changes in each pipeline firm's annual costs.[19] AOPL claims that the determination must be made between the two methods as to which provides the better measure of industry costs: change in the average

[17]Some of these comments are discussed in connection with Issue No. 4 below.

[18]Converting the PPI to the twelve-month period from July1 to June 30.

[19]AOPL Comments, p. 6.

of the entire industry, or the average of the cost changes of the individual members of the industry.[20] AOPL supports its position by presenting a hypothetical example in which each pipeline firm's costs increase from one year to the next but the industry weighted average cost goes down.[21]

AOPL further asserts that Staff should have used the geometric (also known as cumulative) average for calculating average annual rates of change rather than the arithmetic average. AOPL argues that what really matters is the change over the five-year period, represented by the geometric average, rather than the simple, or arithmetic, average of year-to-year changes. It supports this with a simple example showing how the two measures differ.[22]

In reply, Sinclair states that AOPL's study focuses mainly on individual company cost index changes that happened between two discrete years, from the 1994 base year to the 1999 terminal year, in effect ignoring everything that happened in the intervening years. Sinclair contends that by doing so, AOPL overlooks the multi-year averaging process that occurs under a price cap regulation scheme.[23] Sinclair claims that the AOPL study applies fixed original year (1994) barrel mileage for computing the barrel-mile-weighted averages for purposes or computing how costs have changed between 1994 and 1999. Sinclair states that as a result, AOPL ignores the cost savings that occur as volume moves away from high-cost pipelines and to lower-cost pipelines.[24] Further, Sinclair states that AOPL computes averages of the percentage changes of each individual company's costs from one time period to another, rather than computing the average changes in cost levels across the industry as the Commission Staff and Sinclair have done. Sinclair states that AOPL's approach places equal weight on the pipelines that experience large year-to-year cost changes as compared to pipelines with more modest cost changes and as a result AOPL accords relatively high weight to the pipelines that

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[20]Kahn Declaration , p. 8.

[21]Kahn Declaration, p. 7.

[22]AOPL Comments, p. 7.

[23]Sinclair Reply Comments, p. 7, Scherer Testimony pp. 5 and 9-11.

[24]Sinclair Reply Comments, pp. 7-8, Scherer Testimony pp. 5 and 11-12.

have been the least successful in controlling costs.[25] Sinclair claims that if it were to replicate AOPL's analysis of average changes in operating costs experienced by companies filing data in every year from 1994 to 1999, but exclude the extreme 5 percent of reporting companies and substitute 1999 weights in place of 1994 weights, the weighted average cost increase would be substantially closer to PPI-1 than to AOPL's suggested PPI.[26]

Discussion

AOPL argues that Staff's use of a weighted average of operating costs is not the appropriate measure of industry costs by which to evaluate the index's performance. The choice between Staff's method and AOPL's method depends on the meaning of "actual cost changes experienced by the oil pipeline industry."[27] Staff has interpreted this phrase to mean actual year-to-year changes in the industry's average operating cost of transporting one barrel of oil or oil products one mile.[28] Comparing this with the index changes emphasizes the index's efficiency-promoting (i.e., cost controlling) property, one of the characteristics the Commission cited as a benefit of using an indexing system.[29] In addition, an index that tracks reasonably well the industry's weighted average cost provides assurance that pipelines' prices to shippers are not rising faster or falling slower than the cost of shipping a substantial portion of all crude oil or products being transported. This protection of shippers from rate increases greater than a measure of the rate of inflation is another benefit of indexing cited by the Commission.[30]

AOPL has interpreted the objective of indexing to be choosing "the indexation formula that appears, on the basis of past experience, best to reflect the changes in costs

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[25]Sinclair Reply Comments, p. 8, Scherer Testimony pp. 5 & 13-14.

[26]Sinclair Reply Comments, p.9.

[27]Order No. 561 at 30,941, 30,950.

[28]Staff actually scaled its analysis to report average cost per thousand barrel- miles rather than one barrel-mile.

[29]Order No. 561 at 30,948 and n. 37.

[30]Order No. 561 at 30,948-49.

that individual pipeline companies might most reasonably be able to achieve."[31] Dr. Kahn also claims that the appropriate measure for indexing changes "is not the change in industry costs" despite the Commission's repeated use in Order No. 561 of the phrase "actual cost changes experienced by the oil pipeline industry."[32] This interpretation provides the basis for AOPL's assertion that the correct measure of changes in the industry costs considers central tendencies in year-to-year changes in the costs of individual firms.[33]

AOPL also objects to Staff's use of the average of year-to-year changes in costs and the PPI-1 index to compare the index changes with the cost changes. AOPL argues that the change between the first and last years of the period being examined is better for comparing the index to industry costs than is the average used by Staff. As Sinclair has pointed out, however, AOPL has used 1994 barrel-miles weights in computing the weighted average costs for 1999 that it uses to measure the change between the two years. In addition, Sinclair notes that AOPL's method is a fixed-weight approach formerly used in the calculation of the Consumer Price Index but recently discarded. This change occurred because the fixed-weight approach ignored consumer substitution from high-priced goods to low-priced goods, consequently overestimating the amount of price inflation in the economy.[34]

Upon reviewing the initial and reply comments, the Commission concludes that the methodology used by Staff as reflected in the NOI is correct. Staff's approach gives more weight to the volumes and distances products are shipped by the pipeline industry, whereas AOPL gives equal weight to the year-to-year cost changes of each individual firm, regardless of the volume and distances products are shipped. Indeed, as Sinclair noted, AOPL's approach, when applied to a larger set of firms, yields results that more reasonably approximate the PPI-1 than the PPI as the proper index to use in determining the annual price ceiling.

AOPL attempts to support its use of pipeline-specific cost experience, as opposed to industry-wide, barrel-mile, weighted average costs, with a hypothetical

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[31]AOPL Initial Comments, p.6; Kahn Declaration, p.8. Emphasis added.

[32]See, e.g., Order No. 561 at pages 30,941 and 30,950. Emphasis added.

[33]Id.

[34]Scherer Testimony, p. 12.

example. In AOPL's hypothetical, a high cost pipeline, which inexplicably has much higher volumes than a less costly competitor, finds that its business naturally migrates to the lower cost competitor. Thus, even though both companies' costs may increase somewhat over time, the industry-wide, barrel-mile weighted costs will decrease as more business is now flowing to the more efficient firm. This is simply the natural working of the market forces at play, and does not show any distortion resulting from Staff's methodology for calculating the industry's cost experience in support of the PPI-1 index choice. In fact, such behavior is exactly the type that an appropriately chosen index would be expected to encourage.

The Commission finds that the barrel-mile, weighted average cost approach, is fully consistent with determining an industry-wide, generally applicable index mechanism that is fair to both transporters and shippers alike. In fact, to use AOPL's approach would inappropriately skew the index by giving unreasonable weight to higher cost, less efficient transporters that move only a fraction of the industry-wide volumes. It is natural that such less efficient, more costly individual firms may experience higher costs than the vast majority of companies for which the general index, supported by a weighted-average barrel-mile analysis, is appropriate.[35]

By emphasizing cost changes of individual firms rather than industry average cost changes, AOPL would raise the price ceiling and thereby enable more high-cost pipelines to become or remain profitable. In its comments on Order No. 561, AOPL supported a more generous index than the PPI-1 on the grounds that it would cover even the largest changes in costs and allow even the highest cost pipelines to cover their costs. In response to this argument we noted that "[t]he role of an index is to accommodate normal cost changes. Its purpose is not to guarantee recovery of all costs at any time and in full, regardless of other circumstances. Even competitive markets do not do this ."[36]

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[35]Any outlier company, which experiences higher costs than the vast majority for whom the index is appropriate, always has the option, however, of filing for a cost of service increase to initiate a general rate proceeding, if it can demonstrate that there is a substantial divergence between the actual costs experienced by the pipeline and the indexed ceiling rate such that the indexed ceiling rate would preclude the pipeline from being able to charge a just and reasonable rate. See 18 CFR § 342.4 (2000)

[36]Order No. 561-A, p. 31,097. Footnote 25 on that page quotes Dr. Kahn as saying essentially the same thing in his original testimony in that case.

Sinclair, on the other hand, argued that the Commission should adopt the PPI-2 or at most PPI-1.5 as the index for determining oil pipeline rates for the next five years.[37] Support for that assertion appears weak, however. In fact, Sinclair's own expert, Professor Scherer, is lukewarm on the idea. Professor Sherer in fact concludes his initial statement by saying ," [A]lthough aggregate expense per barrel-mile fluctuated from year to year, in part because of changes in the volume of crude oil or product transported, the PPI(FG)-1 approach performed well in relating operators' costs to automatically authorized rate increases."[38] He then states, "From the industry's recent experience in raising pipeline throughput and labor productivity, an argument might be sustained for twisting the ratchet a bit tighter -- e.g., increasing the annual PPI offset from 1.0 to, e.g., 1.5 percentage points."[39] He provides no facts to support why the ratchet should be twisted tighter. In fact, in his reply comments, he repeats "the conclusion of my previous statement – that the PPI-1 approach performed well in relating operators' costs to automatically authorized rate increases."[40] Sinclair therefore does not have a sufficient basis for increasing the -1 factor to -1.5 or -2. Therefore, we conclude that the study methodology contained in the Staff's review is appropriate.

2. Adequacy of the Number of Pipelines Included in the Study

Staff's review uses as much information as possible from the available data based on FERC Form No. 6. Data were unavailable for some firms in some years. For example, a missing barrel-miles report for a particular firm in one year would drop that firm out of the data set for that year. However, Staff included that firm in its computations for each year containing valid data for the firm. As a result, Staff's data set contained a varying number of firms during the years 1994 through 1999.

AOPL argues that Staff, in its review, should not use pipeline firms for which data were available for some years and missing for others. AOPL limited its analysis to

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[37]See Sinclair Initial Comments, p. 37.

[38]Scherer Initial Testimony, p. 16.

[39]Id.

[40]Sherer Further Testimony, p. 25.

pipeline firms for which data were available for the entire period being examined.[41] AOPL asserts that Staff's review fails to account for the possibility of outliers, namely, pipeline firms whose costs or cost changes are much too low or much too high because of some anomaly, such as a reporting error, an extraordinary expense or a shift of costs from one year to the next. AOPL adjusts its data set (year-to-year changes in each individual firm's cost) to account for possible outliers by using both the middle 80 percent and the middle 50 percent of pipeline firms (excluding the 10 percent and 25 percent, respectively, of pipelines having the largest cost changes and the 10 percent and 25 percent, respectively, of pipelines having the smallest cost changes).[42]

Sinclair asserts in reply that because AOPL's study is based entirely on those companies that filed Form No. 6 data in every single year from 1994 to 1999, its data base is seriously flawed.[43] Sinclair states that AOPL's database does not include previously existing companies that merged into other companies or new companies that have come about as a result of mergers or sell-offs. Sinclair states that the companies that disappeared as a result of a merger were smaller higher cost operators that were not included in the database until after the merger as part of a pipeline that existed over the entire 1994-1999 period. As a result, Sinclair contends that this overstates the weighted average change experienced by post-merger pipelines when compared to the same pipelines before the merger. Sinclair states that pipelines carrying 97.8 percent of pre-merger barrel-mile traffic acquired pre-merger companies with costs 4.26 times of the acquiring pipeline companies, resulting in the acquiring companies' post-merger barrel-mile weighted costs increasing 7.2 percent.[44]

Sinclair contends that the AOPL study suffers from another major flaw in that AOPL's conclusions regarding changes in operating costs are based on companies that transported as little as 67 percent of the total miles transported by the industry in 1999.

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[41]AOPL Comments, p. 7.

[42]Kahn Declaration, pp. 11-12.

[43]Sinclair Reply Comments, pp. 5-6.

[44]Sinclair Reply Comments, p. 6, Scherer Testimony pp. 4-5 and 7.

Sinclair states that this is the result of AOPL excluding 50 percent of the industry from its study.[45]

Sinclair states that it replicated AOPL's analysis with variations in sample size and barrel-mile coverage to show the sensitivity of the AOPL study to these variables and how with minor changes in these variables AOPL's methodology produces operating cost changes that are far closer to PPI-1 than to PPI. In the first of three computations, Sinclair states that it followed AOPL and used the average changes in operating costs experienced by companies filing data in every year from 1994 to 1999, but excluded only the extreme 5 percent of reporting companies and substituted 1999 weights in place of 1994 weights. As a result, 89.8 percent of the barrel miles transported by the industry in 1999 were included. The study resulted in a weighted average annual percentage change in operating costs of 0.28 percent. Sinclair contends this result is substantially closer to the PPI-1 (0.17 percent) than to the PPI (1.17 percent).[46]

In its second analysis, Sinclair used all companies that reported data in both 1994 and 1999, added Unocal Pipeline Company (Unocal) and Exxon Pipeline Company (Exxon) to its database because both companies conducted much of their business in the continental U.S. in addition to Alaska (and therefore were not subject to the TAPS exclusion), and used 100 percent of the companies rather than 95 percent. This analysis captures 94.2 percent of the barrel-miles and results in a weighted average annual percentage change in operating costs of 0.19 percent.[47] Sinclair's third analysis, was the same as its second except for omitting the 5 percent most extreme values. This included 93.7 percent of the barrel miles and resulted in a weighted average annual percentage change in operating costs of 0.22 percent.[48]

Discussion

In its review, Staff considered all firms having valid data for at least one year during 1994 through 1999. The resulting data set differs from that used by AOPL in

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[45]Sinclair Reply Comments, pp. 8-9.

[46]Sinclair Reply Comments, pp. 9-10.

[47]Sinclair Reply Comments, p. 10.

[48]Sinclair Reply Comments, pp.10-11.

two important ways. First, it uses much more of the information available from the entire Oil Pipeline Research Institute (OPRI)[49] data set than does AOPL's. Second, the number of firms whose costs are used varies from year to year. AOPL criticizes Staff for including firms that do not have cost-per-barrel-mile figures for every year from 1994 through 1999.

AOPL's concern with Staff's use of firms for whom cost data are not reported in all years between 1994 and 1999 inclusive is misplaced. Exclusion of a number of firms who are absent in one or more years is ignoring valuable information. As Sinclair has noted, AOPL has failed to account for mergers, spin-offs and new entrants during the period. This may lead, for example, to an existing firm's costs being ignored prior to its acquisition by another firm, the consequence being that industry average costs may appear to change when in fact they have not. Regardless, the exclusion of firms biases upward AOPL's reported cost changes.

AOPL has ignored information in a second way. So as to avoid being influenced by outliers (data that are extreme and thus may unduly affect the outcome), after AOPL has limited its data set as described above, it limits its review to the "middle fifty percent" and the "middle eighty percent" of its sample by excluding the "upper and lower" observations.[50] AOPL apparently did so symmetrically, removing as many firms from the upper side of the distribution as from the lower. As we describe below, narrowing the data set as AOPL has done and using its cost-change method dramatically increases the resultant cost changes from those determined by using a complete or nearly complete data set.

AOPL's own work suggests that as more and more of those omitted observations are included, the weighted-average change in operating cost declines.[51] Sinclair confirms that decline by expanding the set of observations to include ninety-five percent of the appropriate firms and finding cost changes much closer to the changes in PPI-1 than in PPI.[52]

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[49]See NOI at 35,765, n. 16.

[50]Kahn, Declaration, p. 12.

[51]Kahn, Declaration, Table 4.

[52]Sinclair Reply Comments, pp.10-11.

Dropping outliers from a data distribution is a common technique to deal with the possible distortion they might impart to measures of its central tendency. The median of a data distribution is unchanged by dropping the same number of observations from the high end of the distribution as from the low end. Looking at the median, then, suggests that increasing or decreasing the number of outliers has little effect on the information available from the data set. In this case, however, the information available from the narrowed distribution varies substantially with the number of observations that are discarded as outliers.

In its analysis presented in the NOI, Staff excluded TAPS pipelines from its data set, including pipeline activity of Exxon and Unocal in the lower forty-eight states. To account for this omission, Staff included the operating costs and barrel-miles for those two companies in the contiguous forty-eight states and recalculated its results. The only resultant change appeared in the industry average cost per barrel-mile, which rose slightly from -0.47 percent to -0.43 percent.

Staff has redone its analysis using AOPL's method of excluding observations from the analysis on a data set enlarged to include every firm for which two consecutive years of cost data appeared at least once. Staff considered four cases: the entire distribution of changes for each of the five two-year periods, the middle 90 percent, the middle 80 percent and the middle 50 percent of the five distributions. These four cases provide two significant results regarding the effects of narrowing the data sets under consideration. First, reducing the initial data set to only those firms present in all years causes the weighted average of cumulative cost changes to increase. Second, as the number of observations dropped from the available distribution increases (i.e., the number of observations remaining for analysis decreases), the weighted average of cumulative cost changes increases. This effect is particularly strong as the observations available for analysis decline from 90 percent to 80 percent of all observations, although AOPL's initial comments demonstrate this for the change from 80 percent to 50 percent.[53]

We are persuaded that taking full advantage of the available information is the proper path to take. Narrowing the set of observations may be appropriate if it is not possible to quantify the entire population in the analysis, so that a sample must be drawn to make the needed calculations. For example, the pollution levels in a contaminated landfill site are determined through sampling, not by analyzing every cubic yard of dirt in the landfill. In the present case, however, we are not required to sample. We can

[53]Kahn Declaration, Table 4, rows (1) and (5), column (d).

work with the complete data set without sampling. Using all available data is consistent with Order No. 561 to review the experience of the entire oil pipeline industry and not limit the review to some portion of it. In addition, the systematic changes that arise from narrowing the data set are troubling. We see no compelling reason to engage in a practice that is unnecessary and appears not to be neutral in its effect on our review.

3. Adequacy of Costs Considered in Staff's Review

In completing its review of historical changes in industry costs, the Staff used operating expenses as reported by pipelines in FERC Form No. 6.[54] Operating expenses consist of operations expenses (i.e., salaries and wages, supplies and expenses, outside services, operating fuel and power, and oil losses and shortages); maintenance expenses (i.e, salaries and wages, supplies and expenses, outside services, and maintenance materials); and general expenses (i.e., salaries and wages, supplies and expenses, outside services, rentals, depreciation and amortization, pensions and benefits, insurance, casualty and other losses and pipeline taxes). Staff used these costs in its review because they include both operating expenses incurred during the relevant year and charges for amortization and depreciation for that year.[55]

AOPL points out that the data Staff uses are operating costs as reported in FERC Form No. 6, which includes depreciation but excludes other capital costs, especially return on investment and income taxes. AOPL argues that this is an important omission.[56]

Sinclair argues that the AOPL study computes a new index of costs that include not only operating expenses as defined in FERC Form No. 6, but also the current year's net additions to the depreciated book value of plant and equipment. Sinclair contends this approach violates generally accepted accounting principles.[57]

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[54]Operating expenses were taken from FERC Form No. 6, page 304, line 22, column m.

[55]NOI at 35,765.

[56]AOPL Comments, p. 8.

[57]Sinclair Reply Comments, p. 8, Scherer Testimony pp. 5 and 16-17.

Discussion

AOPL contends that Staff should have recognized return on investment and income taxes. AOPL itself, however, did not include a cost component that was associated with return on investment and income taxes. Rather AOPL's witness Dr. Kahn used an alternate method to approximate the costs associated with return on investment and income taxes. To account for these two components of cost, Dr. Kahn calculated the change in the net plant account for petroleum pipelines (i.e., computing the change in carrier property less accrued depreciation). This computation was used in addition to the change in operating costs to arrive at the change in costs from one year to another. Neither AOPL nor Dr. Kahn support why using the change in net plant would approximate an oil pipeline's cost associated with return on investment and income taxes.

Order No. 561 required that the FERC Form No. 6 information be used to determine the cost changes experienced by the industry. However, FERC Form No. 6 does not include any cost figures associated with a pipeline's return on investment and income taxes. A pipeline's cost-of-service is made up of costs associated with operation, maintenance, depreciation and amortization, taxes, and return on rate base of which undepreciated value of carrier plant, or net plant, is the major component. However, only operation and maintenance and general expense (which includes depreciation and amortization) are included in FERC Form No. 6. AOPL proposes to approximate the other two cost-of-service items by measuring the change in net plant. Unlike the four cost-of-service items, net plant represents an asset account rather than an expense account item.

AOPL recognizes that depreciation and amortization is a measure of capital costs. The amortization and depreciation amounts listed in FERC Form No. 6 are based upon the carrier property used by Dr. Kahn in his calculation to approximate return on investment and taxes. As a result, an increase in net plant from one year to another should be matched by an increase in the depreciation expense and amortization associated on that plant. Likewise a decrease in net plant from one year to the next should be matched by a decrease in depreciation expense and amortization associated on that plant. Net plant is also the main component used to determine a pipeline's rate base that is used to compute return and taxes associated with return. As a result, an increase or decrease in a company's net plant would be reflected in the return on investment and associated taxes. Thus, depreciation expense and amortization, return, and taxes all measure a pipeline's capital investment. All three of these capital cost components differ from net plant in that: (1) they represent an expense amount rather than an asset amount, and (2) each represents only a fraction of the amounts represented by net plant. Depreciation and amortization expense represents the portion of depreciable assets

allocated to expense each year. This allocation process is done over the estimated service lives of assets. Return is the cost associated with a pipeline's investment in rate base, of which net plant is the major component. Return is derived by multiplying rate base by a rate of return expressed as a percentage. Taxes are computed based upon the return.

The Commission is not persuaded by AOPL's arguments. The Commission finds that AOPL has not supported why a change in a pipeline's net plant can approximate a change in costs associated with return on investment and income taxes. Further, the Commission does not believe it appropriate to consider a pipeline's change in net plant from one year to another as a reasonable approximation of the change in costs associated with return on investment and income taxes. As discussed above the three capital cost components associated with net plant represent a small portion of this asset account. Thus, including net plant in an equation to determine a change in pipeline costs could unfairly weight any change in the capital portion of a pipeline's total costs. Therefore, the Commission finds that by using FERC Form No. 6 reported costs for operation and maintenance expenses (including depreciation expense), the majority of the dollars associated with a pipeline's cost-of-service components are being captured for the determination of the change in costs from year to year. This represents a more reasonable method than trying to approximate return and related income taxes based upon changes in net plant.

4. The Index of Choice

CAPP observes that the Energy Policy Act of 1992 required the Commission to establish a simplified and generally applicable ratemaking methodology for oil pipelines, consistent with the just and reasonable standards of the Interstate Commerce Act (ICA).[58] CAPP recognizes that to achieve this simplicity requires some tradeoff with accuracy. CAPP argues that a simple aggregate index would not be expected to be as accurate as a more detailed index that closely matched and tracked prices and costs on a component by component basis. CAPP concludes by stating that if a "simple" index is required, the PPI-based index is the most all-encompassing, simplest index available.[59]

CAPP states, however, that it has concerns regarding the "general applicability" of a PPI-based index. CAPP questions whether one simple index can be "generally applicable" when the pipeline industry does not have a normal distribution of companies

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[58]49 U.S.C. app. 1 (1988).

[59]CAPP Reply Comments, pp.16-17.

in terms of size and performance, that is, the industry structure is very concentrated by its representation of a small number of very large firms.[60] CAPP suggests that the Commission review its constraint of having the same index for all pipelines. That is, the Commission could retain the same simple PPI-base index, but vary the reduction factor according to two or three broad industry groupings, to make the index more "generally applicable."[61]

CAPP asserts that any index-to-actual cost differences, or regulatory errors, should be borne by the party that also receives the biggest benefit - - in this case, the pipeline companies. CAPP contends the index should err on the side that results in the pipelines undercharging, in order to ensure the users of the pipelines do not bear a disproportionate share of the regulatory cost burden.[62]

CAPP argues that since a pipeline's cost structure is not fully impacted by inflation, the cost base should not be fully indexed to inflation. CAPP also argues that an index approach can instill incentives to capture significant gains and costs reductions and these savings need to be reflected in rates. CAPP suggests that reducing the price index by a factor can be a mechanism to help keep rates in-line with underlying costs, without jeopardizing the underlying rationale or effect of the index methodology.[63]

CAPP asserts that a five-year period is too short to compute a trend analysis that is statistically sound and that provides conclusive findings. CAPP concludes by saying that any historical correlations or comparisons of pipeline costs and the PPI are as likely to reflect random coincidence as they are to reflect a statistically significant relationship. CAPP also expresses a concern that small differences can have significant absolute impacts since the value and volume of crude oil transported through oil pipelines is huge. CAPP suggests an alternative method for assessing the appropriateness of the PPI, i.e.,

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[60]CAPP states it has not conducted an in-depth review of the numerous pipelines that file FERC Form No. 6. It states that it conducted a review of aggregated data reported annually in the Oil & Gas Journal. CAPP Reply Comments, pp. 12-13.

[61]CAPP Reply Comments, pp. 15-20.

[62]CAPP Reply Comments, p.10.

[63]CAPP Initial Comments, p. 8.

Commission review of the underlying components and definitions of various indexes available for comparison with the components of pipeline operating costs.[64]

CAPP claims pipeline companies have experienced significant cost savings under deregulation but asserts the cost-savings have not been shared with the producer/shippers of these pipelines. CAPP suggests the Commission consider introducing a one-time adjustment to ensure that, over the next five years, rates will continue to reflect a pipeline's underlying cost structure and remain just and reasonable.[65]

Platte contends that the PPI-1 index has failed to track changes in its individual operating costs over the past five years. Because of future anticipated costs, Platte argues that the PPI alone would be better than PPI-1, which it asserts has failed to adequately track pipeline cost changes during the past five years. It therefore urges the Commission to adopt "the PPI index proposed by AOPL."[66]

Williams suggests that the Commission revisit the propriety of the index resulting from this five-year review after a period of three years because of the possibility that pipelines' cost will increase significantly in the next two or three years as measures are taken to mitigate health, safety and environmental risks and to comply with new laws and regulations.[67] Colonial also urges the Commission to consider the high probability "that pipeline costs will increase more rapidly in the course of the next five years because of reliabililty and safety issues."[68]

Equilon requests that an interim review of the index be performed prior to the 2005 review to determine whether the index has resulted in a revenue stream that has kept pace with increasing industry costs. In the absence of an interim review of the index, Equilon

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[64]CAPP Initial Comments, pp. 6-7.

[65]CAPP Reply Comments, p. 20.

[66]Platte Initial Comments, pp. 1-2.

[67]Williams Initial Comments, p. 3.

[68]Colonial Reply Comments, p. 1.

requests that a surcharge option be made available if the cost impact of pipeline safety legislation is both significant and pervasive.[69]

Discussion

We will not adopt the changes in the indexing methodology suggested by CAPP since similar issues were previously considered in the context of the proceeding which resulted in Order No. 561. Nor, as discussed above, will we adopt AOPL's and Platte's recommendation of substituting PPI for PPI-1. In Order No. 561, we recognized that it is inevitable that an indexing system will result in some divergence between the actual costs changes experienced by individual pipelines and the rate changes permitted by the index. This is because the indexing system utilizes average, economy-wide costs rather than pipeline specific costs to establish rate ceilings. [70]

In adopting the indexing methodology, the Commission established "fail-safe" procedures and exceptions to maintain a proper balance between the interests of pipelines and shippers under the just and reasonable standard of the ICA.. The Commission adopted a comprehensive scheme which includes cost-of-service and settlement alternatives. A procedure was established for shippers to challenge rate changes that, while in compliance with applicable ceilings, are so substantially in excess of actual costs as to be unjust and unreasonable.[71] In addition, a shipper has the ability to file a complaint when it believes a pipeline's rates no longer meet the just and reasonable standard of the ICA.

The Commission in Order No. 561 rejected a suggestion that the index be applied to specific components of a rate because it could cause perverse and unintended consequences. The Commission concluded this would be complex and difficult to administer.[72] In this proceeding, CAPP raises the same issue by suggesting that the index

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[69]Equilon Initial Comments, p. 2.

[70]Order No. 561 at 30,949.

[71]Order No. 561-A at 31,101.

[72]Order No. 561 at 30,952. For example, the Commission stated it would likely require substantial revisions, and perhaps additions, to the Commission's regulations to identify and monitor those pipeline accounts that would be subject to the index, and those that would not. The additional work this would cause, to both the Commission and the industry, would undercut the policy of the Energy Policy Act of 1992, which is to reduce,

(continued...)

be applied to selected cost components, those subject to inflation. For the reasons we stated in Order No. 561, we will not adopt CAPP's suggestion. CAPP suggests varying the reduction factor according to two or more industry groupings. This suggestion runs counter to the mandate of the Energy Policy Act of 1992 to establish a simplified and generally applicable ratemaking methodology for oil pipelines and we will not adopt it. Moreover, it would be complex and administratively burdensome. This would require selecting appropriate classification criteria for establishing groups, monitoring pipelines by category to determine into which group each pipeline falls each year, maintaining records on what reduction factor each pipeline is subject to in a given index year, and determining whether a pipeline's maximum ceiling rate comports with the requirements of the applicable index reduction factor. Use of different index reductions for different pipelines may provide an incentive for a pipeline to ensure that it would be placed in an industry group that produced the most favorable increase or smallest reduction in its rate ceiling.

Finally, we decline to adopt CAPP's suggestion that we require a one-time adjustment to ensure that rates over the next five years continue to reflect pipelines' costs. The purpose of our indexing methodology is to permit adjustment to ceiling rates based on historical not anticipated cost changes over some future period.

Similarly, we decline to adopt Equilon's suggestion that we implement a surcharge to cover anticipated environmental and safety costs. A pipeline company has the option of making a cost-of-service filing pursuant to 18 CFR §§ 342 and 346 upon showing that there is a substantial divergence between the actual costs experienced by the pipeline and the rate resulting from application of the index. The Commission's cost-of-service filing requirements provide an appropriate mechanism for pipelines to seek recovery in the event such costs are incurred. Conversely, a shipper has adequate protection during the five-year period because it can challenge a pipeline's indexed rate as excessive.

CAPP suggests that a review period of greater than five years is necessary to complete "a trend analysis that is statistically sound that provides conclusive results." On the other hand, Williams and Equilon suggest that the next review of the index be done in less than five years. Based on the experience gained in completing this five-year review,

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[72](...continued)
not increase, regulatory burdens.

the Commission concludes that five years is a reasonable period over which to complete an assessment of the performance of the index and achieves a reasonable balance between the interests of pipelines and shippers. A pipeline has the opportunity to make a cost-of-service filing within the five-year period if it believes its index rate is not sufficient.

Conclusion

After consideration of all the initial and reply comments, for the reasons set forth above, the Commission concludes that the PPI-1 index has reasonably approximated the actual cost changes in the oil pipeline industry during the preceding five year period, and that it should be continued for the subsequent five year period. At the end of this period, in July 2005, the Commission will once again review the index to determine whether it continues to measure adequately the cost changes in the oil pipeline industry.

The Commission orders:

The initial five-year review of the oil pipeline pricing index is concluded.

By the Commission.

(S E A L)

David P. Boergers,
Secretary.