

Kuparuk Transportation Company
Initial Decision
45 FERC ¶ 63,006 (1988)

This proceeding involved Commission review of the lawfulness of rates charged for the transportation of crude oil by Kuparuk Transportation Company (Kuparuk) on the North Slope of Alaska. The Presiding Administrative Law Judge (ALJ) issued his Initial Decision on October 26, 1988. (Kuparuk Transportation Company, 45 FERC ¶ 63,006).

The ALJ stated that the fundamental issue in this proceeding was whether oil pipelines generally, and Kuparuk specifically, had special characteristics which required the application of ratemaking principles different than those used to regulate natural gas pipelines and electric utilities. (*Id.* at 65,042). Although all parties agreed that oil pipelines should receive unique treatment in those areas required in Opinion Nos. 154-B and C, the essential dispute in most issues concerned whether an oil pipeline should receive unique treatment in all areas of ratemaking. Kuparuk argued for treatment different than other regulated pipelines and electric utilities now receive. The Commission Trial Staff, the State of Alaska, and Arctic Slope Regional Corporation urged the same treatment as applied to the natural gas pipelines and electric utilities. The ALJ determined that the regulatory methodology set out in Opinion Nos. 154-B (31 FERC ¶ 61,377 (1985)) and 154-C (33 FERC ¶ 61,327 (1985)) applied to this proceeding to the extent that Kuparuk is an oil pipeline and should have oil pipeline regulatory rules applied to it, where required. However, the ALJ also found that the Commission has not otherwise established a different regulatory framework for oil pipelines. (45 FERC ¶ 63,006 at 65,044).

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notwithstanding it is not best from an environmental standpoint, remains open. Also available to the Commission is the option of certificating more than one of the applicants—or all of them—and permitting market forces to decide which one or more will ultimately construct a pipeline. Finally, the Commission may, with fidelity to its environmental obligations, decide that the EOR market would be best served by continuing the *status quo*, and permitting the current intrastate pipeline monopoly to persist.

Another significant thing that emerges from this phase of the case is that the Commission has before it a Final Environmental Impact Statement that is sufficient to satisfy its obligations under the National Environmental Policy Act to examine certain aspects of the Mojave and Kern River applications. The evidence in this exhaustive record tends to support the conclusions reached in that FEIS.

[¶ 63,006]

Kuparuk Transportation Company, Docket Nos. IS85-9-000 and OR85-1-000

Initial Decision

(Issued October 26, 1988)

Paul J. Fitzpatrick, Presiding Administrative Law Judge.

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Appearances

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O. Yale Lewis, John W. Phillips and William W. Becker on behalf of Artic Slope Regional Corporation

Terry W. Bird on behalf of Alaska Public Utilities Commission

Keith McCrea and Paul Forshay on behalf of Sohio Alaska Transportation Company

William A. Hutchins on behalf of Phillips Pipe Line Company

Lawrence A. Miller and Patrick H. Corcoran on behalf of Association of Oil Pipe Lines

Dennis H. Melvin on behalf of the Federal Energy Regulatory Commission Staff

I. Background

This proceeding involves a review of the justness and reasonableness of the rates charged for transportation of crude oil by the common carrier, Kuparuk Transportation Company (KTC), under the Commission-developed criteria in Opinion Nos. 154-B and 154-C, *Williams Pipe Line Co.*, 31 FERC ¶ 61,377, *reh'g granted in part and denied in part*, 33 FERC ¶ 61,327 (1985). KTC is a partnership made up of Kuparuk Pipeline Company (KPC), BP Alaska Pipelines Inc., Sohio Alaska Pipeline Company, and Unocal Kuparuk (formerly Union Kuparuk) Pipeline Company. KTC owns and operates a pipeline system that transports crude petroleum from the Kuparuk River Unit (KRU) oil field on the North Slope of Alaska to Pump Station No. 1 of the Trans-Alaska Pipeline System (TAPS). Today, the facilities include a 24-inch pipeline, above-ground supporting structures (vertical support members or VSMs), at least two central production facilities (CPFs), a 12-inch and 10-inch pipeline system between the CPFs and connections with the West Sak and Milne Point oil fields. The pipeline system runs approximately 37 miles, virtually all of which is above-ground.

Prior to the start-up of the 24-inch KTC pipeline system, crude petroleum was transported from the KRU through a 16-inch pipeline then owned by KPC, a wholly owned subsidiary of Atlantic Richfield. The 16-inch pipeline system commenced operation in December, 1981, by transporting up to 138,000 barrels of oil per day from the KRU to TAPS.

In the summer of 1981, it became evident that available throughput would likely exceed the capacity of the 16-inch line by late 1984 or 1985. Plans were therefore made to add a new 24-inch pipeline parallel to the 16-inch pipeline, both resting on T-shaped vertical support members. KPC sought partners for a joint venture to construct and operate a 24-inch pipeline resulting in subsidiaries of British Petroleum, the Standard Company of Ohio, Atlantic Richfield and Union Oil Company of California signing a Partnership Agreement which formed KTC.

Full construction of the 24-inch pipeline system began in the spring of 1983, and KTC commenced operations on October 6, 1984. Upon start-up of the 24-inch system, KPC sold the 16-inch pipeline to Oliktok Pipeline Company (Oliktok). KTC purchased the VSMs and CPFs from KPC, KPC having used them in connection with the 16-inch pipeline. Oliktok rents space on the KTC-owned VSMs. The acquired facilities cost \$57.9 million while the newly constructed facilities cost \$63.7 million for a total gross carrier property in service amount of \$121.6 million at the commencement of operations.

Since the start-up of operations, the 24-inch pipeline system has operated with very few interruptions in service. For example, during 1985, there were only three slow-down incidents and two shut-down incidents. Exh. KTC 3-5. Throughput has been continuously increasing since start-up, having risen from approxi-

mately 162,000 barrels per day during 1984 to 274,000 barrels per day during 1986.

II. Procedural History

Before the 24-inch pipeline became operational, KTC filed with the FERC an "Adoption Notice" dated October 3, 1984, adopting KPC's original tariff of 69 cents per barrel. On December 4, 1984, KTC filed revised tariff sheets in Docket No. IS85-9-000 which reduced the rate to 61 cents per barrel for movements through the KTC line to Pump Station No. 1 and established a new discount rate of 55 cents per barrel for shipments from the West Sak connection to TAPS. Under KTC's tariff, shipments from all origin points from which no rate is stated are charged the rate in effect from the next most distant point, and thus, shipments from the Milne Point connection, which is downstream from the West Sak connection, were charged the same rate as West Sak shipments from their commencement in late 1985 until their suspension.¹ KTC filed this revised tariff prior to the June 28, 1985 issuance of Opinion No. 154-B.

On January 3, 1985, in Docket No. IS85-9-000, the State of Alaska ("the State") protested the changed rate and sought an investigation of the revised tariff, and further, filed in Docket No. OR85-1-000 a complaint and petition for investigation of the existing 69 cent per barrel rate that had been in effect from October 3, 1984 through January 14, 1985. After consideration of the State's protest, the FERC's Oil Pipeline Board suspended the proposed rate change for one day, allowed it to go into effect subject to refund, and instituted an investigation. Subsequently, by order issued June 5, 1985, the Commission set for hearing the complaint filed by the State concerning the 69 cents per barrel rate and at the same time, consolidated the Docket No. OR85-1-000 complaint proceeding with the already established investigation in Docket No. IS85-9-000. 31 FERC ¶ 61,269 (1985).

The intervenors in this proceeding include the Arctic Slope Regional Corporation (ASRC), Conoco, Inc. (Conoco), the Association of Oil Pipe Lines (AOPL), Phillips Pipe Line Company (Phillips), and the Alaska Public Utilities Commission (APUC).

The first prehearing conference was held during February 1985. The parties requested that, because of the pending *Williams* proceeding before the Commission, the Presiding Judge defer fixing a procedural schedule until a proposed June 1985 prehearing conference. The

request was granted subject to a monthly status reporting procedure.

On May 30, 1985, the parties submitted a motion to postpone the prehearing conference set for June 5, 1985 until 30 days after the Commission issued its *Williams* decision. The motion was granted subject to a continuation of the monthly status reports.

After the June 28, 1985 issuance of the Commission's Opinion No. 154-B in *Williams*, the Presiding Administrative Law Judge called a prehearing conference to discuss the issues and procedures for these proceedings. The procedural schedule, adopted in an order issued August 16, 1985, provided for two rounds of discovery, a joint statement of the issues, company opening and rebuttal testimony dates, testimony filing dates for protestants and FERC Staff, and a hearing date.

Discovery proceeded through the spring of 1986. A number of potential disputes regarding the scope of discovery were resolved by a comprehensive stipulation entered into by all the parties. That stipulation, which the Presiding Judge approved with certain conditions on January 24, 1986, also included certain substantive agreements which removed the necessity to provide independent evidence on various factual matters. The parties also resolved disputes involving the second round of discovery. On March 28, 1986, the parties submitted a joint statement of issues.

In early 1986, the APUC requested that the interstate proceedings before the FERC be consolidated with similar proceedings involving the intrastate transportation of crude oil by KTC. On April 1, 1986, the Commission issued an order establishing concurrent proceedings. *Kuparuk Transportation Co.*, IS85-9-000 and OR95-1-000, Order Establishing Concurrent Proceedings, April 1, 1986. The parties' presentations to the two agencies ultimately diverged on a number of issues. The concept of concurrent hearings therefore was abandoned, and the APUC and FERC hearings proceeded independently.

KTC filed its direct testimony and exhibits of eight witnesses on May 15, 1986. On August 1, 1986, direct testimony and exhibits were filed by the State of Alaska (six witnesses), the Arctic Slope Regional Corporation (one witness), and Conoco, Inc. (one witness). FERC Staff filed the direct testimony and exhibits of eight witnesses on August 29, 1986. The rebuttal testimony and exhibits of eight witnesses were filed by KTC on October 14, 1986.

On October 28, 1986, the State, KTC, ASRC, Conoco and Staff submitted trial briefs. The

¹ To this judge's knowledge, production from the Milne Point field has been indefinitely suspended, and

production from the West Sak Pilot Project has been terminated entirely. KTC Initial Brief at 11.

hearing commenced on November 4, 1986 and continued until November 26, 1986, producing a total of 19 volumes and 1,921 pages of transcript and more than 300 exhibits.

The Presiding Judge ordered the evidentiary record officially closed on December 10, 1986, and a subsequent motion to reopen the record to receive a late exhibit was denied on January 30, 1987.

Simultaneous initial briefs were filed on February 17, 1987 and simultaneous reply briefs on March 23, 1987.

III. Application of Opinion No. 154-B

A. Positions of the Parties

The fundamental issue underlying each of the technical controversies involved in this proceeding is whether oil pipelines generally and KTC specifically have special characteristics which require that different regulatory ratemaking principles, other than those used by the Commission to regulate natural gas pipelines and electric utilities, be applied. While the protestants (State of Alaska, ASRC, and Commission Staff) assert that oil pipelines' rates must be "just and reasonable" and therefore are regulated in generally the same manner as natural gas companies and electric utilities, KTC argues that the Commission intends to treat oil pipelines differently from other regulated pipelines and electric utilities reflecting the historical treatment of oil pipelines as common carriers under the Interstate Commerce Act. 49 U.S.C. § 1 *et seq.*

In reviewing the proposed rates, the importance of particular Commission decisions, known as Opinion Nos. 154-B and 154-C and more formally referred to as Williams Pipe Line Company, becomes clear after a brief discussion of oil pipeline history. *Williams Pipe Line Company*, Opinion No. 154, 21 FERC ¶ 61,260 (1982), *reh'g denied*, 22 FERC ¶ 61,086 (1983), *rev'd and rem'd Farmers Union Central Exchange, Inc. v. FERC*, 734 F.2d (D.C. Cir. 1978), *cert. denied sub nom. Williams Pipe Line Co. v. Farmers Union Central Exchange, Inc.*, 105 S. Ct. 507 (1984); Opinion No. 154-B, 31 FERC ¶ 61,377 (1985); Opinion No. 154-C, 33 FERC ¶ 61,327 (1985).

The Interstate Commerce Commission (ICC) was first given jurisdiction over oil pipelines in 1906, when the Hepburn Act, 35 Stat. 584 (1906), codified at 49 U.S.C. § 1 (b), extended

the ICC's jurisdiction to include interstate common carrier transporters of oil by pipeline. The Act prohibits oil pipelines from charging unjust and unreasonable rates, 49 U.S.C. § 1 (5), and from causing any undue or unreasonable discrimination or preference. 49 U.S.C. § 3(1). Unlike natural gas pipelines, however, oil pipelines are not required to obtain permission, in the form of certificates of public convenience and necessity, before the commencement of operations (*compare*, e.g. 15 U.S.C. § 717f(c)), cannot be compelled to extend facilities or make particular physical connections (*compare*, e.g., 15 U.S.C. § 717f(a)), and do not need approval to terminate or permanently abandon service (*compare*, e.g., 15 U.S.C. § 717f(b)). Moreover, statutory provisions controlling interlocking directorates, mergers and similar aspects of business operation do not apply to common carrier oil pipelines.

In its regulation of oil pipeline rates, the ICC adopted an approach that became known as the "ICC valuation methodology." This methodology, which evolved from a series of cases in the 1940's,² was built around the statutory requirement that the Commission determine each pipeline's "valuation."³ Pipeline valuation has long been calculated through a formula that includes a weighted average of the pipeline's original cost and its "cost of reproduction new." The cost of reproduction new element results from trending the original cost by individualized price indices.

The ICC historically employed the pipeline valuation as the regulatory rate base in assessing the reasonableness of pipeline rates. This ICC valuation methodology thus served as the basis for oil pipeline ratemaking virtually without challenge until the 1970's, when a group of midwestern shippers objected to the rates charged by the predecessor of the William Pipe Line Company. The shippers challenged not only the specific rates included in Williams' tariffs, but also the underlying ICC valuation methodology. The ICC approved the challenged rates,⁴ but instituted a rulemaking proceeding to assess the continuing validity of its traditional ratemaking approach.⁵

While both the rulemaking proceeding and the shippers' petition for review of the ICC's decision approving the Williams rates were pending, the Department of Energy Organization Act was passed, transferring regulatory responsibility over oil pipelines from the ICC to

² *Reduced Pipeline Rates & Gathering Charges*, 243 I.C.C. 115 (1940), reopened, 272 I.C.C. 375 (1948); *Rail Shippers Association v. Alton & Southern Railroad*, 243 I.C.C. 589 (1941); *Minnelusa Oil Corp. v. Continental Pipe Line Co.*, 258 I.C.C. 41 (1944).

³ 49 U.S.C. § 19a.

⁴ *Petroleum Products, Williams Brothers Pipe Line Co.*, 355 I.C.C. 479 (1976).

⁵ *Ex Parte No. 308, Valuation of Common Carrier Pipelines*.

the FERC.⁶ Shortly thereafter, the FERC requested that the U.S. Court of Appeals remand the petition for review that had been filed following the ICC's *Williams* decision, so that the newly formed agency could examine for itself the generic methodological question raised by the *Williams* rate case. The Court of Appeals agreed to the remand.⁷

On remand, following a wide range of extensive presentations from carriers, shippers and government entities, the Commission issued its Opinion No. 154.⁸ That decision included a thorough discussion of the history and special attributes of the common carrier oil pipeline industry. It concluded, based on that discussion, that the essence of the ICC valuation methodology well served all of the interests directly concerned with oil pipeline rates, and therefore should be retained as the governing oil pipeline ratemaking standard.⁹

The Court of Appeals subsequently vacated Opinion No. 154, in the decision that has become known as *Farmers Union II*.¹⁰ The Court there found that Opinion No. 154 had not adequately responded to its earlier remand order, in large part because in the Court's view, the Commission had not satisfactorily explained why it had retained the valuation approach rather than adopting a cost-based alternative.¹¹

Opinion No. 154-B, issued June 28, 1985, embodies the Commission's response to *Farmers Union II*. While setting forth a policy favoring case-by-case resolution of a number of important ratemaking issues, Opinion No. 154-B announced certain "generic principles" that would apply generally in oil pipeline rate proceedings. Most importantly, the Opinion rejected application of the traditional original cost methodology that the Commission continues to employ in assessing natural gas pipeline and electric rates. Rather, it adopted an approach grounded in trended original cost (TOC), whereby the Commission sought to trend the original cost rate base to reflect inflation, with return calculated by applying a "real" (i.e., without inflation) rate of return to the trended rate base.¹² The Commission did

not adopt a pure TOC methodology, however. Instead, it elected to trend the original cost rate base only to the extent that it deemed the investment to have been financed with equity funds; the portion of rate base deemed to have been financed with debt is kept at original cost and allowed a nominal debt return.

Following a number of petitions for rehearing, the Commission issued Opinion No. 154-C.¹³ That ruling modified Opinion No. 154-B principally in regard to its treatment of interest expense for income tax purposes. In all other significant respects, the Commission confirmed the approach outlined in Opinion No. 154-B, thus leaving it as the presumptive framework for Commission rate analysis. No case applying Opinion No. 154-B to specific rates has yet been decided by the Commission, and no judicial challenge to the general rules set forth in the opinion survives.

The parties in this proceeding begin the presentation of their differences by professing their disagreement over the applicability of Opinion No. 154-B to KTC's pipeline. On the one hand, KTC argues that Opinion No. 154-B and its use of a TOC methodology for calculating rate base, was meant to apply generally to all oil pipeline rates. On the other hand, Staff, the State of Alaska and ASRC all argue that because Kuparuk is a monopoly pipeline, the stated rationale of the *Williams* opinion cannot be applied to KTC's rates.

More specifically, although Staff applied the "Opinion No. 154-B methodology" (i.e., the TOC method), it did so "inasmuch as it currently represents the latest general Commission policy towards all oil pipelines." However, Staff qualifies its position by stating:

We therefore take no position on the specific issue as to whether Opinion No. 154-B applies to oil pipelines that face no competition, such as KTC. However, if the Commission determines not to apply the TOC approach to KTC, Staff reserves the right to recommend an original cost or some other alternative methodology and revise its proposed tariffs accordingly.

retained the valuation approach and rejected the original cost rate base.

⁶ 91 Stat. 565, 42 U.S.C. § 7155.

⁷ *Farmers Union Central Exchange v. FERC*, 584 F.2d 408 (D.C. Cir. 1978), cert. denied, 439 U.S. 995 (1978) ("*Farmers Union I*").

⁸ *Williams Pipe Line Co.*, 21 FERC ¶ 61,260 (1982), vacated sub nom. *Farmers Union Central Exchange v. FERC*, 734 F.2d 1486 (D.C. Cir. 1984), cert. denied, 469 U.S. 1034 (1984).

⁹ The Commission did find certain problems with particular elements of the valuation methodology, especially its approach to rate of return. 21 FERC at pp. 61,641-50. With regard to the fundamental rate base construct, however, the Commission expressly

¹⁰ *Farmers Union Central Exchange v. FERC*, 734 F.2d 1486 (D.C. Cir. 1984), cert. denied, 469 U.S. 1034 (1984) ("*Farmers Union II*").

¹¹ See, e.g., 734 F.2d at 1502.

¹² In contrast, original cost ratemaking applies a "nominal" (i.e., including inflation) rate of return to an uninflated rate base.

¹³ *Williams Pipe Line Co.*, 33 FERC ¶ 61,327 (1985).

Staff Initial Brief at 8.

The State of Alaska is firmer in its rejection of Opinion No. 154-B's rationale for using the TOC methodology in the case of KTC. The State, arguing that the stated rationale for the use of TOC in the *Williams* case was so that newer pipelines can compete with older ones, reasons that because KTC is a monopoly, this rationale does not apply in this case. However, the State nevertheless "has attempted to calculate tariffs on the basis of its understanding of Opinion 154-B," State Initial Brief at 25, and thus has calculated rates on the basis of TOC. The State varies from Opinion No. 154-B by using accelerated, as opposed to straight-line depreciation, which, according to the State, "causes KTC rate profile to resemble that resulting from a depreciated original cost (DOC) methodology." *Id.* at 21. Therefore, the State has attempted to follow the guidance found in Opinion Nos. 154-B and 154-C to calculate KTC's rates or has, where permitted by those opinions and on the basis of specific record material, argued for a case-specific departure from the general policy in those decisions. *Id.* at 22-23.

ASRC stands alone in its complete rejection of the applicability of Opinion No. 154-B to this proceeding. Stating that the policy which should be adopted in this proceeding is a methodology that will encourage competition in production of Alaskan resources in the future, ASRC urges adoption of traditional depreciated original cost (DOC) methodology. The underlying reason for ASRC's position was explained by its witness Professor Sharon Oster:

Thus, production decisions are likely to become increasingly sensitive to tariffs as time progresses. This suggests that a declining tariff stream would be preferable. Declining tariffs would promote greater extraction and development of oil in the future, given expectations concerning the likely rise of extraction costs in the future.

ASRC Initial Brief at 10.

ASRC explains that a TOC methodology would produce tariffs which are lower than the DOC tariffs in the early period and higher in the later period. ASRC wants to avoid this result because "[r]elatively higher tariffs in the later years of pipeline operations will discourage exploration, development and production from marginal resources and also will have an anticompetitive impact that FERC must consider." *Id.* at 11.

In a fall-back position, ASRC argues that if Opinion No. 154-B is applied to KTC and a TOC methodology is adopted, a "front-loaded" or accelerated, rather than a straight-line, method of depreciation should be used so that

the carrier may recover substantially all of its investment in the early years of operations, resulting in lower tariff levels in later years. This would "mitigate the adverse effects on resource development of relatively high tariff levels in later years of pipeline operations." *Id.* at 12. ASRC notes that except for FERC Staff, all of the parties in this proceeding that have addressed the issue have proposed a "front-loaded" method of depreciation.

Standing in opposition to Staff and the other parties, KTC criticizes the protestants' departure from Opinion No. 154-B, stating its belief that the Opinion meant to apply TOC generally for all oil pipelines. Noting the flaws of each of the methods proposed by protestants, KTC argues that the protestants' approach "denies KTC's investors a fair opportunity to earn reasonable revenues from their investment." KTC Initial Brief at 26.

I determine that Opinion Nos. 154-B and 154-C do apply to this proceeding for the obvious reason that being an oil pipeline, KTC should have oil pipeline regulatory rules applied to it. Further, the Commission has not established different regulatory frameworks for oil pipelines depending upon the degree of competition involved. Reargument of the *Williams* case will not be considered here.

Finally, KTC brings up the question of burden of proof and submits that:

While KTC may bear the burden with respect to its changed full-line 61-cent rate, which became effective January 16, 1985, it does not bear the burden of proof with regard to either its initial full-line 69-cent rate (which was in effect from October 3, 1984 through January 15, 1985), or its initial intermediate-point 55-cent rate, which went into effect on January 16, 1986.

Id. at 28 (references to record omitted).

All of the parties agree that the State bears the burden of proving that KTC's initial 69-cent rate effective for the period October 3, 1984 through January 15, 1985 is unjust and unreasonable. Furthermore, KTC bears the burden of proving the justness and reasonableness of its 61-cent rate for the period January 16, 1985 through the present, since it advocates this change to its tariff. As to the 55-cent intermediate-point rate, which went into effect on January 16, 1986, KTC argues that it does not have the burden of proof because it is an initial rate rather than a change in rate. KTC Initial Brief at 28-29. Because service from West Sak had been performed on or before January 15, 1986, the 55-cent rate cannot be considered an initial rate just because it is a new rate. Instead, the new changed 55-cent rate is simply part of a conversion from a one-part 69-cent rate to a two-part rate comprised

of the 61-cent and 55-cents. Therefore, KTC also bears the burden of proof as to the 55-cent rate.

KTC further submits that, because the initial 69-cent rate was never suspended, the State of Alaska, as complainant, bears the burden of proving actual damages. KTC argues that there is nothing in the record from which the Commission can infer the fact of damage or calculate its measure, therefore no relief can be granted for the period prior to January 16, 1985. KTC Initial Brief at 30-31. The State is correct that KTC's argument ignores the State's monetary interest in this proceeding, i.e., its royalty and tax interests. State Reply Brief at 4-5; see State Initial Brief at 7-9. Therefore, KTC's argument is rejected.

IV. Rate Base

In the first step of the development of an oil pipeline carrier's rates, the Commission must determine the value for rate base on which the carrier is entitled to earn a return. Specifically, development of KTC's rate base for regulatory purposes involves first a determination of the amount of gross carrier property in service, to which adjustments must be made for allowance for funds used during construction (AFUDC), accumulated deferred income taxes (ADIT), working capital, the unamortized amount of the State of Alaska investment tax credit, accumulated depreciation amounts and accumulated reserves for dismantling, removal and restoration (DR&R) expenses. Finally, pursuant to Opinion No. 154-B, the equity portion of the rate base must be trended or written up to reflect the effects of inflation. State Initial Brief at 25-26. It should be noted that "starting rate base", see 31 FERC at pp. 61,835-61,836, need not be determined, for KTC is a new pipeline that was never regulated under the ICC's valuation methodology.

The State and Staff accept the beginning carrier property balance claimed by KTC. See Exh. FERC 18-1; Exh. KTC 4-10, Schedule 1; Exh. KTC 4-19, Schedule 1; Exh. AK 17-11, Schedule 13. However, the parties disagree over issues regarding the calculation for trending rate base, the method and rates for calculating AFUDC, the calculation and timing of ADIT related to both the property acquired from KPC and that constructed by KTC, the amounts of certain working capital items including materials and supplies and prepayments, and the amount of accumulated depreciation. These issues are taken up below.

A. Carrier Property Balances

The State, Staff and KTC all agree on the gross carrier property balances submitted by

KTC for constructed property, as well as for the property acquired from KPC. See Exh. FERC 18-1; Exh. KTC 4-10, Schedule 1; Exh. KTC 4-19, Schedule 1; Exh. AK 17-11, Schedule 1-3. The carrier property amounts are shown by year (1984, 1985 and 1986) and are grouped according to whether KTC acquired the property from KPC or whether KTC constructed the property. *Id.*

An issue does arise as to the acquired property. In October, 1984, KTC acquired for \$57.9 million some of KPC's assets used for the 16-inch pipeline, namely the VSMs and the CPFs. KTC argues that the purchase price, measured by the original construction cost less accrued depreciation on KPC's books, should be reflected in KTC's rate base. Staff and the State, on the other hand, want to deduct from this purchase price the balance on KPC's books for accumulated deferred income taxes associated with the transferred property. Thus, the issue is whether or not the Commission should recognize the existence of the deferred tax reserves associated with the transferred property.

Initially, a question as to the burden of proof has been raised by the parties, i.e., who has the burden to show whether or not KPC had a deferred tax balance for the transferred assets. KTC Initial Brief at 89-90; Staff Initial Brief at 58 n.2; KTC Reply Brief at 19. KTC maintains that because KPC's rates were settled, and the settlement agreement did not indicate whether KPC had a deferred tax balance, Staff has the burden to show that KPC's rates were based on normalization (which would have required an ADIT account) and not on a flow-through policy. KTC Initial Brief at 90. It need not be decided here whether KPC's rates were based on normalization. What is important is that KTC, the party in possession of KPC's books of account, does not challenge Staff's calculation of deferred taxes for the transferred property. Staff Initial Brief at 58 n.2. It is too late in the game for KTC's argument to be taken seriously, especially given the fact KTC has the information necessary to prove its allegations at its disposal. See *Campbell v. U.S.*, 365 U.S. 85, 96 (1961) (where party A argues that party B did not prove 'something', when that 'something' was peculiarly in the knowledge and possession of party A, fairness dictates that the burden of proof is not upon party B).

As to the merits, Staff and the State argue that the ADIT balance¹⁴ should follow the transferred property to the transferee because to do otherwise would leave the rate base artificially inflated and simply provide a windfall to KTC. Even worse, they argue, it would encourage regulated companies to engage in similar tax-free exchanges of property simply or primarily for the purpose of writing down ADIT balances and thereby inflating rate base levels and income tax expenses. Staff Initial Brief at 53; see Exh. AK 15-0 at 10-11. Furthermore, both Staff and the State maintain that regulatory precedent dictates that the ADIT balance applicable to the transferred property should follow that property. See *El Paso Natural Gas*, 33 FERC ¶ 61,099 (1985).

They further argue that KTC did not "purchase" this property from KPC as KTC contends, but instead, KPC transferred the property to KTC as its owner's contribution to the KTC partnership. As evidence for this, they assert that the Partnership Agreement specifically recognized the tax depreciation that resulted in KPC's deferred tax balance, and that the Agreement viewed the transfer as a contribution, not a purchase. Staff Initial Brief at 56-59. The consequences of the distinction between a "purchase" and a "transfer" is that:

[a] purchase is a taxable event that permits the purchaser to take the purchase price as his tax depreciable basis. Internal Revenue Code § 168(b)(1) and § 1012. In contrast, a contribution is not a taxable event and, as a consequence, the contributee assumes the same tax basis as the contributor. Internal Revenue Code § 168(f)(10) and § 723.

Id. at 61 n. 76.

KTC, on the other hand, contends that its method of valuing the transferred property follows proper accounting and valuation principles, KTC Initial Brief at 35, although it notes that it is not suggesting that accounting principles are controlling for ratemaking purposes. *Id.* at 35 n. 31. KTC argues that the full purchase price should be recognized when a purchase is made at arm's length, and the customers receive a benefit from the acquisition; KTC maintains that both conditions have been met here. *Id.* at 35-36.

Although the "purchase" may have been made at arm's length, the customers did not

receive a benefit from the acquisition, for the VSMs and other assets provide the same function for the same shippers as they did in the hands of KPC. State Initial Brief at 57. The fact that more oil can be shipped through the 24-inch pipeline than through the 16-inch pipeline was not caused by an increased "efficiency" in the transferred assets. Staff Initial Brief at 58 n. 1. The State and Staff are also correct that form should not be allowed to dictate the substance of a transaction. *Id.* at 57; State Initial Brief at 58. Furthermore, KTC admits that accounting principles do not control in a ratemaking proceeding. Therefore, KTC's position that ADIT should not be deducted is rejected.

Alternatively, KTC argues that if the Commission determines that the ADIT balance should be deducted, the State's and Staff's proposal to reduce KPC's net book value by ADIT would deprive KTC of the rate base to which it is entitled under Opinion No. 154-B. KTC proposes that the ADIT should instead be deducted from the "regulatory value" of the purchased assets, which is a much higher amount than net book value since it includes AFUDC and other costs unaccounted for in net book value. KTC Initial Brief at 37-38. KTC notes that computing the regulatory value would

require not simply a selective adjustment to purchase price, but rather an elaborate recomputation of KPC's rate base under the methodology in effect at the time of KPC's operation (i.e., Opinion 154), because no regulatory value was ever set for KPC's assets. (Hildahl Rebuttal, Exh. KTC-10-1, at 29.)

Id. at 34.

Staff has two responses to KTC's alternative "regulatory value" methodology. Staff Initial Brief at 58-60. First, Staff states that it tried to get data from KTC to calculate an AFUDC allowance, but KTC specifically denied the request. *Id.* at 57. Second, Staff maintains that if KTC believed that calculations for trending and AFUDC on the transferred property were appropriate where ADIT was to be deducted, then KTC should have calculated those allowances for the record and had ample opportunity to do so since it had the necessary information. *Id.* at 60.

Although Staff and the State are correct that ADIT should follow the transferred property to

¹⁴ The State calculated KTC's ADIT balances, after reducing the transferred property amount to reflect the non-jurisdictional usage issue, see Section VI, *infra*, to be \$14.7 million for federal tax purposes and \$1.3 million for state tax purposes. Exh. AK 17-6, Sch. 1, L. 11, 21, 22. The State notes that "if the State's argument on non-jurisdictional usage is not

accepted, the amount of federal and state ADIT associated with the transferred property should then be \$18.0 million and \$1.1 million respectively," State Initial Brief at 54 n.71, which falls within KTC witness Hildahl's approximate amount of between \$19-20 million. Tr. at 1034-35.

the transferee, KTC's argument that any deduction of ADIT should be made against "regulatory value", rather than KPC's booked net original cost, is also sound and not challenged by either Staff or the State on the merits. But, as noted above, the record itself contains no evidence from which to compute the "regulatory value" of the transferred assets. Therefore, for the purposes of this proceeding, KTC must bear the adverse consequences of its failure to provide Staff with the needed information or to calculate the regulatory value itself. Fairness dictates this result given the fact that KTC was in sole possession of this indispensable information. See *Town of Highlands, N.C. v. Nantahala Power & Light Company*, 37 FERC ¶ 61,149, at p. 61,357 (1986) (facts peculiarly within the knowledge of a party must be proven by that party). Staff's and the State's valuation methodology is thus hereby adopted, namely that ADIT should be deducted from the booked depreciated original cost of the transferred property.

B. Trending Methodology

In Opinion No. 154-B, the Commission adopted a modified trended original cost (TOC) approach for calculating the rate base and rate of return issues for oil pipelines. Under that approach, which fundamentally differs from the traditional gas pipeline cost-of-service methodology and the I.C.C.'s oil pipeline valuation method, the equity portion of rate base is trended or written-up for inflation while the debt portion is treated on a depreciated original cost basis. The return allowance comprises a real equity return on the equity share of rate base and a nominal debt cost on the debt share. Opinion No. 154-B describes the procedure for trending the equity portion of rate base as follows:

First, TOC, just like net depreciated original cost, requires the determination of a nominal (inflation-included) rate of return on equity that reflects the pipeline's risks and its corresponding cost of capital. Next, the inflation component of that rate of return is extracted. This leaves what economists call a "real" rate of return. The real rate of return times the equity share of the rate base yields the yearly allowed equity return in dollars. The inflation factor times the equity rate base yields the equity base write-up. That write-up, like depreciation, is written-off or amortized over the life of the property.

31 FERC ¶ 61,377, at p. 61,834.

The Commission decided to employ TOC for oil pipelines instead of depreciated original cost because

it is a theoretically acceptable alternative that after the switch from [the I.C.C.'s] valuation [method] will help newer pipelines with higher rate bases to compete with older pipelines with lower rate bases and will help them compete with other modes of oil transport and so will tend to foster competition generally. This is so because TOC mitigates the front-end load problem for new pipelines.

Id. at p. 61,834 (footnotes omitted).

The Commission in Opinion No. 154-B goes on to describe the consequences of the net DOC caused front-end load problem which, in turn, causes both the rate base and allowed return for the equity cost of capital to decline over time as follows:

[t]his means that the company's allowed equity return is bunched in the early years of its property's life when its rate base is still large. The problem is that owing to competition a pipeline may not be able to charge rates high enough to recover that bunched income. And those lost revenues are gone forever.

Id. at p. 61,835 (footnote omitted).

TOC solves this net DOC problem by capitalizing the inflation factor into the equity rate base, thus delaying income until later years. Over time, under the TOC method, a company will be able to recover this deferred income through increased rates, but will also still be able to compete with its competitors and their price increases due to inflation. *Id.*

It should be noted that because KTC is a new pipeline that was not regulated under the I.C.C.'s valuation method, Opinion No. 154-B's dictates as to calculating a "starting rate base" do not apply. See generally 31 FERC at pp. 61,835-61,836.

Although the parties agree on most of the trending procedures, there are areas of disagreement which are discussed below.

1. Trending of Working Capital

The State and KTC both argue that working capital should be included in the trending calculation. Exh. AK 17-16 at 6; Exh. KTC 4-21 at 2. Staff, on the other hand, argues that working capital¹⁵ (i.e., materials and supplies, prepaid taxes and prepaid insurance) should not be trended because unlike carrier property in service, these items are replaced or "turned over" periodically. Staff maintains that no trending is necessary because inflation will be

¹⁵ The parties have stipulated that KTC's cash working capital allowance equals zero. Judge's Exhibit 1-A.

reflected in the higher replacement cost of working capital. Staff Initial Brief at 14. Thus, it is apparently Staff's position that a real equity rate of return should be applied to an untrended working capital allowance.

While Staff's argument has a superficial appeal, there is no evidence showing how often each of these items of working capital "turns over", if in fact all of them will ever do so. (One substantial inventory item is some 5,000 feet of pipeline.) Staff has produced no analysis of replacement frequency of the various items to substantiate its position and, therefore, KTC's and the State's position is adopted. Working capital should be included in the trending calculation.

2. Beginning-of-Year vs. Average Year Balances—Averaging Techniques

Both Staff and the State advocate the use of an average of the beginning-of-year (BOY) and end-of-year (EOY) balance for each year to compute an original cost (OC) rate base for trending purposes. Exh. FERC 24-0 at 9; Exh. AK 17-0 at 34. They assert that the Commission customarily uses a 13-month averaging technique to compute a OC rate base for gas pipelines. Since KTC has had only insignificant additions or retirements of property included in rate base, Staff and the State allege that the BOY-EOY average produces essentially the same results as a 13-month average. Therefore, Staff and the State assert that because computations using the BOY-EOY average are simpler and because no greater accuracy of any significance would be obtained by using a 13-month average, "the administrative convenience of the BOY-EOY method argues in favor of using that approach." Staff Initial Brief at 15; State Initial Brief at 30; Exh. AK 17-0 at 34. The State further contends that if major additions to the pipeline system occur in the future, the Commission's 13-month averaging method should then be utilized. State Initial Brief at 30; Exh. AK 17-0 at 34.

KTC, on the other hand, advocates the sole use of BOY balances for its trending calculation. KTC Initial Brief at 43. KTC argues that

traditionally, the I.C.C. valuation methodology operated on the basis of a single-point rate base, and that the Commission incorporated this tradition into Opinion No. 154-B. KTC maintains that this incorporation is evidenced by a numerical example of how TOC works where the Commission based the rate base write-up on the value of rate base as of the start of the year. KTC Initial Brief at 43-44; KTC Reply Brief at 25; see Opinion No. 154-B, 31 FERC at p. 61,834.

I agree with Staff and the State that with continuous decline in net plant balances through depreciation, use of an average of the BOY-EOY balances will more accurately reflect the rate base outstanding during the year as compared to a BOY balance alone, which will consistently overstate the rate base. The fact that the Commission uses a BOY balance in Opinion No. 154-B in illustrating how TOC works is not a prejudgment of this question. See 31 FERC at p. 61,834. It is doubtful that through this simple example, the Commission intended to convey any specific guidance on averaging techniques.

Based on the facts of this case, the BOY-EOY averaging more closely attains the Commission's goal of achieving a reasonably accurate measurement of rate base outstanding over the year as a whole, whereas a BOY approach does not. The BOY-EOY averaging technique is hereby adopted for purposes of this proceeding for all of the above reasons. If major capital additions or retirements occur in the future, a more precise averaging technique may then be appropriate.

3. Inflation Rate To Be Used In Trending Calculation

Although for trending purposes, Staff, KTC and the State all proposed to use an inflation rate keyed to the Consumer Price Index-Urban (CPI-U), they all have proposed different rates. Staff Initial Brief at 17; compare Exhs. FERC 24-5, 24-6; Exh. AK 17-8, Sch. 2; Exh. KTC 4-7, Sch. 2. The record indicates the following rates:

Inflation Rates (%)			
	Staff*	Alaska**	KTC***
1984	3.8	3.22	3.22
1985	4.0	4.26	4.39
1986	3.8	3.57	4.17

*Exhs. FERC 24-5, 24-6.

**Exh. AK 17-8, Sch. 2.

***Exh. KTC 4-7, Sch. 2.

Opinion No. 154-B prescribes that the inflation rate for the past year should be used as the estimated rate for the next year. 31 FERC at p. 61,835 n. 35. Both Staff and the State have

done this. The inflation rates that Staff employs for rate base trending are the December to December CPI-U, as shown in the publication entitled *Economic Indicators*, March,

1986, published by the U.S. Government Printing Office. Exhs. FERC 24-0 at 8 and 24-6.

Because Staff was the only party to supply supporting documentation for its recommended inflation rate, Exh. FERC 24-6, and neither KTC nor the State challenges this documentation, Staff's inflation rates, as shown above, are adopted.

4. Calculation For Equity and Debt Returns

As stated *supra*, the Commission has adopted a modified trended original cost approach for oil pipelines under which the equity portion of rate base is trended for inflation, while the debt portion is treated on a depreciated original cost basis. The resulting increase to the equity rate base is termed "deferred earnings," and the annual amounts are amortized over the remaining life of the plant. The parties disagree as to how rate of return for both debt and equity should be applied to the debt and equity portions of rate base, respectively, to determine the dollar amount of return to be included in cost of service. The Staff and KTC employ different methods, and the State "appears" to have used the same method as used by KTC. KTC Initial Brief at 40; KTC Reply Brief at 22; see State Initial Brief at 34.

As to the opposing methodologies, in essence, KTC first determined untrended original rate bases by calculating net CPIS balances for 1984, 1985 and the test year. To each of these, KTC added KTC's working capital balances to arrive at the total end-of-preceding-year original cost rate bases. To calculate KTC's debt portion of rate base for each year, KTC applied its debt ratio of 30 percent to the annual total rate base calculations. KTC then applied its cost of debt of 8.28 percent to the annual debt portions of rate base to yield the debt portion of return.

To calculate KTC's equity portion of rate base, KTC again started with the net carrier property in service for each year and trended them upward to yield net trended carrier property. The addition of working capital to net trended carrier property resulted in the annual total trended original cost rate bases. KTC's proposed equity ratio of 70 percent was applied to each year's total trended original cost rate bases resulting in the equity portion of rate base. Because KTC adopted a "results of operations" approach, KTC started with its achieved total return dollars, which were then reduced by the foregoing debt portion of return and the suretyship premiums, see *infra*, to arrive at KTC's equity return dollars. This amount was then divided by the equity portion of KTC's rate base to produce KTC's annual achieved rates of return on equity for each of the years. KTC Initial Brief at 41-42.

KTC argues that "even if there is a constant book debt-equity relationship, there will be an increasing equity ratio for ratemaking purposes, as the result of trending the equity rate base," *Id.* at 43; Exh. KTC 5-0 at 15-16, and that because the Staff calculated a weighted overall rate of return, instead of maintaining separate debt and equity rate bases as KTC did, Staff's total rate of return improperly reflected a constant equity ratio. KTC Initial Brief at 42-43. KTC contends that unless the increasing equity ratio for ratemaking purposes due to trending is taken into account in the return calculations:

there will be a mismatch between the equity rate base and the equity weighting in the rate of return. This mismatch yields the anomalous result of a debt return being earned on a portion of the rate base that [Staff witness] Mr. Ferguson himself attributed to equity. (*Id.* [Exh. KTC 5-0 at 14-16]; Ferguson, Tr. 19/1982.)

Id. at 43.

In calculating its overall costs of debt and equity, Staff starts with its determination of the original cost (OC) rate base. Staff witness Ferguson then determined and trended the equity portion of rate base by:

multiplying the starting rate base by the Staff's equity investment factor of 74.925% to arrive at the equity portion of the total rate base. The equity portion of the rate base was then trended by the inflation factor for 1984 of 3.8%. The resulting amount was then prorated for 86 days until the end of the year. A similar calculation was performed for the property acquired by KTC from KPC, i.e., 68 days were used to account for the period in service from the October 25 start-up date until the end of the year. This trending process was carried forward for the year 1985 and the Test Year 1986 using the preceding end of year equity portion of the rate base applied to the appropriate trending (inflation) factor.

Staff Initial Brief at 6.

As for the debt portion of rate base, Staff multiplied the OC rate base by 25.075 percent to arrive at the debt portion of the total rate base.

After determining both the debt and trended equity portions of rate base for each year, Staff added the debt and equity sums to arrive at the total rate base for each year. This total rate base was then multiplied by an overall rate of return, reflecting Staff's after tax costs for debt and equity weighted by its recommended capital structure of about 25.1 percent debt and 74.9 percent equity. *Id.* at 10-11.

The major difference then between Staff's and KTC's methodologies is that Staff applies its weighted costs of debt and equity to the total rate base for each year, whereas KTC applies its unweighted costs of debt and equity to separate debt and equity rate bases for each year. *Id.* at 11-12. Therefore, Staff asserts that because trending causes the overall percentage of equity in the rate base to gradually increase over time, KTC's method results in a higher overall return than does the Staff's. *Id.* at 12.

Staff maintains that its trending method follows the Commission's procedure set out in Opinion No. 154-C. Staff argues that what the Commission said about interest expense deductions in Opinion No. 154-C can be applied to the debt return and quotes the following language for this proposition:

The Commission is now persuaded that the better solution is to use the same actual capital structure for both the interest expense deduction and the allowed interest return.

* * *

...it appears appropriate for an oil pipeline to determine its interest expense deduction by multiplying its weighted cost of debt times its net depreciated original cost rate base.

33 FERC at p. 61,640; see Staff Initial Brief at 12.

Staff notes that although the Commission stated that this policy could be amended on a case-by-case basis, if specific circumstances so warranted, KTC has not made such a showing. Staff Initial Brief at 12 n. 2.

Staff further contends that because KTC's method increases the equity portion of rate base, KTC is manipulating the capitalization ratio for return purposes for no stated reason. *Id.* at 13. Thus, the Staff states that:

[t]he recommended equity costs of Staff and KTC were based, at least in part, upon the financial risks associated with particular capital structures. If the capital structure used for return purposes is presumed to change every year, consideration would have to be given every year to the effects such an annual change in financial risk should have upon the cost of equity.

Id.

KTC responds that this is not a valid criticism because KTC did coordinate the increasing equity rate base with its calculation of annual costs of equity. KTC Reply Brief at 23. Therefore, KTC maintains that it "recognized the interrelationship between the trended

equity rate base and the cost of equity and made the proper adjustments." *Id.*; see Exh. KTC 8-11, Panel A.¹⁶

The Commission determines the required rates of return for electric utilities and natural gas pipelines by weighting the nominal rates of return for debt and equity by the proportion of each in the regulated firm's capital structure. The respective weighted rates of return are added together, resulting in an overall weighted rate of return. This latter derived sum is multiplied by the rate base to produce the regulated company's allowed overall return. Staff has used this methodology, with the addition of (1) trending the equity portion of rate base by an inflation factor and (2) applying a real equity rate of return to the equity portion so trended. Staff's method results in a static situation in that it uses a constant book debt-equity relationship to weight its capital costs, which in turn causes an increasing amount of equity having a debt rate of return applied to it. Because KTC's equity rate base ratio will gradually grow larger than its book equity ratio, due to trending, the weighted-average-cost-of-capital approach which Staff employs here cannot be used. Staff's method fails to properly account for this trending effect and must, therefore, be rejected. See generally *ARCO Pipeline Co.*, Initial Decision, 43 FERC ¶ 63,033, at pp. 65,375-65,378 (1988).

Accordingly, total return dollars allowable in cost of service shall be determined by applying the real equity rate of return to the equity portion of rate base and the nominal debt cost to the debt portion of rate base, respectively, and summing the products. The particular return rates, and the capital ratios to be employed in separating equity and debt rate bases, will be addressed hereinafter.

C. Allowance For Funds Used During Construction

Consistent with Opinion No. 154-B, the parties agree that KTC's rate base should include an allowance for funds used during construction (AFUDC). 31 FERC at p. 61,839 n. 38. An allowance for funds used during construction recognizes the need to compensate a regulated entity for the use of funds made available by the owner(s) and invested in a construction project prior to the placement in service of the facilities. Thus, a regulated company is allowed to collect from ratepayers the costs incurred in financing such projects, including both interest on borrowed funds and a fair return on the

¹⁶ The expansion in the equity ratio which Staff warns against appears to be slight over the time frame pertinent here. If equity is trended upward at a

4 percent compounded rate from October 1984 to October 1988, from an initial equity ratio of 50 percent, the resulting equity ratio will be 53.9 percent.

equity portion of the investment. Staff Initial Brief at 18.

The starting point for the AFUDC calculation is maintenance of a construction work in progress (CWIP) account to which an appropriate rate of return is applied. The resulting AFUDC is capitalized until the property is placed in service. Upon the beginning of service, the capitalized AFUDC is included in rate base and recovered through periodic depreciation charges; the unrecovered amounts earn a return along with other elements of rate base. KTC Initial Brief at 45. Both Staff and KTC rely on identical CWIP figures during the construction period (March 1982 through October 1984). Exh. KTC 4-11, Sch. 1; Exh. FERC 18-2.

A monthly AFUDC amount was calculated for KTC by accumulating the monthly additions to CWIP during the construction period to determine the AFUDC base for that month. This AFUDC base for each month was then multiplied by an annual AFUDC rate of return. A total construction period AFUDC amount resulted by continuing this process for each month of the construction period. This general framework for calculating the AFUDC allowance was followed by all the parties. Exh. KTC 4-0 at 16-17; Exh. FERC 18-0 at 4; Exh. AK 16-0 at 4-6.

The disagreement between the parties involves the methods and details within that framework for calculating AFUDC, for the State, Staff and KTC computed differing total construction period AFUDC amounts of \$7.21 million, \$8.11 million and \$10.95 million, respectively. Exh. AK 16-0 at 5; Exh. FERC 18-1; Exh. KTC 4-1, Sch. 1. Specifically, the parties disagree as to the starting point for the AFUDC calculation, the rate of return to be used in calculating the AFUDC, the AFUDC base, the compounding method to be used to compute AFUDC and AFUDC during the test year. These differences are taken up below.

1. Commencement of AFUDC

Both Staff and KTC included AFUDC on all expenditures made for the construction of the 24-inch pipeline, calculated from the date those expenditures were made by the pipeline's investors, beginning in March, 1982. KTC Initial Brief at 47, 51. The State insists that the starting point for AFUDC calculations by KTC can only begin after the execution of the partnership agreement on February 24, 1983, because KTC did not exist prior to that date. State Initial Brief at 37-38. Therefore, the State's AFUDC calculation begins in March, 1983. The State asserts that "the purpose of AFUDC is to compensate the regulated company for the carrying charges on its construction related expenditures," *Id.* at 38, and that

prior to March, 1983, affiliates of KTC made expenditures without charging KTC with any carrying costs. Therefore, the State argues that:

[b]ecause KTC never incurred any carrying charges on funds expended prior to March, 1983, calculation of an AFUDC amount on those expenditures will result in an unjustified windfall for KTC...

Id. (citations omitted).

KTC is correct when it states that "[t]he key question is not when KTC, as an entity, commenced its formal existence, but when the investors in KTC began to incur the costs of constructing the pipeline system." KTC Initial Brief at 48-49. Compensating the investor for incurring capital costs for construction prior to placement in service is the key to the AFUDC allowance. The State ignores this economic reality when stating that "the purpose of AFUDC is to compensate the regulated company", because it is the investors behind the scene who actually supply the capital and not the company itself. Furthermore, because the Commission does not require a certificate of public convenience and necessity for oil pipeline carriers prior to commencement of construction, there is no agency-determined date on which such a project becomes formally recognized as being entitled to AFUDC. Therefore, the date the partnership agreement was signed is arbitrary and irrelevant to the determination of the commencement of AFUDC. The State's commencement date would also result in an unfair distribution of costs, for the shippers would have the benefit of a pipeline that they did not have to fully pay for just because the technical formalities of forming the KTC partnership were not completed at the beginning of the construction period. For all of the above reasons, the State's commencement date is rejected.

2. Earnings Rate For AFUDC

As stated previously, AFUDC is computed by multiplying the CWIP additions during the construction period—here, March, 1982 through October, 1984—by an appropriate AFUDC earnings rate. The AFUDC earnings rate should reflect the costs of both debt and equity capital during the construction period weighted by the amounts of debt capital and equity devoted to the construction project.

Staff and KTC have used different weightings for debt and equity based upon their recommended capital structures. Because the capital structure recommended by Staff and KTC for AFUDC purposes are identical to those proposed for rate of return purposes, the capital structure deemed appropriate for rate of return will be used in the calculations for AFUDC rates. Staff Initial Brief at 19; KTC

Initial Brief at 52; Exh. FERC 18-10 at 7-8; Exh. KTC 5-9 at 14-23. Therefore, this issue is taken up *infra*.

With regard to the cost of debt, Staff utilized a single constant debt cost of 9.26 percent over the entire construction period, which Staff asserts is equal to KTC's actual cost of borrowing during the construction period. Staff Initial Brief at 20. Staff states that this cost information for debt was drawn directly from a response of one of the KTC partners to a Staff data request. Exh. FERC 20-0 at 7-8; Exh. FERC 20-8. KTC, on the other hand, determined four separate debt costs for four different periods during the construction period. KTC's debt rates were derived from the effective yield rate of KTC's commercial paper and for the periods prior to KTC's commercial paper program (i.e., the first two periods), the rates were imputed from general commercial paper rates as reported in the *Wall Street Journal*. Exh. KTC 4-0 at 16-17. The four periods are: (1) March, 1982—December, 1982, (2) January, 1983—February, 1983, (3) March, 1983—December, 1983 and (4) January, 1984—October, 1984. KTC's proposed respective rates for each of the above time periods are (1) 14.54 percent, (2) 9.34 percent, (3) 9.37 percent and (4) 10.56 percent. Exh. KTC 4-11, Schedule 3; Staff Initial Brief at 20 n. 2.

KTC contends that because Staff's 9.26 percent debt cost is an average figure over the entire 32-month construction period, during which time the cost of debt declined, Staff has denied KTC significant compounding effects that would accrue early in the period when the cost of debt was higher. KTC Reply Brief at 31. Furthermore, KTC witnesses Baden and Kolbe stated that they did not know whether Staff's cost of debt was accurate or not. *Id.* at 20-21; Tr. at 449-451, 894.

Staff charges that KTC's debt costs for the first two of the four periods are erroneously imputed because actual costs should have been used. Furthermore, Staff maintains that KTC overstated those costs by using general commercial paper rates as of the first day of the period, when such rates declined between the beginning and the end of the first and second periods. Staff Initial Brief at 21-22. Staff maintains that its figure of 9.26 percent represents the actual cost of debt for the project as reported by at least one of the owners, Staff Initial Brief at 20, and is therefore more accurate than using imputed costs. *Id.* at 21.

Although not illogical, KTC cites no persuasive record evidence for its argument that Staff's average method, as applied to the facts

of this case, results in denial of significant compounding effects and therefore, a lower rate base. Furthermore, Staff is correct that KTC's imputed costs are overstated because of the declining commercial paper rates during the first and second periods, and the fact that KTC used commercial paper rates as of the first day of each of the first two periods. Staff Initial Brief at 21-22; Exh. KTC 4-11, Sch. 3. For these reasons, Staff's debt cost of 9.26 percent is hereby adopted.¹⁷

Regarding the cost of equity for AFUDC purposes, Staff developed a real cost of equity, i.e., a cost excluding the inflation rate, of 9.78 percent for each of the construction years. Staff's 9.78 percent real rate used for AFUDC purposes is the same rate recommended by Staff as the real equity rate of return for KTC. Staff Initial Brief at 22 n.2; Exh. FERC 20-0 at 3. To this real cost of equity, Staff added an inflation factor for each year to yield nominal equity costs for each year of (1) 1982—18.68 percent; (2) 1983—13.68 percent; and (3) 1984—13.58 percent. Exh. FERC 18-2; Staff Initial Brief at 22 and n. 2. Thus, Staff's recommendation for equity costs change with changes in the inflation rate.

KTC witness Baden used a similar methodology, based upon KTC witness Kolbe's cost of equity calculations, to develop KTC's real cost for equity for each of the construction years, but it made certain adjustments to these rates. KTC maintains that because there was a variance in the real interest rate during the construction period which affected the real cost of equity, its method made proper adjustments to these rates and that Staff's method did not. KTC Reply Brief at 31-32.

Staff contends that KTC's evidence does not support the claimed variance for real interest rates because, although KTC witness Kolbe provided information for Treasury yields during the construction period, his calculations of real risk-free interest rates specifically excluded the construction period. Because of this exclusion, KTC does not indicate what real interest rates may have been from 1982-1984. Staff Initial Brief at 23; see Exh. KTC 8-8. Therefore, Staff asserts that Dr. Kolbe's claim that "real interest rates varied sharply during this period," Exh. KTC 8-21 at 78, is unfounded. Staff illustrates its point by following Dr. Kolbe's general approach and calculating real interest rates for this period by deducting inflation rates from the effective Treasury yields from 1982-1984 and arrives at the following estimated real, risk-free interest rates of (1) 1982—5 percent (2) 1983—4.72

¹⁷ In fact, Staff witness Shriver testified that 9.26 percent may be even on the high side. Tr. at 1803.

percent, and (3) 1984—6.03 percent. Staff Initial Brief at 23. Because KTC witness Baden used Dr. Kolbe's calculations in determining the cost of equity for AFUDC purposes, Staff maintains that "to the extent any of those [Dr. Kolbe's] factors are shown to be in error, Mr. Baden's costs of equity will be out of line." *Id.* at 24.

KTC replies that Staff's illustration of lack of variance establishes just the opposite conclusion, stating that there was a 28 percent variance from 1983 to 1984 and a 21 percent variance from 1982 to 1984. KTC Reply Brief at 32 n. 16.

No sufficient showing has been made to question the use of a constant real rate of return on equity for AFUDC purposes. KTC's presentation covers only the post-construction, operating period and, more importantly, relies on a showing that real, risk-free, short-term interest rates vary. Staff's calculations on brief also reflect a variation in such interest rates during the construction period. Neither KTC's nor Staff's calculation, however, has established that any substantial variation in real equity rate of return occurred during the construction period. Further, as found hereinafter in the general discussion on rate of return, the use of interest rates on short-term U.S. Treasury obligations is inappropriate in developing an allowed rate of return on equity, and its use as a measure of claimed changes in real equity rates is no more acceptable.

Thus, a constant real rate of return on equity, hereinafter found to be 8.90 percent, will be used, in conjunction with Staff's inflation factors, in calculating AFUDC.

3. AFUDC Base

The major issue surrounding the calculation of AFUDC involves the AFUDC base, i.e., the dollar amounts against which the AFUDC earnings rate should be applied. More specifically, the issue presented here is whether accumulated deferred income taxes (ADIT) that arose during the construction period should be deducted from the AFUDC base. This ADIT balance was created during KTC's construction period because the Commission's normalization policy does not allow such tax benefits to be immediately flowed-through or reflected for ratemaking purposes, whereas for income tax purposes, the deductions are taken immediately. Thus, the timing difference created between Commission and IRS policy generates the accumulation of deferred taxes.

KTC uses as the AFUDC base the accumulated monthly additions to its CWIP accounts during the construction period, that is, the accumulated dollar outlays for construction. KTC Initial Brief at 46; Exh. KTC 4-0 at 16-17. KTC maintains that the Commission's

"stand-alone" policy requires that the ADIT balance accumulated during the construction period because of interest expenses and property taxes related to the project, should not be recognized until such time as jurisdictional revenues generate income sufficient to permit tax deferral by KTC solely. KTC Initial Brief at 62-70. Therefore, KTC claims that this ADIT balance should not be deducted from the AFUDC base at all, but should be deducted from operational rate base at sometime in the future. *Id.* at 53-54. KTC's stand-alone argument regarding the correct time for recognizing the ADIT balance is discussed in greater detail, *infra*.

Staff and the State also accumulate monthly dollar outlays for construction to arrive at the AFUDC base, but they would deduct from that base thus calculated an amount representing income tax deductions, i.e., ADIT, available to the KTC partners during the construction period. Staff Initial Brief at 24-25; State Initial Brief at 42-44. Staff's and the States's rationale for deducting ADIT from the AFUDC base is that it represents a source of funds for construction costs provided by the federal and state governments, not by investors, and the investors should not earn a return (i.e., receive an AFUDC allowance) on funds they did not provide. Staff Initial Brief at 24-25; State Initial Brief at 42-43; Exh. FERC 18-0 at 4-7.

As support for their position regarding construction-generated ADIT, Staff states that it and the State are adopting "the same policy for AFUDC that the Commission follows when it reduces rates during operations by the ADIT balance," and that in Order No. 144, the Commission specifically confirmed this approach for timing differences occurring prior to the start-up of a newly created enterprise. *Regulations Implementing Tax Normalization for Certain Items Reflecting Timing Differences in the Recognition of Expenses or Revenues for Ratemaking and Income Tax Purposes*, Order No. 144, *FERC Statutes and Regulations, Regulations Preambles 1977-1981* ¶ 30,254, at p. 31,556 (1981); Staff Initial Brief at 25-26; State Initial Brief at 43-44. Staff and the State cite the following passage from the Preamble of Order No. 144 as confirmation of its approach:

The Commission notes that there may be situations in which newly created enterprises are in the process of constructing facilities for future service and do not currently have on file rates for an existing service. In such circumstances, the enterprise would have no rate base in which the deferred tax for construction-related timing differences may be reflected. Although not provided for in the final rule, the Commission believes in such circumstances that it would be appropriate

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Cited as "45 FERC ¶"

to reduce the balance that is utilized for calculation of AFUDC by the construction-related deferred taxes in order that future customers will properly receive the benefit of the time value of deferred taxes generated during the construction period.

Id. at p. 31,558.

KTC cites a recent initial decision which ruled against the Staff's and the State's position, namely, *Trunkline LNG*, 38 FERC ¶ 63,022, at pp. 65,136-139. In that case, the Commission Staff sought to deduct accumulated deferred taxes from AFUDC generated by an LNG project in Louisiana, relying primarily on the same passage from Order No. 144 as cited by Staff and the State here. In deciding that no Commission rule requires or prohibits deduction of construction related ADIT from AFUDC, Judge Stephen Grossman addressed this passage from Order No. 144, observing that:

[t]his statement gives rise to no obligation. At most, the Commission's "belief" of what is "appropriate" constitutes dictum. The Commission refused to adopt the proposal in its final rule because several regulations, which were not subject to notice in the rulemaking, would have been affected by the new requirement. *Id.* The Commission made this statement in 1981 and has not moved to revise these regulations in the proposed manner.

* * *

Order No. 144 expresses the goal advocated here by Staff, i.e., flow-through of the time value of construction-related tax deferrals. The Commission, however, has stopped short of requiring that the goal be carried out.

Id. at pp. 65,137-65,138.

I also agree that Order No. 144 does not answer the question whether construction-related ADIT must be deducted from the AFUDC base; there is certainly no affirmative requirement that this must be done.

Judge Grossman also analyzed the question using a "benefit/burden" test. Applying this test, the Judge determined that because the company's shareholders assumed both the short-term burden of immediate costs of construction and the long-term risk that they might not recover their investment, deferred taxes accumulated during the construction period should not be deducted from AFUDC, that is, the investors who funded the construction should receive the time value of ADIT and

not the ratepayers since they contributed no construction costs. *Id.* at p. 65,139.

Thus, the real question is: who should receive the construction-period time value of the deferred taxes, the investors (KTC's position) or the ratepayers (Staff's and the State's position)? Judge Grossman's decision, although still pending before the Commission, is highly relevant and applicable to this issue, and I see no reason to decide the other way. Here, Staff argues that because cost free "funds" were made available to KTC's investors through reductions to the income taxes of the KTC partners, the time value of the ADIT should be passed on to the ratepayers by deducting ADIT from the AFUDC base. Staff and the State may be correct that interest expenses and property taxes related to construction were a source of cost-free funds to KTC's investors, but their assumption that the ratepayers should receive the time value of ADIT prior to commencement of service is unfounded. Neither Staff nor the State cite any case law for this proposition, and no justification is found in the fact that the Commission reduces rate base during operations by the ADIT balance, for deduction at that point is proper. When transportation facilities are constructed by an oil pipeline, the shippers' obligations to pay rates covering the costs and expenses of the new facilities do not arise until construction is completed, the facilities are placed in service, and appropriate tariffs are in effect. Because ratepayers contribute nothing to the cost of construction of an oil pipeline, they rightly have no equitable claim during the construction period to the benefit of the deferred tax balances generated by the construction.¹⁸ The proper moment to allow ratepayers to receive the time-value of ADIT is when they begin to pay, through rates, for the carrier property in service and not prior to that time. Staff's and the State's position of deducting construction-related ADIT from the AFUDC base is rejected.

4. Compounding of AFUDC

Staff and the State propose semiannual compounding of the AFUDC allowance, which, pursuant to Order No. 561, is what the Commission permits with respect to electric and natural gas regulation. Thus, the Commission stated the following in Order No. 561:

[W]e believe that a monthly compounding of AFUDC . . . may result in excessive amounts capitalized since cash outlays for interest and dividends are not normally made on a

¹⁸ A different conclusion seems appropriate if ratepayers are required to shoulder certain construction costs prior to operation of new facilities—such as where construction work in progress amounts are

included in rate base or where the Commission has announced a policy permitting recovery from ratepayers of the costs of uncompleted construction. But such is not the case here.

monthly basis. We shall therefore permit compounding but no more frequently than semiannually.

Amendments to Uniform System of Accounts for Public Utilities and Licensees and Natural Gas Companies, Order No. 561, 57 FPC 608, 612 (1977), *reh'g denied*, Order No. 561-A, 59 FPC 1340 (1977). Thus, the State maintains that "FERC has consistently disallowed compounding on other than a semi-annual basis," citing *Trunkline LNG Company*, 29 FERC ¶61,195, at p. 61,393 (1984), and *Carolina Power & Light Company*, 4 FERC ¶61,203, at p. 61,470 (1978), for this proposition. State Initial Brief at 42.

KTC responds that in *Trunkline LNG Co.*, the Commission explained that "[t]he Commission's accounting regulations permit, but do not require, semiannual compounding of allowances for funds used during construction." *Trunkline* at p. 61,393. KTC maintains that the Commission's use of the word "permit", both in Order No. 561 and *Trunkline LNG Co.*, does not mean "require", and that "monthly compounding, for which there is ample economic justification, is not precluded by any Commission policy." KTC Reply Brief at 35-37.

Staff's and the State's argument that compounding of the AFUDC allowance should be done semiannually is persuasive, especially in light of the fact that KTC gives no reasons why a different policy should be applicable to oil pipelines than that applied to natural gas pipelines and electric utilities. As to the policy used for the electric and gas pipeline industries, when the Commission uses the word "permit" in Order No. 561, it means the company may, but is not required to, compound as frequently as semiannually (as contrasted with annually or no compounding), and does not mean that the company may compound more frequently than semiannually. Therefore, KTC's position is rejected.

5. AFUDC During the Test Year

The last issue in this section pertains to AFUDC during the test year. Initially, Staff did not allow for any addition to plant during the 1986 test year, but changed its mind and decided to reflect claimed plant additions in 1986 after reviewing data submitted as part of KTC's rebuttal evidence. However, Staff did not take the trouble to calculate an AFUDC allowance for the 1986 projects, stating that because the allowance amounted to approximately \$15,000 at the most, it would have a *de minimis* impact on the final tariff. Staff does not challenge the correctness of the AFUDC amounts to be included in the test year. Staff Initial Brief at 30-31.

KTC argues that the AFUDC allowance for the 1986 test year should be included because whether or not the amount is *de minimis* is not the issue. KTC maintains that Staff's position is inconsistent with its calculation of state tax depreciation on those same additions, which resulted in an increase to KTC's deferred tax account. KTC Initial Brief at 46 n.37.

KTC is correct that the AFUDC allowance for the 1986 projects should be included in the overall AFUDC amount. *Cf. Pacific Alaska LNG*, 9 FERC ¶61,041, at pp. 61,104-61,105 (the Commission required correction of an improper and unjustified return calculation, notwithstanding the *de minimis* impact of the error on the proposed shipping rate.) Staff should make the proper adjustment.

D. Accumulated Deferred Income Taxes (ADIT)—Federal and State

A regulated company accumulates deferred income taxes because of the differences in timing treatment of income and expenses for ratemaking purposes as compared to federal and state income tax purposes. Because tax law usually permits certain expenses (e.g., depreciation) to be accelerated quicker than does regulatory cost of service or book accounting rules, a timing difference is created wherein a regulated company will owe less taxes in its early years and more in its later years. The Commission on the other hand, has determined that a regulated company's accounts should be normalized. Therefore, a regulated company is permitted to recover in its current rates a tax allowance based on income as defined for regulatory purposes, which means that tax timing differences are disregarded in calculating the tax allowance, and a pool of funds known as accumulated deferred income taxes (ADIT) is created. KTC Initial Brief at 56-58.

There are three main issues that need to be resolved regarding KTC's ADIT balance: (1) whether ADIT should be deducted from rate base at the beginning of operation or at sometime in the future, (2) whether KTC may use unused investment tax credits to offset ADIT, and (3) whether the ADIT rate base deduction should reflect KTC's cost of capital or a risk-free interest rate. State Initial Brief at 44; Staff Initial Brief at 32; KTC Initial Brief at 55-56. Each of the outstanding areas of dispute is taken up below.

1. Treatment of ADIT That Arose During Construction Period

As determined *supra*, construction-generated ADIT should not be deducted from the AFUDC base. It must now be decided when this construction-related ADIT should be deducted from rate base. Staff and the State claim that according to the Commission's

"stand-alone" policy, such ADIT balance should be deducted from KTC's rate base as of the beginning of operations. KTC opposes this position, instead arguing that the stand-alone policy requires that no deduction should be allowed until sometime in the future when the pipeline generates sufficient income to utilize the deductions. It should be noted at the outset that Opinion No. 154-B is not silent on this point:

On the issue of consolidated taxes, the Commission reaffirms for now the use of its traditional stand-alone approach. See Opinion No. 154, 21 FERC at p. 61,652, p. 61,653 and *Columbia Gulf Transmission Co.*, Opinion No. 173, 23 FERC ¶ 61,396 (1983), *petition for review filed sub nom. City of Charlottesville v. FERC*, No. 83-2059 (D.C. Cir. Oct. 6, 1983)

31 FERC ¶ 61,377, at p. 61,840 n. 59.

The issue thus is how the Commission's stand-alone policy should be interpreted. Of course, each party argues that its respective interpretation is the correct and proper one.

Staff's and the State's position is essentially as follows. The construction-related ADIT balances were generated as a result of expenses incurred during the construction of KTC and represent benefits already received by KTC partners during the construction period.¹⁹ KTC's CWIP account measures the total costs of construction, including ADIT, which were then capitalized into KTC's rate base for rate of return and depreciation purposes. Thus, these construction costs will be gradually recovered from shippers in the rates they pay to KTC through depreciation of the plant over the lifetime of the property. Therefore, as the costs are amortized out of rate base, the ADIT balance will be reduced. Staff and the State argue that although it is correct to allow recovery of the construction costs themselves, KTC should earn no return on the gradually diminishing ADIT balance. This is because "the cost of construction to the owners was thereby directly and immediately reduced by the amount of those deductions, *i.e. the owners were actually out-of-pocket for much less than the total cost of construction reflected in the CWIP accounts.*" Staff Initial Brief at 33 (emphasis in original). Staff and the State maintain that construction-generated ADIT

represents a source of construction funds furnished by tax benefits accorded KTC investors by the federal and state governments. Therefore, they conclude that the ADIT balance must be deducted from rate base as of the beginning of operations because to do otherwise would require shippers to pay a return on dollars that the owners did not provide, but were instead provided by the tax collectors. Staff Initial Brief at 32-40; State Initial Brief at 44-53.

Staff and the State contend that the ADIT deduction from rate base is fully supported by Commission policy in regulating gas pipelines and electric utilities. See *Columbia Gulf Transmission Company*, 23 FERC ¶ 61,396 (1983), *aff'd sub nom., City of Charlottesville v. FERC*, 774 F. 2d 1025 (D.C. Cir. 1985), *cert. denied*, 106 S Ct. 1515 (1986); *Southern California Edison Co.*, 59 FPC 2167, 2174 (1977); *Jersey Central Power and Light Co.*, 2 FERC ¶ 63,046, at p. 65,267 (1978). Furthermore, they maintain that the Commission's stand-alone policy mandates their position, and that the proper test regarding the recognition of deferred taxes in ratemaking is "whether the expenses that generate the deductions are used to determine the jurisdictional service's rates." Staff Initial Brief at 35; see State Initial Brief at 51.

KTC's principal argument against deduction of ADIT at the commencement of operations rests on its interpretation of the stand-alone principle, which it maintains requires no deduction of ADIT from rate base until such time as customers supply revenue to KTC sufficient to permit KTC to realize the tax benefits solely on its own. KTC relies on language from *Columbia Gulf* for its position, namely that "the test is whether the expenses [which created the tax benefit] are included in the relevant cost of service." 23 FERC at p. 61,853. KTC interprets this language to mean that "[e]xpenses are included in the 'relevant cost of service' at the time the regulated company recovers them through the rates it charges to shippers." KTC Initial Brief at 73. KTC maintains that the Staff's and the State's interpretation of the stand-alone principle is inconsistent with the principle stated by the Commission in *Columbia Gulf*, that is, that a regulated company should be "considered as

¹⁹ As noted by the State, and agreed to by Staff, KTC offered no evidence disputing the presumption that either the partners of KTC or the consolidated groups of which they are members were able to immediately utilize the full tax deduction available to them as a result of KTC's construction activity. State Initial Brief at 49; Staff Initial Brief at 32, 32 n.1. As correctly stated by Staff, "[t]he burden of proof to rebut rests with the party in possession of the neces-

sary documentation, *Louisiana Power and Light Company*, 9 FERC ¶ 63,054 (1979); *aff'd*, 13 FERC ¶ 61,221 (1980); *Nantahala Power and Light Company v. FERC*, *supra* at 1351 . . . the obligation is upon the KTC partners to produce relevant portions of their filed tax returns (or the returns of the parents) to support any claim that the deductions were not used." Staff Initial Brief at 32 n.1.

nearly as possible on [its] own merits and not on those of [its] affiliates." 23 FERC at p. 61,852. Furthermore, KTC contends that the Staff's position creates a regulatory bias based on the financial situation of parents of the owners, i.e., if the parent is a perennial loss-corporation, rates would be higher because the deferred tax benefits could not be used, and the ADIT balance would be lower than if the parent was profitable and could use the deferred benefits. Exh. KTC 10-1 at 39-41; KTC Reply Brief at 42 n. 25.²⁰

KTC further relies on *Distrigas of Massachusetts Corp. v. FERC*, 737 F.2d 1208 (1st Cir. 1984), as an illustration of the principle that customer-contribution is the key reason for deducting deferred taxes from rate base.

Staff responds by stating that the Commission's requirement of an ADIT deduction from rate base has never depended upon whether or not there was sufficient jurisdictional income to offset or utilize the deferred tax benefits. Staff Reply Brief at 16. Staff asserts that the only question is whether the deduction was generated by an expense which will be borne by the ratepayers and that when the jurisdictional expense is paid for by the shippers does not matter as long as it is eventually borne by them. According to Staff, *Distrigas* does not support KTC's position. Unlike the situation in *Distrigas*, which concerned the issue of whether future shippers should have to pay for an expense incurred prior to the company being regulated,²¹ "the shippers here will pay every penny of the expense associated with the deferred taxes at issue." *Id.* at 23.

All of the parties agree that *Columbia Gulf Transmission* is the controlling authority on the stand-alone principle. The specific issue in *Columbia Gulf* was whether the tax rate used for cost-of-service tax allowance purposes should be the statutory rate or the substantially lower effective tax rate of the consolidated group. In making this determination, the test to be applied is "whether the expenses that generate the deduction are used to determine

the jurisdictional service's rate." 23 FERC at p. 61,853. The Commission chose to apply the statutory tax rate because the expenses that gave rise to the tax reducing benefits were not incurred in providing transmission service. The Commission explained in *Columbia Gulf* that

[t]he ratepayers were therefore not responsible for these expenses. Accordingly, none of the expenses of the gas development companies were included in the pipelines' cost of service. Because this is so, none of the deductions of the gas development companies should be allocated to the pipelines' ratepayers.

Id. at p. 61,853.

A proper reading of *Columbia Gulf* thus supports the Staff's and the State's position, and the correct test is "whether the customers ever pay the expenses associated with the deferred tax benefits, not when." Staff Reply Brief at 21 (emphasis in original).

Turning to the facts of the case here, KTC has made no attempt to adduce evidence disputing that the ADIT balances at issue were generated as a result of expenses incurred during the construction of KTC, that KTC's partners have already received the benefits associated with the ADIT balance, or that these expenses have been reflected fully in KTC's cost of service since the first day of operation.²² With a partnership such as KTC, tax benefits may freely flow through to the individual partners, which was the case here. The ADIT balance should be rightly deducted from rate base when the ratepayers have an obligation to pay the costs of construction which gave rise to the ADIT balance. This is especially true here where KTC does not deny that these expenses are reflected in the cost of service, and that the benefits of the tax timing differences giving rise to the ADIT balance have been realized by KTC's individual partners.

KTC has made up out of whole cloth a rather flimsy and unsupported argument which would

²⁰ The Staff contends that KTC's argument that an owner whose parent is profitable and can utilize the deferred tax benefits will have a higher ADIT balance, and thus lower rates than an owner whose parent is in perennial tax-loss situation, is a "red herring" because: (1) the relevant cases do not concern themselves with "jurisdictional income"; (2) it would be incorrect to have such a proposition as a general rule when only one pipeline has been specifically identified as having a tax-loss parent; and (3) KTC itself does not have perennial tax-loss parents. Staff Initial Brief at 38-39.

²¹ In *Distrigas*, because the expense was incurred prior to the time the company became regulated, the customers never incurred the \$4.6 million expense as would typically have been the case under the normali-

zation approach. The Commission not only disallowed imposition of this expense on future ratepayers, but it also disallowed a \$4.6 million rate base deduction until the deferred taxes were paid off because such expense would never be included in the jurisdictional cost of service or in jurisdictional rates. Staff Reply Brief at 22-23.

²² Furthermore, KTC witness Hildahl was asked in his direct testimony whether it mattered if the parent companies of the KTC partners may have deducted some or all of the construction period tax timing differences on their corporate tax returns. He did not dispute the fact that the parent companies did utilize the available tax timing differences during the construction period. Exh. KTC 10-0 at 24-25; see also Tr. at 17-19.

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defer full realization of ADIT until some unspecified time in the future. This would have an inequitable result given the facts that ratepayers would not only be paying through their rates the expenses that generated the ADIT balances, but they would also be supplying a return on the amount of ADIT balance in rate base when KTC's partners had already received the benefits of such balances. KTC has made no attempt whatsoever to substantiate when, under its theory, KTC would generate enough revenue so that it could utilize the tax timing difference. Furthermore, those companies who have already received the benefits of these timing differences are economically identical to KTC. To allow KTC to realize a return on the ADIT balance when the benefits of the balance have already been received by its partners would provide KTC with a double benefit, and thus an unjustified windfall. KTC would have us view it as if it were totally divorced from the reality of the situation.

For all of the above reasons, KTC's interpretation of the stand-alone policy is rejected. As aptly stated by Staff witness Mopsick, "[i]t would be inconsistent and unfair to recognize the build-up of these [interest and tax] expenses during construction and add them to the jurisdictional cost of service, but then fail to recognize the deductions that these expenses generated during construction for ADIT purposes." Exh. FERC 19-0 at 13. Construction-generated ADIT must be subtracted from KTC's rate base at the start-up of operations.

2. Investment Tax Credit Offset to ADIT

Investment tax credits (ITC's) are a direct credit against taxes owed for IRS purposes. Pursuant to Section 203(c)(2) of the Revenue Act of 1964, the Commission may not use ITC's to reduce, directly or indirectly, KTC's Federal income tax expense and, therefore, rates. This restriction disallows the sharing of federal ITC benefits available to the company with the oil pipeline ratepayers. Accordingly, neither Staff nor the State gave any consideration to the ITC's in this case; the credits were simply ignored. Staff Initial Brief at 40; State Initial Brief at 67-68.

KTC, on the other hand, does not ignore the ITC's. Because in its early years KTC had no net taxable income against which it could apply the ITC's, some ITC's remain unused. Thus, KTC treats these "unused" ITC's as carryforwards belonging to KTC and argues that they should be deducted from the company's ADIT balances. Exh. KTC 10-0 at 26. KTC's bases its position on two grounds.

First, KTC's position that the Commission's stand-alone principle mandates that the investors' ITC's be carried forward as "unused" and deducted from KTC's ADIT balance is rejected

for all of the same reasons that KTC's interpretation of the stand-alone principle was rejected in connection with the rate-base deduction of ADIT balances, *supra*. Again, KTC does not deny that the parent companies of its partners used or could have used the ITC's. As stated by Staff, the end result of allowing an ITC offset of ADIT is a

classic double-dip for the owners and a penalty on the ratepayers, i.e., (1) full realization by the owners of the tax savings associated with the ITC's (from which the ratepayers receive no benefit), and (2) a write-down of ADIT by an amount . . . equal to an . . . "unused ITC" balance (which increases rate base and this penalizes the ratepayers).

Staff Initial Brief at 41.

Second, KTC argues that the Financial Accounting Standard Board Interpretation No. 25, which suggests that unused ITC's may be used as an offset to ADIT, further supports its position. Even if KTC had any "unused" ITC's, Staff and the State note that on at least two occasions, the Commission has specifically rejected using FASB Interpretation No. 25 for ratemaking purposes. Staff Initial Brief at 43; State Initial Brief at 69; see *New York State Electric and Gas Corporation*, 37 FERC ¶ 61,151, at pp. 61,371-374 (1986); *Public Service Company of New Mexico (PSCNM)*, 13 FERC ¶ 63,041 (1980), *aff'd in pertinent part*, 17 FERC ¶ 61,123 (1981), *reh. den.*, 18 FERC ¶ 61,036 (1982), *aff'd in pertinent part*, 832 F.2d 1201 (10th Cir. 1987). In any event, KTC notes that "the ITC provisions applicable to electric utilities such as PNM differ dramatically from those applicable to oil pipelines." KTC Initial Brief at 83. n. 66.

The Commission policy that unused ITC's cannot be used to offset ADIT has been upheld in court, and no substantial reason has been given not to follow this policy. Moreover, KTC's reliance on FASB Interpretation No. 25 is unfounded in that this interpretation is used solely for accounting purposes.

For all of the above reasons, KTC's argument that unused ITC's should be deducted from its ADIT balance is hereby rejected.

3. Deduction From Rate Base vs. Risk Free Credit

I have determined that the appropriate time to give ratepayers the benefit of the time value of ADIT is when the expenses which generated the ADIT balance are included in the cost of service, namely, at the beginning of operation. Now, the proper mechanics of the ADIT deduction from rate base must be determined. It should be noted at the outset that Opinion No. 154-B requires that all deferred taxes must be

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deducted from rate base. 31 FERC ¶ 61,377, at p. 61,839 n. 55. The Commission reaffirmed this position in Opinion No. 154-C. 33 FERC ¶ 61,327, at p. 61,639.

Staff and the State contend that ADIT should be fully deducted from rate base so that no return is earned on such funds. They state that Commission policy requires such a deduction and cite Opinion Nos. 154-B and 154-C, as well as substantial case law to support this position. See, e.g., *Alabama-Tennessee Natural Gas Co.*, 31 FPC 208 (1964); *Minnesota Power and Light Co.*, 3 FERC ¶ 61,045, at pp. 61,127-28 (1978); *Trans-Alaska Pipeline System (TAPS)*, 10 FERC ¶ 63,026, at p. 65,189 (1980).

KTC, however, contends that ADIT should not be deducted from rate base because ADIT should be viewed as an "involuntary" loan, with all the risks of repayment falling on KTC. Therefore, KTC maintains that

[c]rediting shippers with KTC's overall cost of capital (which is the net effect of rate base deduction) compensates the shippers for a risk they do not bear and deprives KTC's investors of a premium to which they are entitled as a matter of regulatory fairness.

KTC Initial Brief at 86. KTC proposes instead to measure the time value of the ADIT funds by applying a risk-free interest rate to the ADIT balance and treating the resulting earnings as a credit to the cost of service. *Id.* at 88-89. KTC argues that Opinion No. 154-B does not definitively answer the question as to the proper treatment of the ADIT balance because it is "merely a policy statement which must be fully justified before it can be applied in a concrete case." *Id.* at 87; KTC Reply Brief at 46-49. Furthermore, KTC maintains that if the Commission's ADIT-deduction policy in regard to natural gas pipelines and electric utilities is blindly applied to oil pipelines, it may produce unfair results. KTC Initial Brief at 88; KTC Reply Brief at 51-52.

For the past twenty years, the Commission has consistently followed the position advocated here by Staff and the State in its regulation of natural gas pipelines and electric utilities. More recently, the policy of a full rate base deduction of ADIT was extended to an oil pipeline in TAPS where Judge Kane dismissed the pipeline owners' similar argument against a full rate base deduction by stating:

Deferred tax reserves represent recovered capital. Since that capital has been recouped there is no rationale that would support earning any return on it.

Trans-Alaska Pipeline System, 10 FERC ¶ 63,026, at p. 65,189 (footnotes omitted; emphasis in original). Moreover, as stated pre-

viously, Opinion Nos. 154-B and 154-C upheld the Commission policy of deducting deferred taxes from rate base and specifically extended such policy to oil pipeline regulation. KTC has provided no evidence or persuasive argument why a different policy should be followed in this case. No reason appears why cost-based regulation should require that the regulated entity be permitted any return on cost-free deferred tax funds which were not supplied by the investors.

KTC's treatment of the ADIT funds is hereby rejected.

If the rate base deduction is to be required, KTC also addresses the question of how the ADIT deduction from the equity portion of rate base should occur. KTC Initial Brief at 87 n. 67; Exh. KTC 10-1 at 50-51. Opinion No. 154-B is silent on this issue. Staff and the State implicitly deduct ADIT from rate base prior to the trending adjustment to the equity portion of rate base. KTC, on the other hand, "believes that, if deduction of ADIT is adopted in this case, the deduction should be made after trending," KTC Initial Brief at 87 n.67, because to do otherwise would deprive KTC of the ability to earn a fair rate of return on its trended rate base. Neither Staff nor the State defends their method, and their failure to brief this issue constitutes apparent abandonment. *Arizona Public Service Company*, 5 FERC ¶ 63,038, at p. 65,181 n. 18. In any event, Staff's and the State's implicit position would have the effect of improperly inflating the ADIT balances. See *ARCO Pipe Line Company*, 43 FERC ¶ 63,033, at pp. 65,392-65,394 (1988).

KTC's method of subtracting ADIT after trending the equity portion of rate base is proper for the reason stated by KTC and is adopted.

E. Working Capital

Working capital comprises funds, over and above carrier property and other separately identified rate base components, for various allowances (e.g., inventory material and pipelines, prepayments and certain amounts of cash) used to satisfy daily operating needs. The Commission recognizes these funds as an investment, and permits a return to be earned on them. See Opinion No. 154, 21 FERC at p. 61,704 n.386; *aff'd*, Opinion No. 154-B, 31 FERC at p. 61,838. Thus, a working capital allowance provides money to cover the time lag between expenditure of funds to provide service and the receipt of revenues from that service.

Staff and KTC have no dispute about KTC's proper working capital amounts. The Staff supports KTC's recommended working capital balance. Exh. FERC 24-0 at 10-11; Staff Initial

Brief at 60, KTC Initial Brief at 91. The State, however, raises an issue regarding two components of KTC's claimed working capital: (1) material and supplies and (2) certain prepayments. State Initial Brief at 70; KTC Initial Brief at 91.²³

As to the material and supplies component of working capital, KTC claimed balances of \$539,219 for 1984 and \$351,718 for 1985 and the test year for the existence of 5,508 feet of 24-inch pipe and six anchors. KTC Initial Brief at 91.²⁴ The State argues that the balance for KTC's materials and supplies should be zero because these items are excess property left over from the construction project. The State maintains that the only record support for KTC's allowance is the Kuper Report which labels these items "inventory or surplus materials." Therefore, the State contends that it is reasonable to assume that these surpluses will be sold back to KTC's affiliates, especially since "KTC already has disposed of approximately 40 percent of that surplus"; the surplus items have not been used at all since the commencement of operations; KTC has no need for any materials and supplies as such items can be acquired, as necessary, from its affiliates; and even if there is a genuine material and supply need, one mile of pipe for a 37-mile pipeline is excessive. State Initial Brief at 72-73, and 73 n. 89.

As correctly stated by KTC, "the generally accepted standard within the industry is to maintain in a company's working capital account approximately one mile of spare pipe for each operating region. (KTC Brief at 92.)" KTC Reply Brief at 53; see Tr. at 378. Furthermore, a sale of the remaining items is purely speculative and would run counter to the standard practice. The fact that KTC sold some of its surplus materials shows that KTC tried to stay within the industry standards. Just because KTC has not used the items does not mean that they are surplus which KTC intends to sell in the future. For all of the above reasons, the State's position is rejected;

²³ No dispute exists as to KTC's treatment of prepaid insurance and cash working capital. Exh. FERC 24-0 at 10-11; Exh. AK 16-0 at 18-19. The parties have stipulated to a zero amount for cash working capital. Prepaid insurance was zero for 1984, and the monthly average for 1985 was \$188,000.

²⁴ The "Kuper Report", a document that contains a comprehensive analysis of all of KTC's property accounts, was issued in May/June 1985. Tr. at 373. As stated by KTC:

[KTC Witness] Mr. Baden explained that the Kuper Report reflected a balance of \$620,048 for materials and supplies, an amount that was subsequently reduced to \$377,562 in December 1984 and

KTC's adjusted figures for materials and supplies are hereby adopted.

As to prepaid property taxes, KTC claims a prepayment for the last half of each tax year, since KTC pays its property taxes at the end of June of each tax year. The State asserts that during the months of January through June, KTC accrues property taxes which act as a "negative prepayment", and that this amount should be used to offset the positive prepayment later in the year. State Initial Brief at 74; Exh. AK 16-0 at 18.

The key case on this issue, cited by the State and KTC, is *Carolina Power & Light Co.*, 6 FERC ¶ 61,154 (1979). In *Carolina Power*, the Commission held that mere book accrual of an estimated tax liability does not necessarily mean cash is available for working capital; only if the taxes are actually collected through rates from the customers in advance of payment will an offset be created against working capital. *Id.* at pp. 61,297-61,298.

The State does not unequivocally state that KTC collected taxes in advance in rates to shippers. State Initial Brief at 74; Exh. AK 16-0 at 18. The State's only statement is that "during the months of January through June, KTC accrues an amount for each month's portion of the estimated property taxes." Exh. AK 16-0 at 18. This statement does not prove that KTC's accrual accounting entries were anything more than book entries; mere book accruals do not necessarily create cash. 6 FERC at p. 61,297. Therefore, the State's proposed tax offset is rejected.

F. Accumulated Depreciation

The appropriate depreciation pattern, depreciation base, and depreciation rates are discussed elsewhere in this decision. The issue that confronts us here is the appropriate date on which to commence the calculation of depreciation.

Staff calculated depreciation expense and the related accumulated reserve for depreciation starting with the dates specific facilities were placed in service. Staff also uses this

then to \$349,564 in January 1985, to reflect certain vouchers that had not previously been accounted for in KTC's materials and supplies balances. (Baden, Tr. 6/372-74, 376-77; Ex. KTC-4-12.) The differences reflect surplus materials and supplies disposed of by KTC to Alyeska, and were properly excluded from working capital. (Baden, Tr. 6/377.) The resulting average balances of materials and supplies were \$539,219 for 1984 and \$351,718 for 1985.

KTC Initial Brief at 93.

These adjustments were not made to Mr. Baden's exhibits but were instead explained on the record. See Tr. 372-74, 376-77.

approach in its calculations for trending the equity portion of rate base and for the rate of return. KTC placed property it constructed into service on October 7, 1984, and on October 25, 1984, KTC placed transferred property into service for book purposes. Thus, Staff calculated depreciation expense in 1984 on the two classes of property for 86 days and 68 days, respectively. Staff Initial Brief at 60-62. KTC witness Baden, however, calculated depreciation expense from November 1, 1984, notwithstanding his use of an October in-service date for his computation of rate of return and rate base inflation write-ups. *Id.* at 61; Exh. KTC 4-0 at 7.

Staff argues that the logical and accepted ratemaking principle holds that depreciation commences at the moment property is placed in service. Staff contends that not only has KTC's witness departed from this principle, but that he also has been inconsistent with his calculations of carrier property in service. *Id.* at 61-62.

KTC does not respond to Staff's assertion, and it apparently has abandoned this issue. See *Arizona Pacific Service Company*, 5 FERC ¶ 63,038, at p. 65,181. In any event, Staff's position is correct on the merits and must prevail over KTC's.

The State makes an interjection that must be dealt with. The State asserts that if its unit-of-throughput (UOT) method for depreciation, for which the State derives annual factors from a stipulation, is employed, the issue raised by Staff will be mooted. State Initial Brief at 76; see discussion *infra* of State's unit-of-throughput method. Because the State's UOT method is not accepted, as discussed hereinafter, its assertion of mootness is rejected.

V. Rate of Return/Capital Structure

Investors in a regulated company must be afforded a reasonable opportunity to earn a fair rate of return on their invested capital. See *Bluefield Waterworks & Improvement Co. v. Public Service Commission*, 262 U.S. 627, (1923); *FPC v. Hope Natural Gas Co.*, 320 U.S. 591 (1944). In *Bluefield*, the Supreme Court held that a regulated company

is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties...

262 U.S. at 629. Twenty years later in *Hope*, the Court similarly observed:

From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on debt and dividends on the stock. By that standard the return to the equity owner should be commensurate with return on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.

320 U.S. at 603 (citation omitted).

These concepts are reflected in Opinion No. 154-B, where the Commission concluded that in oil pipeline rate cases, "equity rate of return should be determined on a case-specific basis with reference to the risks and corresponding cost of capital associated with the oil pipeline whose rates are in issue." 31 FERC at p. 61,836 (footnote omitted). The Commission noted specifically that the focus in determining the cost of equity capital should be "on investor expectations and requirements with respect to earnings." *Id.* at p. 61,839 n. 47.

Making that determination is a matter of judgment which cannot be reduced to mathematical proportions. *Midwestern Gas Transmission Co.*, 32 FPC 993, 1000 (1964). It is not a "slide-rule" calculation, *cf. Colorado Interstate Gas Co. v. FPC*, 324 U.S. 581, 589 (1945), nor a search for "delusive exactness" *cf. Jones & Laughlin Steel Corp. v. Pfeifer*, 462 U.S. 523, 552 (1983).

While all parties in the proceeding recognize that KTC is entitled to a reasonable return allowance in its rates, there is substantial dispute over many specific elements bearing on the appropriate level of that allowance. The essential issues to be resolved in this section are: (1) how risky is KTC, i.e., what are the chances that the equity investors in KTC will be able to recover their investment and a reasonable return?; (2) what specific capital structure should be employed in the return analysis?; (3) given the risk level and capital structure to be employed, what is a reasonable rate of return on equity for KTC?; (4) what cost of debt should be reflected in KTC's return allowance?; and (5) should KTC's investors receive additional compensation for guaranteeing KTC's debt, i.e., should they receive a "suretyship premium"? The foregoing questions are, in some measure, interdependent. For example, equity investors in a high-risk enterprise must be allowed a higher return on their investment than investors making a low-risk investment. Likewise, as will be seen, the

allowance for a "suretyship premium" may depend on the treatment given to capital structure and debt costs, or on who benefits from the guarantee. Each of these issues is taken up below.

A. Risk

Staff's and the State's presentations on risk are persuasive. They demonstrate through many different factors that KTC is a low-risk enterprise. Thus, Staff and the State point out that: (1) the successful experience of TAPS and KTC's own 16-inch pipeline greatly mitigated construction completion and operational risks associated with subsequent North Slope oil pipelines; (2) because KTC enjoys a monopoly position in its service area, KTC's owners do not face significant business risks from competition; (3) because KTC's owners have guaranteed its debt with throughput and deficiency agreements (T&DA), they have a definite financial interest in maintaining throughput levels sufficiently high to insure the economic well-being of the pipeline; (4) employment of a variable tariff methodology (VTM) as proposed by Staff and the State would serve to further insulate KTC against the risk of undercollection of its actual costs due to increases or decreases in such things as throughput, net investment and corporate income taxes; and (5) the fact that Judge Kane found the TAPS line itself to be a low-risk investment means that whatever risks KTC investors face, they must be lower than risks faced by the investors in TAPS, the first North Slope pipeline. Staff Initial Brief at 63-72; State Initial Brief at 82-95.

The foregoing conclusions of the State and Staff are fully supported and confirmed by the appraisals of the owners themselves as revealed in the "decisional documents." These are written analyses prepared by or on behalf of the KTC partners at the time they made their investments. The documents unanimously disclose that KTC was perceived to be a low-risk investment at the various times when the individual owners determined to enter into the venture. Staff Initial Brief at 63-67; State Initial Brief at 84, 88-95. Further, as the State maintains, the absence of any discussion of risk in many of the investor risk documents indicates that the project's risk was deemed to be so low that it was not even worthy of comment. State Initial Brief at 84; Exh. AK 14-0 at 17. It must be remembered that the KTC owners were knowledgeable investors who were well aware of the risks associated with oil pipeline activities.

KTC generally argues that oil pipelines have greater business risks than either gas pipelines or electric utilities. Specifically, KTC's witness

Kolbe asserts that, conservatively, KTC should be treated as being consistent in risk with the bottom (i.e., on a scale of 1 to 100 percent with 1 percent being the riskiest) 25 percent of oil pipelines reporting to the Commission. KTC Initial Brief at 97. Thus, KTC claims that its pipeline constitutes a much riskier enterprise than other regulated businesses (i.e., gas pipelines and electric utilities).

This claim of high risk rests on three different types of risk KTC delineates, namely: (1) market risk, (2) proration risk and (3) operating risk. KTC Initial Brief at 105-117. Market risk deals with the chance that world oil prices may fall so low that North Slope oil production will be "shut in", causing KTC's oil shipments to decrease to a level insufficient to permit KTC's owners to recover their investment and the allowed return. Staff and the State effectively counter this "risk" by stating that this is one of the specific risks the investors considered in the 1982 decisional documents when they concluded that the overall risk of the project was low. Exh. AK 14-9 at 8. Furthermore, KTC never established at what point competitive effects of the world price of oil would have any real impact on KTC's throughput. Staff Reply Brief at 34-39; State Reply Brief 35-41.

Proration risk involves the chance that unanticipated high demands for TAPS services will exceed available TAPS capacity, resulting in proration of the use of the TAPS facilities. This in turn, it is argued, would prevent the full utilization of KTC's pipeline and the ability of KTC to collect its allowed return. KTC has made no showing of any prorationing of oil shipments through TAPS anytime in the past or any real risk of such prorationing in the foreseeable future. Staff correctly points out that it is improper to look simply at the current capability of TAPS in evaluating the proration risk because of the presence of two additional factors, namely that TAPS can add Drag Reduction Additive (DRA) which will increase the flow of oil and the fact that TAPS was designed to have 12 pump stations of which only 10 are currently in operation. Staff Reply Brief at 39-40. Furthermore, at least one of the decisional documents concluded that "[r]isk of proration due to capacity limitations is considered low as long as the expanded [KTC] system can be commissioned by end 1984." Exh. AK 14-9 at 10; see Exh. AK 14-7 at 7-8.

Last, KTC argues that KTC faces the risk of extraordinary outages due to its geographical location. Any such operating risks KTC faces were minimized by the success of TAPS and KTC's 16-inch pipeline, for neither has

incurred any extraordinary outages. See AK Exh. 14-9 at 9.

Of course, KTC contends that little, if any, weight should be given to the decisional documents. This argument is totally unpersuasive. First, history attests to the accuracy of KTC's investors' "low-risk" conclusion. Further, KTC's throughput actually increased from about 80 million barrels in 1985 to about 100 million barrels in 1986, despite the drop in world prices in those years and despite the fact that Milne Point throughputs were less than originally anticipated. Staff Initial Brief at 68-69. Therefore, the investors' "low-risk" assessment is no less applicable today than it was when the decisional documents were written. It is unfounded for KTC to claim that the contemporaneous 1982-1984 risk evaluations of the four KTC owners are subjective, uncritical and less reliable than the allegedly "objective" and "unbiased" risk analyses made by its hired consultants for purposes of this proceeding. As stated in Opinion No. 154-B, the focus of the inquiry should be on investor expectations, and the decisional documents are highly probative for this purpose.

Therefore, KTC's position is rejected. I find that KTC exhibits lower risk than TAPS did at the outset, and is markedly less risky than typical lower-48 oil pipelines because of the lack of competition KTC faces, either from other pipelines or from other forms of transportation in its service area.

Moreover, KTC is substantially less risky than FERC-regulated natural gas pipelines. The latter, at least since the early 1980s, have been operating in an increasingly more competitive national market. Their sales have fallen in competition with alternative fuels; there is substantial interpipeline competition for existing sales markets; and most gas pipelines are now constrained to act as transporters of gas owned by others which may further displace their own sales. Further, these competitive pressures on their sales have caused, and will continue to cause, substantial risks for natural gas pipelines with respect to their obligations under long-term, take-or-pay gas purchase contracts with natural gas producers. KTC, on the other hand, faces no such risks. Its market position is unassailable: it buys and sells no oil; contract and physical tender limit its duty to its shippers; and its actual throughput is backed by substantial oil reserves and is buttressed by the throughput and deficiency agreements which act to guarantee its debt.

B. Capital Structure

In *Arkansas Louisiana Gas Co. (Arkla)*, Opinion No. 235, 31 FERC ¶ 61,318 (1985), the Commission approved a general policy of

using actual rather than hypothetical capital structures for natural gas pipeline rate cases. *Id.* at p. 61,726. Relying on this 1985 policy pronouncement, the Commission announced in Opinion No. 154-B its intention respecting the capital structure to be employed in oil pipeline rate cases:

The Commission must decide on the appropriate capital structure to use to determine a pipeline's starting rate base and to thereafter compute the pipeline's allowed return. The Commission recently expressed for gas pipelines a general policy of using actual capital structures rather than hypothetical capital structures. The Commission believes that this approach is appropriate for oil pipelines. The actual capital structure could be the actual capital structure of either the pipeline or its parent. The Commission concludes that a pipeline which has issued no long-term debt or which issues long-term debt to its parent or which issues long-term debt guaranteed by its parent to outside investors should use its parent's actual capital structure. However, a pipeline which issues long-term debt to outside investors without any parent guarantee should use its (the pipeline's) own capital structure.

31 FERC ¶ 61,377, at p. 61,836 (footnotes omitted).

But the Commission did not rule out the use of a hypothetical capital structure in all cases, for it stated that it would "allow participants on a case-specific basis to urge the use of some other capital structure." 31 FERC at p. 61,833.

Notwithstanding the general policy pronouncement in *Arkla* and Opinion No. 154-B to use actual capital structures over hypothetical ones, the Commission in *Alabama-Tennessee Natural Gas Co.*, 38 FERC ¶ 61,251, at p. 61,849 (1982), addressed the question of what limits to place on this general policy. The Commission found that Alabama-Tennessee's 95.78 percent equity ratio had moved beyond "generally accepted limits" and adopted in its place a hypothetical capital structure of 55 percent debt and 45 percent equity in order to avoid an "abnormally high" rate of return on equity. Thus, the Commission stated that:

[w]hen an equity ratio moves beyond generally accepted limits, the Commission may find that it has to prescribe anomalous rates of return in order to mitigate the effects on ratepayers of abnormally high equity ratios. In such instances an exception to *Arkla*'s general policy is justified ...

Id. at p. 61,849.

And again in *Tarpon Transmission Company*, 41 FERC ¶ 61,044 (1987), the Commission imputed a hypothetical capital structure

of 55 percent debt and 45 percent equity where an actual 100 percent equity capital structure was held to be "beyond the norm of a company facing Tarpon's risks." *Id.* at p. 61,138.

Therefore, it is clear that the general policy favoring the use of an actual capital structure (whether that of the pipeline or that of the parent) is not to be mechanically applied. Where the actual capital structure is "out-of-line," a hypothetical capital structure should be employed.

Against this backdrop, I will review the parties' proposed capital structures. KTC advocates the use of the pipeline's stipulated actual capital structure of 30 percent debt and 70 percent equity. Exh. KTC 10-0 at 11. Staff advocates the use of the weighted average of the actual capital structures of KTC's parent companies, that is, approximately 25 percent debt and 75 percent equity. Exh. FERC 20-0 at 3-4. Alternatively, in the absence of perceived constraints of Opinion Nos. 154-B and 154-C, Staff states that it prefers, and would have recommended, a capital structure of about 50 percent debt and 50 percent equity. *Id.* at 5-6. The State recommends use of a hypothetical 30 percent equity, 70 percent debt capital structure based upon an assumed "project financing." Exh. AK 14-0 at 4.

KTC's proposal is hereby rejected. First, all of KTC's debt was guaranteed by the parents of KTC's partners, and there is no publicly-traded stock of KTC. Opinion No. 154-B clearly mandates that a company's own capital structure should not be used where the company does not engage in independent financing. 31 FERC at p. 61,836. Such is the case here. Second, aside from what Opinion No. 154-B requires, KTC's stipulated actual capital structure of 70 percent equity and 30 percent debt is not typical of oil pipelines that transport only crude oil.

KTC attempts to qualify the straightforward language of Opinion No. 154-B by stating that the Opinion does not appear to have been written with KTC's situation in mind, and therefore, policy justifications require that it not be applied to KTC. Specifically, KTC contends that the use of either a hypothetical or KTC's parents' capital structure may (1) result in unnecessary interference with management decisions in regard to financing and (2) discourage an oil pipeline from using a partnership form of organization since, in determining whether to join an oil pipeline partnership, an entity would have to consider the capital structures of each prospective partner's parent. KTC Initial Brief at 119-121. KTC then contradicts these alleged policy considerations by arguing that, according to its witness Dr. Myers, capital structure should have "little, if

any effect, on ratemaking." *Id.* at 117. As aptly stated by the State:

[i]f the latter proposition is true, [i.e., Dr. Myers' statement quoted above] pipeline investors (whether in partnerships or otherwise) should be indifferent to whether an actual, parent or hypothetical capital structure is used. But, as the vigor with which KTC has defended its 30/70 capital structure ... demonstrates, capital structure *does* have a significant effect on ratemaking.

State Reply Brief at 43 (emphasis in original).

Therefore, beside what Opinion No. 154-B clearly mandates, KTC's purported policy justifications for using a 30 percent debt and 70 percent equity capital structure are also unsound.

Moreover, the capital structure created for KTC by its owners had a dual purpose, that is: (1) to replicate, more or less, the average structure of its parents (with an eye to what policy the Commission might take in oil pipeline regulation), and (2) to maximize KTC's tariffs, i.e., rate levels. Because KTC would be faced with no competition, there was no incentive for the owners to adopt a cost-minimizing capital structure. Instead, KTC's owners' "incentive is to adopt a capital structure that, given the constraints of the regulatory regime under which it operates, would maximize its revenues (and hence its tariffs)." State Initial Brief at 97. The intent to do just this is evidenced by an internal memorandum to the former Chairman of the Board of the Standard Oil Company recommending that Sohio invest in KTC, which states:

The actual debt-to-equity structure [for KTC] is yet to be determined, but in general, will be set so as to maximize the future earnings stream of the project under whatever regulatory methodology is finally adopted by F.E.R.C.

Exh. AK 14-13 at 3.

Staff's proposed debt-to-equity ratio of 25.1 percent debt and 74.9 percent equity was based on KTC's parents' capital structures, which is what the Commission in Opinion No. 154-B said should be looked to if the debt of the company in question carries parental guarantees. But this capital structure is also flawed. First, Staff's equity ratio is unduly thick as compared with other crude oil pipelines. Staff itself demonstrates this by comparing KTC's capital structure with that of seven oil pipelines that transport only crude oil; these seven pipelines had an average equity ratio of only about 50 percent at yearend 1984. Exh. FERC 20-0 at 5-7. Moreover, the risk profiles for the parents were quite different from that of KTC, for pipeline transportation contributes to only

a small percentage of the parents' revenues. *Id.* at 5.

I conclude that neither the actual capital structure of KTC nor the substantially similar weighted average capital structure of its parents reflects the range of capital ratios normally associated with crude oil pipelines; nor does either comport with the risks associated with investment in KTC.

Thus, a hypothetical capital structure is appropriate since both KTC's actual and its parents' weighted capital structure are "out-of-line" with the norm. See *Tarpon Transmission Company*, 41 FERC ¶ 61,044, at p. 61,138 (1987); *Alabama-Tennessee Natural Gas Co.*, 38 FERC ¶ 61,251, at p. 61,849 (1982).

The State's hypothetical capital structure proposal rests on the testimony of its witness, Dr. Hass, who asserts that because KTC's business risk is very low, it could have employed substantial debt in its capital structure without triggering extraordinary concerns about the risks which accompany financial distress. He views KTC as possessing the necessary ingredients for project financing at a level of debt at least equal to 70 percent of its total original cost. Accordingly, he recommends that the Commission assume that KTC could have used a 70/30 debt-to-equity ratio and base its cost-of-service determination on that capital structure and the estimated costs of debt and equity which would be consistent with it. Exh. AK 14-0 at 33-34. The State describes project financing as a "standard financing tool" designed specifically to minimize the cost of capital by substituting debt for equity. State Initial Brief at 106.

Dr. Hass maintains that if KTC's management had chosen to employ its own project financing, given its relatively low risk as compared to integrated oil companies, his proposed 70/30 debt-to-equity ratio would have been achievable with "non-recourse" debt financing. Exh. AK 14-0 at 34-39. The ability of a company to use project financing and non-recourse debt rests mainly on "the ability of the project to generate sufficient cash flow (through either operations or asset liquidation) to service the debt." *Id.* at 34. State witnesses Hass and Horst both maintain that KTC could generate enough cash flow to service a 70 percent debt ratio. *Id.* at 34-39; Exh. AK 17-15.

Moreover, Dr. Hass states as his final reason for employing a 70/30 debt-to-equity ratio that this is the amount of debt typically used in project financing. For his 70 percent debt proposal, Dr. Hass depended upon (1) a *Harvard Business Review* survey of 146 commercial banks which conclude that project financing relies "heavily on leverage, generally for 65 percent to 75 percent of its capital needs,"

Exh. AK 14-0 at 39, and (2) the fact that a 70/30 capital structure was approved by the Commission in the project financing of two natural gas pipelines, citing *Ozark Gas Transmission Company*, 16 FERC ¶ 61,099 (1981); *Trailblazer Pipeline Company*, 18 FERC ¶ 61,244 (1982).

I find that selection of an appropriate capital structure for purposes of this proceeding should not be based on the State's project financing supposition, with its attendant 70 percent debt ratio. That special form of financing was not employed by KTC and has not been shown to be customary in the oil pipeline business. Nor has it been shown that debt ratios in the range of 70 percent are commonplace in the industry. An essential feature of energy project financing—which permits employment of an unusually high proportion of debt, but at an acceptable cost—is a tariff form that assures lenders that the revenue stream will be sufficiently high to protect their interest. Such assurance is typically provided by a cost-of-service rate or some other type of minimum bill, effective from commencement of operations, which satisfies lenders that revenues will recover unavoidable project expenses (including debt requirements) regardless of actual service levels. In such circumstances, lenders need not look to the creditworthiness of the enterprise nor to debt guarantees furnished by its sponsors. See, e.g., *Ozark Gas Transmission System*, 16 FERC at p. 61,195.

Accordingly, an appropriate capital structure will be determined by reference to Staff's alternative proposal. That proposal rests on the actual capital structures of low-risk crude oil pipelines. Staff witness Shriver derived his alternative 49.56%/50.44% debt-to-equity ratio by examining the year-end 1984 average capital structures of the seven largest oil pipelines which, like KTC, transport only crude petroleum. He chose these oil pipelines as representing that portion of the oil pipeline industry whose risk profile most clearly matches that of KTC. Four of the seven pipelines operate solely in Alaska. Exh. FERC 20-0 at 6-7.

For purposes of this proceeding, I adopt a hypothetical capital structure of 50% debt and 50% equity. Such capital structure is fully supported by the average capital structure of Mr. Shriver's group of seven crude oil pipelines. Cf. *Alabama-Tennessee*, 38 FERC at p. 61,850 (the Commission selected a hypothetical capital structure by reference to the average capital structure of Class A and B gas pipelines). That group average provides the best evidence of record for determining a capital structure for KTC for ratemaking purposes, giving due regard to KTC's risk characteristics.

C. Return on Equity

For many years, this Commission has followed a forward-looking, market-oriented cost-of-capital approach to determine an appropriate allowance on equity for regulated companies. See *Minnesota Power and Light Co.*, 31 FERC ¶ 61,045, at p. 61,132 (1978). While the Commission has placed substantial reliance on the discounted cash flow (DCF) method for this purpose, it has not hesitated to depart from a DCF analysis, in whole or in part, where warranted by the facts of particular cases. See, e.g., *Midwestern Gas Transmission Co.*, 31 FERC ¶ 61,317 (1985), (affirming initial decision, 27 FERC ¶ 63,073 (1984)); *Yankee Atomic Electric Co. et al.*, 40 FERC ¶ 61,372 (1987).

The facts in this proceeding have not lightened the task of the parties, or the Commission, in estimating a just and reasonable, market-oriented equity return for KTC. The company is a partnership and the partners are wholly owned corporate subsidiaries of four integrated oil companies. Exh. AK 14-0 at 15. Thus, KTC has no publicly traded common stock nor do the partners. Moreover, there is no group of crude-oil pipelines whose stock is publicly traded and whose market-based equity capital costs could therefore serve as a proxy measurement for the appropriate return allowance for KTC. Finally, while the common stock of the four integrated oil companies is publicly

traded, no party has proposed to measure KTC's return by reference to the equity capital costs of those companies. These circumstances have colored the presentations of the parties, and it is against this backdrop that their proposals must be assessed.

KTC, the State and Staff have submitted a total of five independent estimates of required equity rates of return reflecting essentially four different methodologies. KTC relies on a "risk-positioning" variant of the capital asset pricing model (CAPM) presented by its witness Kolbe. The State, through its witness Hass, bases its recommendations on the average of the results of two methods—(1) a risk positioning analysis which finds KTC's risk comparable to, and employs the Commission's generic rate of return for, electric companies; and (2) a "corrected" version of KTC's CAPM presentation. Relying on its witness Shriver, Staff uses a DCF analysis of a gas pipeline group to determine the equity return allowance to be used with the parents' weighted average capital structure; alternatively, if Staff's hypothetical capital structure is adopted, it bases the return on a relationship between equity ratios and equity returns derived from Commission-approved settlements in numerous gas pipeline rate cases.

The following table summarizes the specific nominal and real equity return recommendations of the parties:

(1) State (Exhs. AK 14-41; 14-44; 14-0 at 4-5)

	Equity (N)*	Equity (R)
March 1983—Dec. 1983	15.2%	—
Jan. 1984—Sept. 1984	14.5%	—
Oct. 1984—Dec. 1984	14.7%	11.5%
Jan. 1985—Dec. 1985	14.7%	10.4%
Jan. 1986	11.4%	7.8%

(2) KTC (Exhs. KTC 8-11 Panel B, C; 8-0 at 6, 25)

	Equity (N)**	Equity (R)
1982	22.9%	—
March 1983—Dec. 1983	17.6%	—
Jan. 1984—Sept. 1984	18.8%	—
Oct. 1984—Dec. 1984	18.9%	14.6—15.3%
Jan. 1985—Dec. 1985	17.5%	12.9—13.5%
Jan. 1986	16.4%	11.9—12.8%

(3) Staff (25.1% debt/74.9% equity) (Exhs. FERC 20-0 at 2, 3; 24-5; 24-6; 18-0 at 7, 8)

	Equity (N)	Equity (R)
1982	18.68%	9.78%
1983	13.68%	9.78%
1984	13.58%	9.78%
1985	13.78%	9.78%
Jan. 1986	13.78%	9.78%

(4) Staff (+9.56% debt/50.44% equity)

	Equity (N)	Equity (R)
1982	19.41%	10.51%
1983	14.41%	10.51%
1984	14.31%	10.51%
1985	14.51%	10.51%
Jan. 1986	14.51%	10.51%
* Average of the State's risk approach and KTC's CAPM model as revised by the State.		
** Midpoint of each range.		

This decision finds that no party's specific recommendation respecting equity return allowance is acceptable. As hereinafter determined, a just and reasonable nominal equity return for KTC is 12.90 percent, with a corresponding real return of 8.90 percent, from 1986 forward. For earlier operating periods and for the calculation of AFUDC during the construction period, that real return shall be increased by the inflation rates proposed by Staff. The position of the parties, a discussion of these positions and an ultimate determination of the equity rate of return for KTC follows.

1. Positions of the Parties

a. KTC

Through the method employed by its witness Kolbe, KTC attempts to determine the market-required nominal returns for KTC by adding to a risk-free rate of return a specific premium amount to reflect the risks of investment in KTC. In order to determine the premium for KTC, Kolbe first estimated the long-term risk premium for the stock market as a whole at approximately 8.5 percent by reference to the published data of Ibbotson Associates, Inc. This data shows a market premium for stocks over U.S. Treasury bills of 8.6 percent for the period 1926-1985 and 8.3 percent for the period 1947-1985. Exh. KTC 8-0 at 22-23.

Next, it was necessary for the witness to estimate the relative riskiness of KTC compared to the overall market. For this purpose, he employed "beta", which is said to measure the non-diversifiable risk in a particular investment as a function of the relationship between volatility in return on the particular investment to the volatility in return on the overall market (beta for the overall market is taken to be unity, i.e., 1.0). Because neither KTC's stock nor that of other oil pipelines is publicly traded, the witness used an indirect method to calculate beta for KTC which relies upon an accounting risk analysis of a group of 55 oil pipelines. By developing and applying a set of formulas correlating the variation in accounting risk data to the unlevered beta (i.e., capital structure adjusted to an all-equity basis) of some 1000 publicly-traded corporations, witness Kolbe inferred the unlevered beta for each of the oil pipeline companies in his sample. Exh. KTC 8-0 at 17-18, 20. He then positioned KTC at the 25th percentile or bottom quarter

of the group in terms of risk (i.e., at a beta level lower than the groups mean) implying a beta for KTC of about 0.8. Exhs. KTC 8-0 at 30 and KTC 8-21 at 59.

Given the market risk premium described above, witness Kolbe selected an all-equity risk premium for KTC of 6.75 percent to 7.25 percent. Exh. KTC 8-0 at 30-31. Coupled with risk-free interest rates measured by yields on U.S. Treasury bills and short-term notes during relevant periods commencing March 1982, this premium produced nominal unlevered costs of equity for those periods. Exhs. KTC 8-0 at 21, 23-25, and KTC 8-8 (Panel A). These unlevered costs were then adjusted upward by a formula to yield the nominal costs of equity, as shown in the above table, corresponding to KTC's stipulated capital structure. Exhs. KTC 8-0 at 7 and KTC 8-11 (Panel B).

b. The State

The first of witness Hass's two methods is bottomed on his assessment that KTC's risks are quite low, and consequently, electric utility industry returns would constitute a good proxy for KTC's returns. Exh. AK 14-0 at 48. The low risk assessment was based, first of all, upon the perception of the project investors themselves, as revealed by the decisional documents discussed above. This perception was supplemented by an independent analysis comparing oil pipelines facing risks comparable to KTC with other oil pipelines, gas pipelines, and typical non-utility companies on the basis of variability of returns. Exh. AK 14-0 at 30-33. From this analysis, Dr. Hass concluded that KTC's risks are less than those of the three comparison groups, and KTC therefore requires a lower return than the others. Exh. AK 14-0 at 45. The low-risk assessment was further corroborated by the results of a statistical model developed by State witnesses Lakonishok and Dr. Hass to explain market risk (beta) as a function of eight different accounting variables, ranked in order of explanatory significance; these variables were: availability in operating income, growth, dividend payment, accounting beta, leverage, interest coverage, size, and current ratio. The model was applied to some 1000 companies, including 47 electric utilities and a selected group of 13 oil pipelines (i.e., eight TAPS carriers and five lower-48 pipelines deemed by the Department of Justice to have

substantial market power) considered most similar in economic status to KTC. Exhs. AK 14-0 at 45-48 and 14-38. From visual inspection of an array of the results of the analysis, Exh. AK-31, Dr. Hass concludes that the 13 oil pipeline proxy group has risk-determinant values, for the four most important variables, on par with or below, the electric group.

Given this risk assessment, Dr. Hass determined KTC's equity return by reference to the Commission's generic rulemaking exercise for determining the cost of common equity of a typical electric utility, using the Commission's formulas for updating and calculating equity returns for the relevant period in the instant proceeding. Exh. AK 14-32 (Revised). These returns were then adjusted in a two-step process, using equations based on financial theory, to eliminate the typical leverage from electric utilities (assumed to be 48% debt, 12% preferred and 40% common) and to substitute a new leverage for KTC. Exh. AK 14-0 at 49.

Dr. Hass's second approach modified KTC witness Dr. Kolbe's CAPM presentation in essentially three major respects: (1) determination of market risk premium, (2) selection of the model to be used in relating accounting measures of risk to market risk measure (beta), and (3) determination of the accounting risk measures that are appropriate for KTC, i.e., choosing an appropriate proxy group. Exh. AK 14-0 at 59-64.

First, the witness criticizes Dr. Kolbe's reliance on the historic average (60-year and 29-year) market risk premium over Treasury bills reported by Ibbotson Associates. He asserts that it is generally recognized that the premium is not a constant but is inversely related to the level of the riskless rate—the premium tends to be lower when interest rates are high, and *vice versa*. In place of Dr. Kolbe's market risk premium, Dr. Hass substitutes a premium determined by the difference between Merrill Lynch's current estimates of the required return on the S & P 500 and contemporaneous U.S. Treasury bill rates at various times over the period March 1983 through June 1986. The substitute premium ranges from a high of 7.2 percent to a low of 4.3 percent and, on average, is some 300 basis points lower than Dr. Kolbe's premium over that period. Exhs. AK 14-37 and 14-0 at 63.

Second, the model used by Dr. Hass in relating accounting risk measures and market risk was the previously described Lakonishok model employing eight explanatory variables. The Kolbe model was found to be seriously flawed, primarily in its selection of only one explanatory variable and in its use of poorly measured and/or inconsistent equations.

Third, while agreeing with Dr. Kolbe that KTC has had too short an operating life to permit basing any accounting risk measure on KTC's own financial accounting statistics, Dr. Hass takes issue with the oil pipeline group that Dr. Kolbe has used as a proxy for KTC. He points out that the Kolbe oil pipeline group contains only a few companies, like KTC, with substantial market power and many companies with little market power. Use of such a proxy improperly assumes that KTC is an average pipeline, and the betas derived from such a sample, Dr. Hass asserts, are irrelevant to the question of KTC's risk. In place of that group, Dr. Hass relied on the set of 13 oil pipelines, *supra*, having market power similar to KTC, and applied the Lakonishok model relationships to the accounting variables of these pipelines. Based upon the results of this analysis, the witness uses a "raw" beta for KTC of 0.4, and an adjusted beta of 0.6. Exh. AK 14-0 at 65-66.

With the State's recommended capital structure, the nominal returns on equity for KTC under Dr. Hass's risk-positioning or "generic" approach range from a high of 18.08 percent for the March-December 1983 period to a low of 12.67 percent for the period January 1986 forward; the returns under the return/risk or "corrected" CAPM approach range from a high of 13.08 percent for the last quarter of 1984 to a low of 10.12 percent for January 1986 forward. Exh. AK 14-41 (Revised).

c. Staff

Asserting that publicly owned gas pipelines constitute the best proxy for oil pipelines such as KTC, witness Shriver performed a DCF analysis on a selection of nine such companies whose mix of business he deemed fairly reflective of the risks of transportation of energy resources. The nine companies in his group derived from 54 percent to 99 percent of their revenues from energy transportation, primarily natural gas, over the years 1982-1984. The group average was 80 percent. Exh. FERC 20-0 at 11-17. As previously noted, the witness recommends that the results of the DCF analysis be used with the capital structure of KTC's parents.

The DCF method measures the investor-required equity return as the sum of the dividend yield (D/P) and the anticipated rate of growth in dividends (g). Mr. Shriver calculated the yield portion under the DCF equation by averaging the results of the discrete and continuous models. For the growth component, "g", the witness employed five-year averages of internal growth rates to measure expectations of future dividend growth. The five-year period was taken as a reasonable balance between the relative stability of a longer period and the

greater sensitivity to recent developments of a shorter period. Looking forward from 1984, the DCF analysis yielded a simple average equity cost for the group of 14.30 percent and a median cost of 14.15 percent. *Id.* at 18-20; Exh. FERC 20-1.

The average yield component was 6.45 percent, the result of applying Value Line's individual company dividend projections for 1985 and 1986 to the witness's own projection of the average 1985 stock price for each company. These price projections were determined (1) by relating the historical price/earnings (P/E) ratio to the historical P/E for the market as a whole, as measured by the S&P 500, over a long-term period; (2) determining the estimated 1988 market P/E ratio from S&P and Value Line data and multiplying that estimate by the long-term individual company P/E-to-market P/E ratios to yield individual company P/E ratios estimated for 1985; and (3) applying the latter ratios to Value Line's 1988 earnings estimates for the nine companies resulting in an estimated 1985 average price for each of the nine companies. Exh. FERC 20 at 20-23.

The average growth rate was 7.85 percent based on averaging the internal growth rates for the nine companies. The individual company growth rates were determined from the product of earned rates of return on equity (r) and earnings retention rate (b). Value Line was the principal source for the estimated data employed in the calculations. *Id.* at 25-26. No allowance was made for the cost of acquiring new equity funds from outside sources since KTC has no plans for future expansion that will require significant external funds. *Id.* at 29.

From the foregoing, witness Shriver recommended a current nominal equity capital cost of 13.78 percent, somewhat lower than the average and median results of his calculations, to reflect a risk for KTC's operations below the average for the gas pipelines in his group. *Id.* at 28. He checked the reasonableness of his result in three ways: (1) by comparing the 13.78 percent derived for KTC with similarly derived investor-required equity returns for a comparison group of 21 companies (fourteen natural gas and seven crude oil pipelines) whose stock is not publicly traded; (2) by comparing these estimated investor-required returns for the 21 companies with their book returns, and their hypothetical market prices with their book values; and (3) by comparing his estimated investor-required returns for the 21 companies with equity returns allowed in 18 gas pipeline case settlements from December 1983 to December 1984. *Id.* at 31-42. He further checked the adequacy of his recommended equity return for KTC to provide a margin of

safety against financial risk by computing pre-tax interest coverage ratios for KTC and the companies in both the nine-company and the 21-company pipeline groups and comparing them against widely accepted coverage standards that measure relative risk. *Id.* at 42-43.

Mr. Shriver determined a real equity return of 9.78 percent corresponding to his nominal rate of 13.78 percent by subtracting the 4.0 percent inflation rate reflected by the 1984 CPI-U index. *Id.* at 45.

Alternatively, nominal and real rates of 14.51 percent and 10.51 percent, respectively, are recommended for use with the witness's hypothetical capital structure. Mr. Shriver determined by linear regression an equation which relates the equity rates of return and the equity ratios allowed in 18 gas pipeline dockets settled between December 1983 and December 1984. The equation is: $y = 16.575 - 0.041x$, where y is the equity return and x is the equity ratio. Simple substitution into the equation of the 50.44 percent equity ratio reflected in the hypothetical capital structure yields a nominal return of 14.51 percent. *Id.* at 10-11.

2. Discussion

a. Staff's Alternative Method

The settlement-based equation defining equity return solely as a function of equity ratio, developed by witness Shriver to determine an equity allowance for use with his hypothetical capital structure, is not a valid tool for establishing the just and reasonable level of KTC's equity return in this proceeding. This is so regardless of the particular equity ratio used in calculating the derived equity return.

First, the Commission's rules deny precedential value to the approval of uncontested settlements (18 C.F.R. § 385.602 (b) (iv)), and it appears that at least several of the settlements underlying the equation were uncontested. KTC Initial Brief at 154, n. 104. Moreover, Staff has uncritically recommended adoption of the equity return mechanically determined by application of its equation, without regard to the differences in business risk between KTC and the gas pipelines involved in the 18 settlements. To use the equation in this manner is, in essence, to turn one's back on the broad, company-specific evidentiary record on business risk made in this proceeding. The equation could presumably be used in this way to fix an equity return in any contemporaneously litigated gas or oil pipeline rate case, with little or no recourse to other evidence. While the invitation is appealing, it must be declined. Finally, apart from the foregoing considerations, the reliability of the equation has been called into question on statistical grounds by Staff witness Kilpatrick. Tr. 1813-1815. Accordingly, this method is rejected.

b. *The State's Risk-Positioning or "Generic" Method*

There are substantial and insurmountable problems with the State's risk-positioning or "generic" method for determining KTC's allowed equity return. At the outset, the Commission has thus far developed and published generic benchmark equity rates of return only for electric utilities. 18 C.F.R. § 37.2 No such proceedings have been initiated with respect to gas or oil pipelines, presumably because the Commission considers the development of generic benchmarks unsuitable to these industries. A finding of risk-parity between KTC and electric utilities, as urged by the State,²⁵ would not bridge this gap. In electric rate cases, the benchmark rates of return are not binding, 18 C.F.R. § 37.6; they are "advisory only." *Statutes and Regulations* ¶ 30,795, at p. 30,987 (1988). While the Commission has employed the benchmark rate as a "check" or test against the adopted rate, or used the changes in the benchmark to update its analysis, see, e.g., *Yankee Atomic* at p. 62,210, it has yet to adopt the benchmark itself as the measure of the allowed equity rate of return in an on-the-merits adjudication of the issue in any electric rate case. Nor, insofar as this judge is aware, has the electric benchmark rate been given any effect whatsoever by the Commission in the numerous gas pipeline cases litigated since its inception. Application of the electric utility generic benchmark equity rates of return to an oil pipeline in this proceeding is therefore unwarranted, whether standing alone or, as the State proposes, averaged with the results of another method.

Further, the benchmark rates employed in this method must also be adjusted for leverage. That adjustment is made through application of complex equations based on financial theory which relate changes in capital costs to changes in capital structure. This additional step adds a significant element of troublesome uncertainty to the result. While there is no quarrel with the general principle that the level of required equity (and debt) costs will vary with capital structure, *Ozark Gas Transmission System*, 32 FERC ¶ 63,019, at p. 65,046 (1985), there is apparently, as yet, no agreement among academic experts on how to fashion the appropriate general model to be used in making such calculations, particularly with respect to tax effect. The leverage equations employed by the witnesses in this proceeding reflect this lack of consensus. See, e.g., Exh. KTC 5-9 at 15-19; Staff Initial Brief at 96.

For all of the above reasons, the State's risk-positioning method is rejected.

c. *The CAPM Methods*

The record in this case strongly suggests that for purposes of setting rate of return on equity in proceedings before this Commission, the capital asset pricing model is an idea whose time has not yet come. It attempts to explain relative market risk solely on the basis of "beta", and it does not measure up as a forward-looking cost-of-capital approach. Staff Initial Brief at 86; Tr. 1796-1797. One of its sponsors in this proceeding praises it faintly as "far from perfect" but having "some predictive value." Exh. AK 14-0 at 11.

Apart from that general observation, the specific applications of the method here by KTC witness Kolbe and State witness Hass are of dubious reliability and are otherwise flawed. Both studies rely on computed regressions of accounting versus market risk measures for publicly traded companies and use these regressions to infer the market risk (i.e., the betas) of oil pipelines (for which market data are unavailable) from the accounting risk measures for oil pipelines. Given that there is no theoretically "right" way to estimate betas using accounting variables, and that the procedures that have been used in practice vary widely, Exh. KTC 8-21 at 37, it is not surprising that the witnesses and the briefs have expended much time and effort in defending the numerous assumptions, theories and calculations supporting their own presentations on beta and criticizing those of their opponent. See, e.g., Exhs. AK 14-0, AK 11-0 and KTC 8-21; see also KTC Initial Brief at 141-146, Reply Brief at 100-102; State Initial Brief at 120-124, Reply Brief at 53; Staff Initial Brief at 98-103. A detailed analysis and resolution of each of the subsidiary theoretical, conceptual and mathematical disputes raised by that evidence and addressed by those arguments is unnecessary here. Far from persuading that the Lakonishok model or that used by witness Kolbe should be accepted, the evidence creates such substantial doubts with respect to both that the measurement of an estimated beta for KTC by either one cannot be adopted with any reasonable degree of confidence. One further observation will be made. In regression analysis, R-squared is a statistical measure of goodness-of-fit, or how well the estimated equation fits the sample data: a value of 0 indicates there is no fit, while a value of 1 indicates a perfect fit. Exh. FERC 21-0 at 6. As shown by Staff witness Kilpatrick, the R-squared values

²⁵ The State's assessment of comparability of risk is based partly on the use of Dr. Lakonishok's regression model, discussed *infra*

for Dr. Kolbe's equations are so low, ranging from 0.11 to 0.23, as to make the equations totally unacceptable for purposes of prediction. *Id.* at 6-7; Staff Initial Brief at 99-102. While the reported R-squared values for Dr. Lakonishok's model are significantly higher, Exh. AK 11-0 at 19-20, this merely suggests that this model gives a better fit than Dr. Kolbe's, not that the model should be adopted.²⁶

Further, the sample used by Dr. Kolbe to determine accounting risk measures for oil pipelines is flawed. The sample embraces all oil pipelines for which Dr. Kolbe determined that usable accounting data were available. KTC Initial Brief at 137. None of the pipelines operate in Alaska. State Reply Brief at 56, n. 56. Thus the sample is heavily skewed toward those very many lower-48 pipelines having relatively little market power as contrasted with the few which, like KTC, possess substantial market power and which are, accordingly, Justice Department candidates for continued regulation. State Initial Brief at 123-125. The positioning of KTC's beta by Dr. Kolbe at the 25 percentile level of the group does not overcome the skewing in the sample itself, since those few pipelines in the sample like KTC have been shown to be significantly less risky than the 25 percentile level. *Id.* at 125.

Determination of market risk premium is a critical element of the two CAPM studies. KTC's analysis is so seriously flawed in this respect as to render it unusable. First, the 8.5 percent market risk premium was measured by data covering several decades. The use of such long-term historical data to measure a risk premium has been rejected by the Commission in the absence of a showing that the historical premium is applicable to current financial markets. *Consolidated Gas Supply Corp.*, 24 FERC ¶ 61,046, at p. 61,145 (1983); see also Staff Initial Brief at 103-104. KTC has made no such showing here, and there is evidence tending to show otherwise. Exhs. AK 14-0 at 37; FERC 20-12 at 5-6. Also, KTC's witness measures market risk premium as the difference between common stock returns and the returns on risk-free, U.S. Treasury bills (less than one-year term), derives a KTC risk premium from the market premium, and adds the KTC premium to short-term U.S. Treasury note rates in effect during periods pertinent to KTC's construction and operation. The Commission has a long-standing policy of looking to long-term U.S. Treasury obligations to determine a risk-free rate of return and has specifically rejected the use of short-term rates for that purpose. *Yankee Atomic*, 40 FERC at p.

62,211, affirming *Connecticut Yankee Atomic Power Co.*, 40 FERC ¶ 63,009, at p. 65,096. Witness Kolbe's procedure thus accomplishes a double violation of that policy. Dr. Hass also uses short-term obligations to measure risk-free returns and his determination is thus similarly faulted.

d. Staff's DCF Presentation

KTC takes issue with the Staff's DCF presentation essentially on the grounds that (1) DCF cannot be used to determine the cost of equity for a privately owned oil pipeline such as KTC; (2) KTC's equity cost cannot be inferred from a DCF analysis of gas pipelines; (3) apart from the above, Mr. Shriver's DCF analysis was so improperly implemented as to make the result unreliable even for gas pipelines; and (4) the tests or "checks" performed by witness Shriver on the results of his DCF analysis are largely meaningless. KTC Initial Brief at 133-134, 151-155, Reply Brief at 108-112. The State, although electing not to submit a DCF analysis of its own, has expressed no position on the Staff presentation.

No market-oriented approach to determining KTC's cost of equity capital, whether DCF or any other method, can operate directly on KTC or on a proxy group of oil pipelines, because market data are non-existent. Exh. AK 14-0 at 7; see also Exh. KTC 8-0 at 16. DCF is no more disqualified by these facts than are other methods. Proxy data can be used in a DCF analysis to determine an equity return for a privately owned company so long as the differences in risk between the selected proxy and the privately owned company are recognized. The Commission has previously taken this path by giving effect to a DCF analysis performed on a parent company, or group of parent companies having risk characteristics substantially different from those of its regulated subsidiary, and used the result, after adjustment for difference in risk, in determining an appropriate rate of return on equity for the subsidiary. *Yankee Atomic*, 40 FERC at p. 62,209; *Tennessee Gas Pipeline Co.*, 25 FERC ¶ 61,020, at pp. 61,094-61,095 (1983); *Consolidated Gas*, 24 FERC at p. 61,146.

Staff's choice of a group of nine gas pipelines as a proxy (or "primary comparison group," to use the descriptive term employed by the witness) is rational in the circumstances. Gas pipelines and oil pipelines are similar in their basic configurations and increasing price competition between natural gas and oil have caused the economic prospects of the two pipeline industries to become closely linked in

²⁶ But the better fit achieved by the Lakonishok model may be partly attributable to the witness's adjustment of anomalous data points—"outliers"—

and/or to numerous data recording errors which infect the study. KTC Initial Brief at 144-146.

recent years. Staff Reply Brief at 57. Contrary to KTC's assertion, the fact that gas pipelines are granted certificates of public convenience and necessity (under Section 7 of the Natural Gas Act) while oil pipelines hold no such "franchises" does not cause gas pipelines to be inherently better protected from competition than are oil pipelines. Gas certificates do not ensure market power, see *Mojave Pipeline Co.*, 38 FERC ¶ 63,010, at pp. 65,079-65,080 (1987), and the competitive forces currently operating on gas pipelines are well known and have been described, *supra*. The risks confronting all gas pipelines and all oil pipelines may not be precisely matched, as Staff recognizes, Staff Initial Brief at 84, but they need not be. The real question is whether the cost of equity capital for a group of gas pipelines can reasonably be used as a point of departure in setting the required rate of return for a particular oil pipeline—KTC—if the differences in risk between the two are recognized and given appropriate effect. Staff's proxy selection is valid for this purpose, and will be so used.

Respecting the implementation of the DCF analysis, the major flaws cited by KTC are that growth rates for the proxy companies were not measured by witness Shriver on a consistent time-frame basis; that market prices were estimated; that the proxy group spanned a broad range of risk, as measured by their betas, and the average beta for the group significantly exceeded that estimated for KTC by witness Kolbe; and that the result of the DCF analysis is inconsistent with the capital structure to which Mr. Shriver would apply it.

There is no particular magic which requires measuring future growth rates of different companies by reference to identical time periods. Witness Shriver generally used the 1984-1988 Value Line growth projections for his proxy companies; in certain cases where the five-year average was not considered representative of future growth prospects due to recent changes in company operations, he properly used something other than five years. Tr. 1768-1769. The objective, as recognized by KTC witness Kolbe, is to determine, independently for each company, the best estimate of future growth. Tr. 877. Blind adherence to the same rigid time frame for each company could well frustrate that goal. Staff Initial Brief at 89-90. Similarly, witness Shriver decided to estimate stock prices for his proxy companies as of the beginning of 1985 (rather than taking published prices as of that time) in order to achieve a forward-looking price—one good for the foreseeable future—in lieu of a one-time price which could be subject to temporary market aberration and thus unlikely to reflect future prices. Tr. 1745-1746; Staff Initial Brief

at 85-86. That decision appears reasonable on its face. It is noted that KTC has not submitted a revision to Mr. Shriver's analysis to cure the alleged improper implementation with respect to either growth rates or market prices.

The claimed broad risk range for the proxy companies is based on Value Line betas ranging from 0.85 to 1.20 (six of the nine values fall within the range of 0.95 to 1.05). Exh. KTC 8-16. Even if it is appropriate to measure risk solely on the basis of beta, which Staff denies, variation in risk between members of any industry group is to be expected and there has been no showing that the array of betas for Staff's gas pipeline group is so exceptional as to disqualify the group for proxy purposes. Further, KTC's comparison of the group's average beta, 1.03, with witness Kolbe's estimated beta for KTC of 0.80 does nothing to impeach the proxy. First, the 0.8 beta for KTC has questionable support, *supra*. Next, the comparison is between an unlevered beta for KTC and Value Line levered betas. Staff Reply Brief at 54. Finally, even if the comparison were taken at face value, it would simply demonstrate that KTC is less risky than gas pipelines, which is what Staff contends and this decision finds.

KTC's contention that Staff's DCF analysis is inconsistent with Staff's capital structure is immaterial. The 25 percent debt/75 percent equity capital structure proposed by Staff in connection with its DCF has not been adopted. The median equity ratio of Staff's gas pipeline proxy group is 50.6 percent and the simple average is 53.8 percent. Exh. FERC 20-6. Therefore, Staff's DCF analysis is not inconsistent with the capital structure adopted herein.

As to the tests or "checks" employed by witness Shriver to confirm the validity of the result of his DCF analysis of the gas pipeline proxy group, the one employing a comparison of coverage ratios is certainly meaningful. The Commission has recognized pre-tax interest coverage as a factor to be considered in assessing financial risk, *FERC Statutes and Regulations, Proposed Regulations 1982-1987* ¶ 32,242, at p. 32,220 (1982), and has given that factor specific effect in selecting a reasonable range for equity return. *Alabama-Tennessee Natural Gas Co.*, 13 FERC ¶ 61,224, at p. 61,519 (1980). KTC witness Kolbe has, in effect, conceded the point by acknowledging that interest coverage ratios would be one way of comparing the relative financial strength of companies and that investors would be interested in the coverage ratios of companies in which they had taken, or were considering taking, an equity position. Tr. 863-864. No reliance will be placed on the other tests performed by witness Shriver. While the DCF analysis performed on his secondary compari-

son group of 21 non-publicly traded companies may have some probative value, the necessarily hypothetical nature of that analysis raises substantial uncertainty as to the result. Use of approved returns in settlements of gas pipeline cases has been rejected above as a primary tool in determining KTC's rate of return and has little, if any, validity as a check on the result reached by other means.

e. Conclusion

The allowed equity return for KTC should be substantially less than the 14.30 percent average return produced by Staff's DCF analysis of gas pipelines, since KTC has been found to be less risky than that group. The upper end of the reasonable range of nominal returns for KTC thus is limited by that average.

The lower end of the range can be estimated by reference to the risk-free returns on long-term U.S. Treasury obligations, augmented by a premium amount which gives recognition to the risks associated with relevant equity investments. Over the period from October 1984 through June 1988 (the most recent month, as of the time of this writing, for which the data are reported in the Federal Reserve Bulletins), the return on 10-year constant maturity U.S. Treasury obligations has averaged 9.06 percent. Currently, as measured by the 9 percent's of May 1998, and 9¼ percent's of August 1998, 10-year U.S. Treasury obligations are returning 8.95 percent to 8.97 percent. *Barrons*, p. 129, September 26, 1988. KTC's rates to be determined in this proceeding are not limited to a past, "locked-in" period; prospective rates must also be determined. Projection of future interest rates is admittedly conjectural. Nonetheless, comparing the average returns on the 10-year obligations for the first and second quarters of 1987 (7.19 percent and 8.34 percent) with those for the comparable quarters of 1988 (8.53 percent and 8.91 percent) suggests that there may be an upward drift in rates in the near term from current levels. Accordingly, a risk-free rate of 9.25 percent is adopted. A risk premium of 2.25 percent will be added to that risk-free level. This amount falls within the range of premiums allowed by the Commission, either directly or by implication, in several gas pipeline and electric utility proceedings. See *Yankee Atomic*, 40 FERC at p. 62,211; *Midwestern*, 27 FERC at pp. 65,292-65,293 (citing *Tennessee Gas Pipeline and Consolidated Gas*), 31 FERC at pp. 61,722-61,723. *Midwestern* and *Yankee Atomic* both involved prospective rate-setting, and both were decided by the Commission within the time frame for which rates are being established in this proceeding. The lower end of the range of reasonable returns for KTC is thus 11.50 percent, and the mid-point of the range,

12.90 percent, is hereby adopted as the just and reasonable nominal equity return allowance for KTC for the period 1986 forward. That allowance falls slightly above the lower end of the range of returns averaging 14.30 percent which Staff witness Shriver calculated for his proxy group.

Based upon 1985 CPI-U data, witness Shriver recommended use of an estimated 4 percent inflation rate to determine the complementary real rate of return for the forward period. That estimated inflation rate has not been seriously challenged by KTC or the State. Notice is taken that while actual inflation rates have been lower than that estimate during some parts of that period, they have been higher during other parts. For the 12 months ended August 1988, the CPI-U rose 4.0 percent. Thus, the Staff's 4 percent estimate is hereby adopted, and the resulting real equity return allowance is 8.9 percent. While certainly not controlling, it is noted that the allowance is within the 5 percent to 10 percent range of real returns expected by the owners in light of their risk assessment, as revealed by the decisional documents, at the time they embarked on the project; with the capital structure and debt costs adopted herein, KTC's real return on total capital should fall within that range. See State Initial Brief at 115-116.

The allowed nominal equity returns for the operating period October 1984 through the end of 1985, and for the calculation of AFUDC during the construction period as previously discussed, shall be the foregoing 8.9 percent real return augmented by the inflation rates submitted by Staff.

D. Debt Allowance

No party has proposed using KTC's parents' average embedded debt cost in this proceeding. Staff Initial Brief at 109 n.1. The State, Staff and KTC seem to agree that if the Commission adopts KTC's stipulated 70 percent equity and 30 percent debt capital structure, as the company recommends, it should, in keeping with the policy of Opinion No. 154-B, use the company's embedded debt cost. State Initial Brief at 131; Staff Initial Brief at 109; KTC Initial Brief at 156; see Opinion No. 154-B, 31 FERC at p. 61,833. Moreover, Staff would use KTC's actual debt cost in connection with a parent weighted capital structure. Of course, as decided *supra*, neither KTC's stipulated capital structure nor that of its parents has been adopted here, but instead a hypothetical capital structure has been found appropriate for KTC. Thus, the State's and Staff's methodologies for determining debt costs for their respective hypothetical capital structures must be examined.

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Cited as "45 FERC ¶"

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Both Staff and the State contend that KTC's actual debt cost, with appropriate adjustments, should be used with their respective hypothetical capital structures. The two differ on how they adjust the actual debt costs to reflect the additional influx of debt into the capital structure.

Staff has recommended a debt cost of 10.80 percent for its hypothetical capital structure, which Staff witness Shriver states he derived as follows:

I first assumed that KTC changed, in the final quarter of 1984, from the ownership weighted capital structure that is my primary recommendation in this docket (74.925% equity; 25.075% debt) to a capital structure that is based on a 1984 year-end average of the capital structures of the seven risk-comparable pipelines (50.44% equity; 49.56% debt). I assumed, further, that the change was effected through a dollar-for-dollar replacement of equity with new debt, at bond yields prevailing during the final quarter of 1984. I found the weighted average cost of new issues of A and AA rated industrial debt in the fourth quarter of 1984 to be 12.38 percent. At that time, three of KTC's owners were rated in the AA quality category by Moody's while the debt of one, BP was rated A1. Finally, I averaged the 12.38 percent cost of the new debt with the 9.26 percent cost of KTC's existing debt, according to their respective weights, to arrive at an overall debt cost of 10.80 percent.

Exh. FERC 20 at 9-10.

Staff's interest rate of 9.26 percent for KTC's existing actual debt was used to price the 25 percent base portion of its hypothetical 50 percent debt, since it is the same cost as that actually experienced by KTC from 1982 through October 1984, as shown in an internal memo supplied to Staff by a KTC partner in response to a data request. *Id.* at 7-8; Exh. FERC 20-8; Staff Initial Brief at 108.

The State, on the other hand, made its adjustment by first looking at the interest rate KTC would have been charged if it had financed its operations on a stand-alone basis using bank loans which generally float with the level of interest rates. State witness Chatfield estimated that KTC would have been charged about 1 to 1.25 percentage points above the London Interbank Offered Rate (LIBOR). Exh. AK 14-0 at 50-51. State witness Hass then used as KTC's stand-alone interest rate LIBOR plus 1.125 percent (the average of Mr. Chatfield's spread range) since Hass states that there was evidence that Chatfield's derived interest rate was expected to be less than that calculated with Chatfield's formula. *Id.* at 51-52. The State contends that the second factor that

must be looked at in making this adjustment is the "conservation of risk premium" rule, which proposes that "[a]s the mix of debt and equity changes, the sharing of that overall project risk is shifted, but the overall risk remains unchanged." *Id.* at 52. These two factors were used as a basis from which the relationship between the degree of debt utilization and the before-tax cost of debt was determined by Hass. Hass made these calculations as follows:

Using KTC witness Chatfield's conclusions and a LIBOR rate of 11.5 percent, the estimated cost of debt at the 30 percent debt level is 12.5 to 12.75 percent; the unlevered cost of capital of 14.86 percent at that time [October 1984] is taken from Exh. AK 14-32. A fitted line through those data points which slopes upward at an increasing rate as the amount of leverage is increased, (i.e., consistent with increasingly greater risk-bearing as the debt proportion is raised) implies a cost of debt capital for a 70/30 ratio of debt-to-equity of approximately 13.6 percent. A similar exercise for the other estimation dates results in the estimates found in Exh. AK 14-34. The resultant estimated costs of debt capital over this period for a 70/30 debt-to-equity capital structure starts at 12.15 percent in March of 1983 and drops to 9.25 percent in June of 1986.

Exh. AK 14-0 at 53.

The State's method for determining debt cost for a hypothetical capital structure is unduly complex, overly theoretical, and unpersuasive, especially in light of the fact that Staff has provided us with a much simpler and more straight-forward method. Moreover, as KTC's witness Myers points out, Hass's leveraging curve is arbitrarily fitted and can yield anomalous results. Exh. KTC 5-9 at 30. For these reasons, the State's method is hereby rejected.

KTC rebuts Staff's debt costs in a number of unpersuasive ways. First, KTC claims in its reply brief that the estimated overall debt cost derived by Shriver for his 50/50 debt-to-equity hypothetical capital structure is not consistent with the risks or the hypothesized capital structure of KTC, citing the evidence of KTC witness Myers. KTC Reply Brief at 116; Exh. KTC 5-9 at 25. Dr. Myers further noted that Shriver's 9.26 percent short-term borrowing cost, "would be no higher at 50 percent debt than at 25 percent debt, because KTC's parents guarantee its debt." Exh. KTC 5-9 at 25.

Shriver's use of 12.38 percent debt cost in substituting debt for equity in his hypothetical capital structure reasonably reflects the risk and capital structure findings made herein. Further, it gives effect to the fact that once a long-term asset, such as an oil pipeline, is placed in service, the company will typically

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refinance with permanent capital such as equity or long term debt. Exh. FERC 20-0 at 8. In any event, if the cited evidence of Dr. Myers was relied upon to determine debt cost, the resulting interest rate would be lower than that proposed by Staff. KTC should not be heard to complain about the adoption of Staff's debt costs.

Second, KTC intimates that Staff, in making its estimate of debt cost for test year purposes, gave effect to actual debt rates for the first part of 1986. KTC Initial Brief at 160. An examination of the evidence of Staff witnesses Shriver and Ferguson respecting debt costs and test year estimates (see, e.g., Exhs. FERC 20-0 and FERC 24-4) does not support that suggestion. The cross-examination of KTC witness Myers, cited by KTC to support this argument, is apparently related to the question, addressed *infra*, of whether a VTM rate form should encompass actual changes in debt costs.

Because Staff's method for computing debt costs for an approximately 50/50 debt-to-equity hypothetical capital structure is straightforward and persuasive, it is hereby adopted with the following modification. No good reason appears why Staff witness Shriver, in pricing the debt for his hypothetical capital structure, should have used, as a starting point, the weighted capital structure of the parents. The appropriate starting point for the dollar-for-dollar replacement of equity with new debt is the stipulated capital structure of KTC. It is that capital structure which gives rise to the 9.26 percent actual debt cost which Shriver employed.

Since I am adopting a 50 percent debt/50 percent equity capital structure, the appropriate debt cost to be allowed herein for rate of return purposes shall be the sum of 9.26 percent multiplied by $\frac{30}{50}$ and 12.38 percent multiplied by $\frac{20}{50}$, or an average of 10.51 percent.

E. Suretyship Premium

A suretyship premium is the return the guarantors of the debt of a company may receive as compensation for incurring such risk and providing the guarantee. Thus, such a premium, when needed and properly computed, can be a legitimate component of the cost of service of a regulated entity. Exh. AK 14-0 at 68. Further, Opinion No. 154-B allows the parties to argue on a case-by-case basis whether the pipeline's "parent company is entitled to compensation for any guarantees of the pipeline's debt." 31 FERC at p. 61,837 n.50. Although here, KTC's debt is guaranteed by its owners' parents in the form of a throughput and deficiency agreement, the parties disagree as to whether a suretyship premium should be allowed in KTC's rates, the State and KTC contending

that one should be allowed, and the Staff arguing to the contrary.

To derive the suretyship premium, the State estimated what KTC's debt cost would have been on a stand-alone, i.e., unguaranteed, basis and then compared this to KTC's actual debt cost, adjusted to reflect the State's recommended capital structure. The State contends that the difference in KTC's actual and "stand-alone" debt cost is the value of KTC's parents' guarantee. State Initial Brief at 133; Exh. AK 14-0 at 68. Because the State contends that capital structure necessarily affects the measure of the suretyship premium, State Witness Hass calculated illustrative suretyship premiums for a range of capital structures. Exh. AK 14-0 at 70. Further, Dr. Hass recommended that the suretyship premium be expressed as a separate item in the cost of service rather than as an adjustment to the rate of return on equity, *id.* at 69, for two reasons: (1) the exact size of the premium is known and distinct from the equity rate of return and (2) no additional tax consequences will result from treating the premium as a separate cost-of-service component. The State's suretyship premium ranges from .59 percent to .76 percent. State Initial Brief at 136 n. 119.

KTC also argues that a suretyship premium is necessary to compensate investors for providing debt guarantees, and further contends that Opinion No. 154-B states that an oil pipeline is entitled to seek such a premium as a component of its overall return. KTC Initial Brief at 162; see Opinion No. 154-B, 31 FERC at p. 61,839 n. 50. KTC witness Chatfield calculated KTC's suretyship premium by taking the difference between KTC's commercial paper rates as guaranteed by its partners' parent companies and an estimate of the cost of debt without such guarantees, KTC Initial Brief at 164-165, concluding that the premiums should be 1.275 percent for 1984 and 1.375 percent for 1985 and later years. *Id.* at 162; Exh. KTC 7-0 at 8.

The Staff maintains that KTC's debt guarantors do not need a suretyship premium for four reasons. First, Staff contends that there is no evidence of record as to what the guarantee may have cost the parents, and that ratepayers should not have to pay for costs not shown to have been incurred. Second, Staff argues that the suretyship premium has effectively already been paid by KTC's lenders in terms of income forgone, and received by the parents of KTC's owners in the form of interest expenses to KTC that were lower than they would have been without the underlying guarantees. Therefore, "to compensate the guarantors (the parents of KTC's owners) a second time for their support, through a levy built into the tariff of the subsidiary pipeline, would be an inequitable bur-

den on the pipeline's customers." Staff Initial Brief at 117-118; see Exh. FERC 20-12 at 11. Third, Staff states that because of the owner's parents' investment in the construction of the KTC pipeline, "the value of the parents' reserve was greatly enhanced simply by the presence of the pipeline." *Id.* at 117-119. Finally, Staff contends that in the suretyship premium situation, shippers must pay for the premium in its cost of equity, whereas if shippers had paid for the premium in the form of higher interest expenses on unguaranteed debt, not only would there be no extra taxes to bear, but this increased debt cost would have given rise to a correspondingly higher interest deduction for KTC. *Id.* at 119-120. Staff points out that KTC witness Chatfield acknowledged that his recommended suretyship premium failed to take account of whether shippers might have to pay taxes on any dollars collected for suretyship purposes. *Id.* at 120; Tr. at 643-646.

KTC counters that Staff's position is incorrect because the benefit of lower debt costs is passed on to ratepayers, and not to KTC's investors, when KTC's actual interest rate is used.

I find that in the circumstances presented here, no special allowance for a suretyship premium should be reflected in KTC's rates. There is virtual identity of economic interest between KTC's owners and shippers.²⁷ The result, as Staff points out, is that the owners *qua* shippers are adequately and directly recompensed for the debt guarantees by the lower shipping rates stemming from the lower cost of the guaranteed debt. Moreover, as Staff argues, the construction of the KTC pipeline conferred an economic benefit on its owners by enhancing the value of their reserves. State witness Hass, who recommends a suretyship premium allowance, nonetheless admits that the guarantees were probably perceived as costless in the context of the overall economics of exploiting the oil reserves to be tapped. Exh. AK-14-0 at 35.

In a different factual setting, where economic identity of owners and shippers is absent, allowance of a suretyship premium in rates might well be proper. In such a situation, the State's proposal to reflect the premium as a separate cost-of-service item, rather than an addition to the equity rate of return, would be appropriate. In either case, the IRS would undoubtedly view the dollars as taxable income. But under the Commission's method of

calculating income tax allowances in the cost of service as a function of allowed return on equity, inclusion of the premium in equity return would require ratepayers to underwrite not only the cost of the premium but a tax on that cost as well. That result would be unnecessary and inequitable, given the stated purpose of the premium.²⁸

For all of the above reasons, KTC's and the State's proposal to allow a suretyship premium is rejected, and Staff's position is hereby adopted.

VI. Treatment of Non-Jurisdictional Usage

As noted in Section II, KTC did not build all of the facilities included in its cost of service; certain facilities were built in the early-1980's in connection with KPC's 16-inch oil pipeline and were acquired by KTC when it began operating the 24-inch pipeline. These facilities include the vertical support members (VSMs) and certain central production facilities (CPFs), which are both used by KTC's 24-inch pipeline and the original 16-inch pipeline, now owned by Oliktok Pipeline Company (Oliktok) and converted to an intrastate natural gas pipeline. Oliktok pays KTC an annual rent of \$432,000 for its use of these joint facilities, such payments providing KTC with a straight-line recovery of a pro-rata share (32 percent) of the initial capital investment associated with the VSMs over the expected 27-year life of the facilities. However, no other VSM-related costs, such as a return on investment or operating expenses, were included as part of the payments. Staff Initial Brief at 121; State Initial Brief at 136.

For purposes of this proceeding, KTC proposes to credit 50 percent of the annual rental payment from Oliktok (\$216,000) to its cost of service and to retain the remaining 50 percent, because it maintains that Oliktok's use of the VSMs and CPFs is "incidental" to KTC's use of those facilities and that:

well-established Interstate Commerce Act precedents...permit a carrier to include in its rate base the cost of facilities owned by the carrier but incidentally used by a non-carrier.

KTC Initial Brief at 170; see 49 C.F.R. Part 1201 at § 2-4; *Atchison, Topeka & Santa Fe Railway*, 127 I.C.C. 1 (1927), modified, 135 I.C.C. 633 (1928); *Danville & Western Railway*, 84 I.C.C. 227 (1924).

²⁷ So far as the record discloses, the only non-owner shipper through Kuparuk since operations commenced was Conoco, which shipped from Milne Point. During 1985, Milne Point shipments were less than 1% of total throughput; in 1982, they accounted for 6.6%. Exh. FERC 25-1, Sch. 4. Milne Point shipments ceased in January 1987. Their resumption will

depend, among other things, on future trends in oil prices. Conoco Initial Brief at 4.

²⁸ But see *Farmers Union II*, 734 F. 2d at 1514, 1525 n. 73, on the question of suretyship premium where hypothetical capital structures are adopted.

KTC states that these I.C.C. cases established three criteria for determining incidental usage: (1) the reasonable necessity for the facility, (2) its original purpose and (3) the relationship between the carrier's usage and the non-carrier's usage. KTC Initial Brief at 174. KTC argues that Oliktok's usage fulfills all three of these criteria. First, the VSMs are essential for oil pipelines in northern Alaska, but gas pipelines such as Oliktok do not need them since they can be buried underground. Second, the original purpose of the VSMs was to support an oil pipeline; Oliktok is operating the gas line now only because the KRU is producing casing-head gas along with oil. Third, KTC predominantly uses the VSMs to support its oil pipeline as demonstrated by the facts that Oliktok's use does not diminish the capacity of KTC's oil line, and KTC's use represents more than 80 percent of the weight resting on the VSMs. *Id.* at 175-176.

Furthermore, KTC contends that the State's and Staff's disallowance of 50 percent of the rental fees in KTC's cost of service would be inequitable since KTC cannot recover the disallowed amounts from anyone else. KTC argues that the KTC/Oliktok lease arrangement was an arm's length transaction, even though both are subsidiaries of the Atlantic Richfield Company (ARCO), and that it cannot charge Oliktok a higher rental fee for the use of the VSMs given the fact that Oliktok's entire operating cost for 1985, including the rental payment, was only \$889,000. *Id.* at 179. Therefore, KTC claims that it is entitled:

to a full recovery of all of its reasonable costs, including those incurred in regard to facilities that also serve an incidental use. So long as KTC shares with its ratepayers the fruits of that incidental use—i.e., the rentals it receives—there is no ground for complaint. In contrast, the protestants' [Staff and the State] proposed disallowances approaches would deprive KTC of any hope of recovering its legitimately incurred costs, and those proposals must therefore be dismissed out of hand.

KTC Reply Brief at 131.

In further defense of its credit provision, KTC maintains that its proposed 50 percent credit of the Oliktok rental payments would provide an incentive to KTC to make the maximum use of the VSMs. KTC Initial Brief at 181; see *Distrigas of Massachusetts Corp. v. FERC*, 737 F. 2d 1208 (1st Cir. 1984) (Commission allowed a 50-50 allocation of revenues as "an incentive to sell the use of temporarily idle gas facilities while also sharing the proceeds of those sales with its gas customers." *Id.* at 1221).

In the alternative, KTC argues that if the Commission determines that an allocation is to be made, only the incremental costs associated with the non-jurisdictional usage should be excluded, namely, those costs involved in constructing the VSMs to accommodate additional pipelines other than the 24-inch pipeline. KTC witness Stramler determined that out of the total VSM construction cost of more than \$40 million, only \$1.4 million or less should be attributed to sizing the VSMs to accommodate the 16-inch pipeline, and that the costs for constructing the CPFs would not have changed at all if only a 24-inch pipeline had been constructed. KTC Initial Brief at 184-185.

Staff and the State regard KTC's proposed revenue credit as grossly unfair to KTC's shippers and urge instead that costs associated with the jointly used facilities be allocated between jurisdictional (i.e., oil pipeline) and non-jurisdictional usage (i.e., gas pipeline). Although Staff and the State agree in theory that costs should be allocated between jurisdictional and non-jurisdictional usage of the joint facilities, they part company when it comes to the methodology which should be employed to make this allocation.

The State, using a carrier property adjustment, judgmentally allocates the cost of the joint-use facilities 50-50 between KTC's oil pipeline and Oliktok's gas pipeline. The State argues that this is a conservative division because KTC's 24-inch pipeline uses less than 50 percent of the 50 inches of usable space and because 96.5 percent of the costs of the VSMs are attributable to the 16-inch pipeline. State Initial Brief at 146. Moreover, the State maintains that KTC's rental formula is inadequate since it only accounts for the return of the original capital investment and does not recover DR&R, other expenses, and a return on capital. *Id.* at 142.

Staff, on the other hand, argues that when facilities are jointly used, the overall cost should be allocated in a manner consistent with the use and benefits derived by each of the joint users; i.e., cost related to non-jurisdictional usage should not be reflected in the jurisdictional cost of service. Staff Initial Brief at 123-127; see *Colorado Interstate Gas Co. v. FPC*, 324 U.S. 580 (1945) (Jackson, J. concurring); *United Fuel Gas Company v. Railroad Commission of Kentucky*, 278 U.S. 300 (1929); *United Gas Pipe Line Company*, 16 FERC ¶ 63,044 (1981); *Mississippi River Fuel Corp.*, 4 FPC 340 (1945), *remanded but aff'd in relevant part*, 163 F.2d 433 (D.C. Cir. 1947). In making this allocation, Staff developed a cost of service for the non-jurisdictional usage for each year compatible with that which it had constructed for KTC's overall cost of service,

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Cited as "45 FERC ¶"

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and reduced the overall annual cost of service by the non-jurisdictional cost of service, with the balance to be borne by the oil pipeline shippers. Staff used the same occupied space percentage (i.e., 32 percent) to allocate to Oliktok its non-jurisdictional plant cost as that used by KTC in developing Oliktok's rental rate. Staff Initial Brief at 127-128. Staff's method thereby allocates a pro rata share of the initial investment, the related return and expenses associated with the VSMs. *Id.* at 129.

Of course, both the State and Staff criticize KTC's "incidental-use" test as having no bearing on the propriety or amount of allocation of cost to each user. They state that the relevant question is what value should be placed on the usage, incidental or not. State Reply Brief at 64; Staff Reply Brief at 64-66. Furthermore, the State and Staff assert that the cases cited by KTC for its "incidental-use" proposition are merely valuation orders related to nonadversarial proceedings outside of a ratemaking context which are irrelevant to the proper ratemaking treatment of non-jurisdictional use issues. *Id.* at 64-66; *Id.* at 62-64; see *United States v. Los Angeles and S.L.R. Co.*, 273 U.S. 399, 310 (1927).

As to KTC's proposed 50 percent credit of Oliktok's rentals, both Staff and the State contend that this "incentive credit" is arbitrary and unfounded pointing to the facts that the Prudhoe Bay Unit (PBU) negotiated with KTC for rental space after the Oliktok negotiations but prior to this proceeding, and that no incentives were needed in either the Oliktok or the PBU negotiations. Staff Initial Brief at 134; State Reply Brief at 68-69; Tr. at 1111-1113. They also maintain that KTC's claim that it cannot recover the disallowed amounts should be disregarded because, as the State argues:

[h]aving failed to negotiate an arm's-length, market based rental fee arrangement with Oliktok (State Initial Brief at 141-44), KTC pleads hardship, arguing that if protestants proposed adjustments are made, KTC will be unable to recover the disallowances. KTC's argument however fails to mention the other side of the coin: without an adjustment, jurisdictional shippers will be required to pay more than their fair share of the costs. It is KTC's failure in the first place to negotiate a fair rental agreement that prompts the adjustment. Having failed to do so, it should not be permitted to plead a lack of redress.

State Reply Brief at 67 (footnote omitted).

Aside from the lack of incentives needed to enter into the specific rental negotiations, Staff and the State also point out that general ratemaking principles do not guarantee the recovery of all costs.

KTC responded to the State's and Staff's allocation methods as follows. As to the State's rate base reduction proposal, KTC argues that other than the fact that there are two users, the State's exclusion of 50 percent of the facilities construction cost from rate base is arbitrary and unfounded. As to Staff's revenue requirement adjustment, KTC maintains that Staff's assumption that the space occupied by the 16-incl. pipeline, i.e., 32 percent, relative to the total available space, represented the proportionate share of Oliktok's cost of service, is unfounded. KTC contends not only that the space allocation was not meant to reflect costs, but that Staff's method does not account for the facts that the VSMs are much wider at the Kuparuk River crossing and that space allocations are not appropriate for the CPFs.

KTC Initial Brief at 182-184.

An allocation of costs, as proposed by the State and Staff, is definitely superior to KTC's proposed revenue credit procedure for many reasons. First, Oliktok's rental payment was not designed to collect all elements of the cost of the joint use facilities, i.e., it passes along none of the fixed expenses of DR&R, return and associated taxes. Exh. FERC 24-0 at 13-14. Thus, the shippers would be paying the non-jurisdictional amounts for these excluded elements of cost if KTC's procedure was adopted. As aptly stated by Staff:

[t]he company's only attempt to allocate costs is to apply a revenue credit that reflects only half of a negotiated rental charge that admittedly does no more than recoup 1/27 of the initial investment on an annual basis, without giving any regard to a return on that investment or the associated expenses. There is no logic to this method. Unless some portion of the VSM-related return and expenses are also recognized in the non-jurisdictional allocation, the jurisdictional ratepayers will have to bear all of the costs alone, effectively giving the non-jurisdictional user a partial "free-ride" at the jurisdictional shipper's expense.

Staff Initial Brief at 129.

Fixed costs associated with the non-jurisdictional portion of these facilities should not have to be borne by jurisdictional ratepayers. Exh. FERC 24-0 at 14. KTC's argument that it will not be able to recover the disallowed amounts is not valid because ratemaking does not guarantee a recovery of all costs. Furthermore, KTC was free to negotiate any rental rate it wanted for non-jurisdictional use of its facility.

Second, KTC's methodology loses further credibility with KTC's proposal to retain 50 percent of Oliktok's rental payment. KTC's premise that it needs extra "incentive" before

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it will rent space on its facilities is unfounded, for:

KTC has an obligation to provide service to its jurisdictional shippers at the lowest reasonable cost. If that involves a rental of unused space on the VSM's that will offset jurisdictional costs but will not otherwise impair jurisdictional service, that is itself incentive enough. The pipeline company should not require a windfall gain to coax it into doing what it already has an obligation to do. Second, to the extent that KTC can reduce the risk of owning and operating a portion of its facilities by renting them to Oliktok and collecting rentals to offset their sunk costs, management should be willing to do so even without an additional "sweetener". Finally, we should not lose sight of the fact that Oliktok is owned entirely by an affiliate of KPC, which owns the majority share of KTC. Without use of the VSMs and other joint-use facilities, Oliktok could not operate. Clearly, KTC has plenty of reason to support the rental to Oliktok without additional incentives.

Exh. FERC 24-0 at 15.

Furthermore, as noted above, the fact that KTC negotiated a rental arrangement with Oliktok and PBU without an incentive diminishes the impact of KTC's argument that it needs such an incentive. This "incentive" is also arbitrary in that no reason is given by KTC witness Hildahl as to why 50 percent was chosen instead of any other number. *Id.* at 16.

In short, KTC's proposal is rejected. KTC's alternative of excluding only incremental costs associated with the non-jurisdictional usage if an allocation is to be made, is also rejected. Recognizing the physical configuration of the facilities at issue and considering the equality of use and benefit that each pipeline demonstrates, the VSMs are equally vital and necessary to the continued functioning of both the 16-inch and 24-inch pipeline. The cross-country VSMs were built to support up to three pipelines, regardless of the product they may carry at any point in time. Exh. KTC 2-0 at 9; Tr. 170.

As between the State's and Staff's proposal, Staff's method is both more equitable and logical because it gives recognition to the relative use of space by the two pipelines, rather than employing a judgmental 50-50 split. Not only does the 32 percent represent the percentage of total occupiable space on the VSMs used by the 16-inch pipeline, it also is the percentage KTC itself used to determine how much of the VSM capital investment costs would be included in its rental charge to Oliktok. Thus, Staff witness Ferguson's development of a non-jurisdictional cost of service for the 16-inch pipeline by

applying the 32 percent ratio to KTC's total cost of service includes an allocation of all VSM-related costs; i.e., capital costs, depreciation, DR&R, return and taxes. Exh. FERC 24-0 at 16-17.

Staff's allocation method is hereby adopted for all of the above reasons.

VII. Expenses

A. Dismantling, Removal and Restoration (DR&R)

1. The DR&R Obligation as a Contingency

Dismantling, removal and restoration (DR&R), as described in the Right-of-Way lease between the State of Alaska and KPC, is an obligation that falls upon the Kuparuk system. Exh. KTC 3-1. The Partnership Agreement specifies the transfer of KPC's DR&R liability to KTC. Exh. KTC 12-1 at 82. Pursuant to the lease:

[u]pon revocation or termination of the authorization of which these Stipulations are a part, the COMPANY shall remove all improvements and equipment from the STATE LANDS, unless otherwise approved in writing by the COMMISSIONER OR HIS DESIGNEE...

Exh. KTC 3-1, § 1.16.

Although the extent of the obligation is not determined in the lease, the parties have stipulated that if DR&R is required, such work will cost \$11.0 million in 1986 dollars. Judge's Exh. 1-A.

Prior to turning to the issue of which of the parties' proposed methods of calculating an annual DR&R expense should be adopted, a threshold legal question must be addressed, that is, "whether a contingent expense such as this, i.e., one that may never be incurred, is properly includable in a regulated entity's cost of service[?]" Staff Initial Brief at 137. Staff would have us answer "no" to this inquiry, for it asserts that there is a lack of record evidence to "support a finding that the KTC partners will ever in fact incur any DR&R expense," *id.*, and that contingent, speculative expenses have no place in ratemaking. *Id.* at 138. Staff maintains that the ratepayers would have to bear all of the risk of an inclusion of the contingent DR&R expenses in rates because if the utility does in fact incur the expense, it is covered, but if no expense is incurred, the utility will receive a windfall. *Id.* at 139. Furthermore, Staff states that "the ratepayers have no refund protection should the DR&R obligation never materialize." *Id.*

Although the State realizes that the DR&R obligations are not cast in stone, it states that the parties have stipulated to an \$11.0 million

removal cost estimate in 1986 dollars and a decommissioning date of 2011. State Initial Brief at 148-149. The State notes that a contingency argument can be made, but adds that if a determination is made during the pipeline's operational period to eliminate or reduce the presently projected scope of the DR&R requirement, there are safeguards present, namely, crediting ratepayers for any overcollection and revising the DR&R cost of service calculation. *Id.* at 149 n. 135.

KTC sees nothing contingent in its obligation and would like to recover the cost of DR&R from its shippers over the lifetime of the system so as to eliminate the burden on KTC's investors of incurring the DR&R obligation when the pipeline is no longer operational without having collected the associated costs through rates. KTC Initial Brief at 188.

There are really two subissues within the issue of whether a contingent expense can be allowed in the cost-of-service. First, an expense should not be allowed if the amount is indefinite. *See, e.g., Columbia Gulf Transmission*, 13 FERC ¶ 61,211(1980); *Public Service Commission of Indiana*, 7 FERC ¶ 61,319(1979). Here, the parties have stipulated to a definite DR&R amount of \$11.0 million. The second subissue is whether an expense is too contingent or remote to allow because of uncertainty of its incurrence. Staff and the State cite many cases involving this latter situation, which is at issue in this proceeding. *See, e.g., El Paso Natural Gas*, 46 FPC 454 (1971); *Alabama-Tennessee Natural Gas Co. v. FPC*, 359 F.2d 318 (5th Cir. 1966), *cert. den.*, 385 U.S. 847 (1966), *reh. den.*, 385 F.2d 964 (1966); *Memphis Light, Gas & Water Division v. FPC*, 504 F.2d 225 (D.C. Cir. 1974); *Virginia Electric and Power Co., (VEPCO)*, Opinion No. 118, 15 FERC ¶ 61,052 (1981).

In *VEPCO*, *supra*, the administrative law judge disallowed the company's proposal to increase its nuclear fuel expense to offset its estimated spent fuel disposal costs. *Id.* at pp. 61,103-61,104. Upon review, the Commission allowed *VEPCO*'s proposed charges for transportation from its reactors to the interim depository and for interim storage charges to be included in cost-of-service, but it agreed with the judge's decision not to include costs for permanent disposal, stating that:

[w]e are reluctant to include an amount for permanent storage at this time due to the uncertainty that exists concerning the federal reprocessing policy. Whatever Federal Policy ultimately emerges on reprocessing, however, *VEPCO* will have to incur the costs of interim transportation and storage of spent nuclear fuel since no reprocessing facil-

ity currently exists or is likely to be operational within a decade.

Id. at p. 61,105. *See also Carolina Power and Light Company*, 4 FERC ¶ 61,107 (1977).

The situation in *VEPCO* is different from the situation at hand, for in *VEPCO*, the uncertainty was in the possibility of a change in federal policy, i.e., a creation of a market for reprocessed spent nuclear fuel. Here, the uncertainty lies with the possibility of the state officials releasing KTC from its obligation in respect to this particular project and not with a broad change in state policy. Considering the above-ground configuration of the system and the climate of the North Slope, it seems highly questionable that state officials will countenance preservation of the abandoned system as a permanent monument to KTC's engineering skills. Therefore, the Commission's disallowance of a contingent expense in *VEPCO* and similar nuclear cases does not require a similar disallowance in this proceeding.

Two further observations are in order. First, Staff's argument is based solely on the lease clause quoted above. That clause presently binds KTC to incur the future expense, unless the state subsequently grants KTC a release. But the inclusion of the provision for potential release does not alter KTC's present obligation. That obligation would be no more firmly fixed had the release provision been omitted, since a lessor can always release a lessee from future performance of a duty owed to the lessor. Under Staff's theory, a present obligation to incur future costs under most contracts must be viewed as speculative. Second, the State, whose primary interest in this proceeding is to protect its royalty interest in oil production by having FERC fix the lowest reasonable transportation rate, does not support Staff on this issue.

For the foregoing reasons, KTC will be permitted to include a DR&R expense in its rates.

The problem that remains, as pointed out by Staff, is whether the ratepayers whose rates include the DR&R expense will be able to receive a refund if KTC is allowed to collect the cost of DR&R in its rates, but the state determines at the end of KTC's operation that it will not require KTC to remove the pipeline. Staff Initial Brief at 139-140. In deciding this issue, a fundamental Commission policy must be remembered, that is, in each instance of ratemaking, a determination must be made as to whether the utility and its investors should bear a certain risk or cost or whether that risk or cost should be borne by the utility's ratepayers. *Kentucky Utilities Co. v. FERC*, 760 F.2d 1321, 1328 (D.C. Cir. 1985). Here, the ratepayers are of a different nature than the typical ratepayer in an electric or gas ratemaking case.

In the latter situation, the ratepayers are usually individual consumers in a mobile society who would be difficult to seek out and recompense many years after they have paid for an unincurred contingent expense through their rates. The ratepayers in this case are large shippers that will almost certainly still remain on the system until KTC operations end. Alternatively, it would be inequitable to disallow collection of the DR&R expense, allowing the risk of such expense to fall solely on KTC's investors.

Therefore, an intermediary position between having either the ratepayers or the investors bear the full risk in connection with the DR&R obligation can be developed with the use of an escrow account and agreement. The collection of the DR&R expense from ratepayers will be allowed, subject to the condition that the funds be deposited into an interest-bearing escrow account until such time when KTC incurs such expenses, or alternatively, if the expense is not incurred, returns the funds to the ratepayers who paid for such expenses in their rates. Accordingly, KTC is hereby required to submit an escrow plan to the Commission for its review and approval.

2. DR&R Methodology

As to the basic DR&R methodology, Staff supports a traditional straight-line method of calculating the annual DR&R expense such that the same annual dollar amount of DR&R cost is charged to ratepayers until the pipeline's cessation in the year 2011. The Commission often encounters negative salvage situations with nuclear generating stations and offshore gas pipelines which eventually must be dismantled. The Staff's straight-line approach is similar to the Commission's gas pipeline model which generally provides that once an up-to-date net negative salvage cost is determined, that current cost is divided into equal, annual installments over the remaining life of the facility. The annual expense is then included in the annual cost-of-service. Staff Initial Brief at 143; see *Columbia Gulf Transmission Company*, 10 FERC ¶ 63,030, at p. 65,344 (1980); *Tennessee Gas Pipeline Company*, 32 FERC ¶ 61,220 (1985), *aff'd*, 33 FERC ¶ 61,005, at p. 61,007 (1985). Here, Staff would divide the stipulated cost of \$11.0 million (less \$526,000 for DR&R accruals transferred from KPC) evenly over the stipulated 27-year life of the KTC facilities.

KTC and the State, on the other hand, use an annuity methodology which operates so as to "front load" or accelerate the cost recovery, resulting in the ratepayer incurring higher expenses in the earlier years of the pipeline's life than in the later years. Other than the employment of the same basic methodology,

i.e., accelerated cost recovery, major differences exist between the State and KTC as to the specific elements of the annuity DR&R cost recovery computation. KTC Initial Brief at 189. The State's DR&R method would match the annual expenses to a stipulated future annual throughput pattern, whereas KTC's method would recover DR&R expenses on the basis of a sum-of-the-years-digits (SYD) calculation.

Under KTC's annuity methodology, "cash is accumulated over the life of KTC in such a manner that the accumulated after-tax collections, plus after-tax earnings, equal the anticipated cost of DR&R as adjusted for inflation. The collection of DR&R is then accelerated by application of the sum-of-the-years-digits depreciation profile." *Id.* at 191. KTC uses the inflation rates projected in the State of Alaska Department of Revenue's *Petroleum Production Revenue Forecast* (December 1985), Exh. KTC-4-0 at 8, and provides for four different inflation rates through the year 2011. KTC Initial Brief at 191-192.

The State uses the same \$11.0 million starting point, but it would initially adjust this sum downward by \$1.044 million in order to allocate to non-jurisdictional users of KTC's facilities their proportionate share of DR&R obligation. State Initial Brief at 149 n.136. As to the pattern of recovery, the State's DR&R methodology would match DR&R expenses to a stipulated future annual throughput (UOT) pattern and would take inflation into account. The State uses the inflation estimates of the Congressional Budget Office's GNP-deflator projection of 4.1 percent through the year 2011.

KTC witness Hildahl contends that the SYD method approximates the stipulated throughput profile and is therefore fairer to shippers than a straight-line determination. Exh. KTC 10-1 at 62-63. This is not necessarily true, for the SYD method matches throughput only accidentally, as there is no relationship between the two. Although KTC further argues that at some point in the future, throughput may fall so low that KTC's rates could not include the necessary DR&R collections, KTC Initial Brief at 189, KTC has offered no evidence as to when or if this will happen.

Contrary to KTC's claim, the prime consideration of a proper negative salvage methodology has not been to protect the company from all conceivable risks of undercollection by front-loading costs in the early years, especially where as here, the SYD method would collect more than two-thirds (67.47 percent) of the DR&R costs before half of the expected life of the pipeline is over. Exh. KTC 10-5. The early-

years' shippers would be unfairly burdened under KTC's SYD methodology.

As to the State's UOT methodology, there is at present substantial uncertainty as to the total amount of oil that may pass through the pipeline. Staff Initial Brief at 162-170; Staff Reply Brief at 76-77. Furthermore, there is no way to accurately predict KTC's future yearly or total throughput. *Id.* The stipulated throughput profile cannot be used to predict annual or ultimate volumes, Tr. at 334-335, for, by "its own terms, it is only an estimate." Staff Initial Brief at 167 (emphasis in original).

Although no specific ratemaking method for DR&R expense recovery has been adopted by the Commission for oil pipelines, Staff's straight-line method, given such uncertainty, will result in a more equitable distribution of costs than either KTC's SYD method or the State's UOT method. It would be unfair to load a majority of the costs on the early-years' ratepayers.

Because of the uncertainty as to the amount of throughput, I see no compelling reason not to apply to the situation at hand the Commission's traditional gas pipeline straight-line method of treating negative salvage expense. Therefore, Staff's method of spreading KTC's DR&R expenses evenly over the years properly accounts for the uncertainty surrounding KTC's annual and total volume expectations, thereby minimizing any potential disadvantage to either the early-years' or later-years' shippers.

It must be emphasized that although the straight-line method is hereby adopted and applied to the stipulated \$11 million, this is not necessarily an order for all time. The Commission can at any time institute a review of KTC's DR&R charges, or the company may file for a change as future circumstances may call for. The specific differences between KTC's and the State's front-loaded DR&R methods need not be resolved since it is found that the straight-line method of recovering DR&R expenses is appropriate for KTC. However, the State's observation that a portion of the DR&R cost must be allocated to non-jurisdictional use is well taken.

Because the DR&R funds are to be collected in an external interest-bearing escrow account, the accumulation of the DR&R reserves will not constitute cost-free capital that KTC can use for general corporate purposes. The funds, including the interest accruals, can be used only for the stated purpose or, alternatively, must be refunded to ratepayers. Accordingly, these escrowed reserves should not be deducted from rate base. Moreover, accumulation of the annual DR&R expense in an interest-bearing account will mitigate any disparity, caused by

inflation, between the \$11 million stipulated cost in 1986 dollars and the future value of such costs, a point of concern to KTC and the State.

Staff acknowledges that the annual DR&R allowance in rates will not be recognized as a tax deduction by the IRS until some future time when KTC actually engages in DR&R activity and incurs the expense. Staff has appropriately accounted for this temporary timing difference in its cost-of-service calculations by offsetting the tax effect of the DR&R accrual against ADIT balances, thus increasing the rate base. Staff Initial Brief at 145-146. KTC argues, however, that there is no assurance that KTC, on a stand-alone basis, will have sufficient income to take advantage of the tax-deductions at the time when the DR&R expenditures are actually made. KTC Initial Brief at 203. First, KTC's interpretation of the stand-alone policy is rejected here for the same reasons it was rejected in connection with deduction of ADIT balances from rate base, *supra*. Second, the Internal Revenue Code has carry-back and carry-forward provisions creating at least a six-year window and, as Staff observes, it is inconceivable that KTC's owners will be unable to take full advantage of KTC's DR&R tax deductions over such an extended period. Staff Initial Brief at 155-156.

B. Depreciation Expense

Depreciation expense recovers the capital invested in property devoted to the public service by investors in regulated companies. Such companies are permitted to recoup this capital investment over the life of the property. The amount of this annual depreciation expense depends upon three things: (1) the depreciable base, i.e., the amount of capital to be recovered, (2) the estimated life of the property, and (3) the pattern of depreciation.

The parties have entered into a stipulation as to the first two issues. Thus, they agree that the depreciable base is comprised of KTC's carrier property in service (although they disagree as to the amount, which issue has been resolved above). Similarly, the life of the pipeline is stipulated to end on December 31, 2011. The issue to be resolved here is the pattern of recovery of the depreciation.

The parties have proposed three different methods for recovering depreciation expenses, tracking their respective proposals with respect to DR&R expense. Staff proposes a straight-line method which would allow recovery of the same annual dollar amount for depreciation expense over the stipulated life of the property. KTC's, ASCR's and the State's methods would accelerate or "front-end" load cost recovery, resulting in greater annual expenses in the ear-

lier years and lesser expenses in the later years of KTC's life. Specifically, KTC and ASCR employ the sum-of-the-years-digits (SYD) method, whereas the State uses a unit-of-throughout (UOT) method which matches the annual expenses to a stipulated annual throughput profile. The SYD and UOT methods presented here yield similar results but, as previously noted, that similarity is by accident only.

Although the Commission has never specified a particular depreciation pattern which must be followed by oil pipelines for ratemaking purposes, KTC Initial Brief at 206, the parties do not contest that the Commission regularly uses the straight-line method in gas and electric cases. In certain circumstances where the unit-of-throughout (UOT) method would be justified, i.e., where the useful life of the plant "is necessarily defined by present and future reserves," *Tennessee Gas Pipeline Co.*, 56 FPC 120, 128-129 (1976); Staff Initial Brief at 161; State Initial Brief at 158; KTC Initial Brief at 206-210, KTC Reply Brief at 141-144. In its result, the UOP method is substantially similar to both KTC's SYD method and the State's UOT method.

As stated correctly by Staff, a UOP methodology, or one similar, is justified only where a plant's present and future reserves can be "ascertained with any degree of certainty." *Tennessee Gas* at 128-129; Staff Initial Brief at 161; see *Middle South Energy*, 26 FERC ¶ 63,044 (1984), *aff'd* 31 FERC ¶ 61,305, at p. 61,658 (1985). Staff is persuasive that the situation needed before the UOP method can be applied is not present here, for although the parties stipulated as to a certain future throughput profile, this profile "was not intended to predict actual or ultimate volumes." Staff Initial Brief at 163; Tr. at 334-335. Furthermore, the throughput profile is an estimate which was not developed to be applied to depreciation rates. Staff Initial Brief at 167. Not only are there uncertainties "associated with any estimate of the total reserve that will eventually be transported via the KTC pipeline", but "uncertainty [also] exists as to when and in what amount these reserves will flow through KTC." Staff Initial Brief at 162; see Exh. FERC 22-0 at 14-19. Moreover, Staff illustrates the volatility of UOP rates by showing what would happen to depreciation rates for KTC if ultimate reserve estimates were to increase by .5 billion barrels—depreciation rates would drop by approximately .6% in each of the years. Staff Initial Brief at 169.

To alleviate the risk involved with this uncertainty, KTC employs the SYD calculation so as to give KTC's "investors the greatest

security of recovering their invested capital during the period when KTC has the highest likelihood of maintaining adequate levels of throughput." KTC Initial Brief at 207; see Exh. 10-0 at 17-18. Staff argues that KTC is virtually insuring itself against any risk of nonrecovery of depreciation expenses. Staff Initial Brief at 164-165. The effect of KTC's "insurance policy" is that the depreciation costs are "front-loaded" onto the earlier-years' shippers thereby allowing KTC to avoid any risk it might have of not collecting its full depreciation expense in the later years. Because the SYD method overcollects in the early years, the later-years' shippers would enjoy decreased rates. The straight-line method would spread out payments so that this inequitable situation would not occur. Moreover, the SYD method has not been applied in the ratemaking context, and is instead a tax concept. *Id.* at 170; State Initial Brief at 159; Tr. at 983, 1241.

Staff's straight-line method, which is hereby adopted, properly accounts for the uncertainty surrounding KTC's annual and total volume expectations, thereby minimizing the possible disadvantages that the SYD or UOT method would have on ratepayers. Neither of these "front-loading" depreciation methods has been justified on this record.

As in the case of DR&R recovery, the particular straight-line depreciation rate established in this proceeding is not fixed for all time. If it should appear in the future that KTC's useful life will terminate prior to the stipulated date, KTC is free to file for a higher rate. Conversely, should that date hereafter be determined to be too pessimistic, the Commission can accordingly reduce the rate prospectively.

C. Income Tax Expenses

All the parties concur in the basic approach to computing KTC's income tax allowance, that is, all parties support normalization of the tax allowance and synchronization of interest for tax and return purposes. As between KTC and the State, differences exist primarily in allowed equity return or other components used in the calculation for income tax allowance. The first issue between these two involves the treatment of the State of Alaska investment tax credits (ITC), and the second concerns the so-called "TEFRA adjustment" to depreciable tax base. State Initial Brief at 160-164; KTC Initial Brief at 210-213. Staff states that so far as it knows, "there is no issue between Staff and KTC as to how to compute income taxes." Staff Initial Brief at 171. Thus, Staff appears to support KTC's positions in reference to the above two issues.

1. The State ITC

The State of Alaska has enacted its own investment tax credit (ITC). Alaska Stat. 43.20.036(b). That provision provides for an ITC equal to 18 percent of the federal investment tax credit of 10 percent, or 1.8 percent. The credit is further limited to 20 million dollars of in-state investment.

While the State and KTC agree that the benefits of federal ITC's must be retained by the oil pipeline for its investors, no such restrictions expressly attach to the state credit. The State argues that because of the cost-free nature of the ITC funds made available to KTC, such credits should be amortized against the tax allowance over the service life of the property. State Initial Brief at 164. KTC, on the other hand, argues that the state credit should be treated the same as the federal ITC, thereby allowing KTC to retain the benefits of the state ITC for its investors. KTC Initial Brief at 211-212.

The narrow question is, in creating the state ITC, whether the Alaskan legislature intended the benefits to be flowed through to the ratepayers or retained by the company's investors. KTC makes several persuasive arguments for the latter effect. First, the Alaska Public Utilities Commission did not "flow through" the benefits of the Alaska ITC in its only reported decision on oil pipeline rate regulation. *Cook Inlet Pipe Line Co.*, 66 P.U.R. 4th 77 (APUC 1985); KTC Initial Brief at 211. Second, the State has provided no specific legislative history or other authority indicating that the Alaska legislature intended a different result than Congress when it enacted the state counterpart of the federal ITC provision. KTC Initial Brief at 211.

Furthermore, the federal and state ITC provisions share a common statutory policy of promoting qualifying investments. This purpose of promoting investment in useful assets cannot be realized if the ITC benefits are taken away from the investors and given to the ratepayers. *Id.* Therefore, it is reasonable to interpret and give the same effect to the state and federal ITC provisions in rate proceedings before a federal agency unless the state ITC statute requires a different result, either on its face or through interpretation by the state commission or state court. The State has not shown this to be the case here; its proposed flow-through of state ITC benefits is therefore denied.

2. The TEFRA Adjustment

Under the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), a taxpayer can elect (for longer-lived investments) an 8 percent ITC with a 100 percent depreciable tax basis or a 10 percent ITC with a 95 percent

depreciable tax basis. State Initial Brief at 161. KTC elected the full 10 percent ITC benefit with the reduced basis and proposes to pass on this 5 percent loss in tax basis to ratepayers in the form of higher income tax expenses.

The State argues that for rate purposes, KTC's election should not result in a passing on of the loss in tax basis to ratepayers through increased rates. *Id.* at 162. KTC argues that the State's position improperly penalizes KTC for making a permissible tax election regarding its ITC's, and that to refuse to make the appropriate TEFRA adjustment undermines the policy of promoting qualifying investment through such incentives, contrary to clear congressional intent. KTC Initial Brief at 212-213; KTC Reply Brief at 145-146.

Although there may be merit to the State's argument, the resolution sought by the State would result in an impairment of the ITC election created by Congress, thereby indirectly depriving KTC of the full benefit of the 10 percent ITC, contrary to the intent of Congress. Therefore, the State's treatment of KTC's ITC election is denied.

VIII. Rates for Milne Point Shipments

KTC's pipeline system extends about 37 miles from the Kuparuk River Unit to Pump Station No. 1 on the TAPS line. KTC's system serves three areas: the Kuparuk River Unit, the West Sak Pilot Project and the Milne Point Unit. The pipeline transports the Kuparuk River oil the full 37 miles, the West Sak pipeline connects to the pipeline 27 miles from TAPS Pump Station No. 1 and Milne Point production enters KTC's system through the Milne Point Pipe Line (MPPL) 22 miles upstream from Pump Station No. 1. Conoco Initial Brief at 3.

Although KTC's proposed full-length tariff is 61 cents/barrel, KTC established a separate, lower rate of 55 cents/barrel for shipments from the West Sak interconnection to TAPS Pump Station No. 1. The Rules and Regulations governing KTC's tariff provide that:

[p]etroleum received from a point on the system which is not named in the applicable tariff, but which point is intermediate to a point from which a rate is published in the applicable tariff, will be assessed the rate in effect from the next more-distant point published in the applicable tariff.

Under this rule, a shipper whose oil is transported from the MPPL interconnection must pay the same 55 cent rate applicable to shipments from the West Sak connection, even though the MPPL interconnection is 5 miles closer to TAPS Pump Station No. 1. *Id.* at 5. While KTC maintains that this group rate system is a proper division of costs, Conoco,

Inc. (Cononco) and Staff contend that relative length of haul should control rates.

KTC states that the inclusion of Milne Point in a group rate based on the next-most-distant point is fair, especially in light of the fact that KTC exempted MPPL from its usual connection policy which requires connection to the KTC system at a monitored measurement facility. KTC contends that waiver of this requirement saved MPPL three million dollars. KTC Initial Brief at 215-216.

KTC further maintains that Conoco's and Staff's principal argument that the relative length of haul should control rates ignores ICC precedent that permits the grouping of rates regardless of haul distance. *Id.* at 216. In determining whether a group rate which encompasses many interconnections within the same zone without accounting for variations in distance should apply, KTC argues that the test laid out in well-established ICC precedent is whether the overall circumstances surrounding the establishment of a group rate are reasonable. *Id.* at 217-218; see *The New York Harbor Case*, 47 I.C.C. 643, 712 (1917); *Bognar & Co. v. Pennsylvania Railroad*, 305 I.C.C. 21 (1958). KTC alleges that establishing a group rate for West Sak and Milne Point is appropriate for many reasons, including: (1) the waiver of its connection policy; (2) MPPL is upstream from the Kuparuk River crossing which is the most expensive part of the pipeline system; (3) MPPL directly utilized almost all of the KTC owned VSMs which constitute a substantial portion of KTC's costs; and (4) that traveling a shorter distance does not automatically guarantee MPPL a lower rate. KTC Initial Brief at 221-223.

Both Conoco, which is the majority owner and operator of MPPL, and Staff contend that the present KTC tariff is unduly discriminatory toward the Milne Point shippers because it does not fully factor distance of haul into their rate. Exh. FERC 25-0 at 6-7; Exh. Conoco 12-0 at 15-16. Therefore, the two agree that a separate rate should be established for production shipped from Milne Point, but they do not agree on the allocation methodology which should be used in establishing this rate.

Conoco contends that a rate approximately 50 percent of the full-length rate or 30 cents/barrel for transportation from Milne Point would be fair. In arriving at that rate, Conoco witness Kem broke KTC's full 61 cent tariff into three component percentages representing operating expenses, station value, and pipeline network investment value. After multiplying each of these percentages by the full 61 cent tariff, Mr. Kem determined that the full-length tariff should be apportioned as follows:

Operating Expenses =	\$0.084/Bbl
Station Value =	\$0.091/Bbl
Pipeline Network Value =	\$0.435/Bbl
	<hr/>
	\$0.610/Bbl

Mr. Kem further allocated the pipeline network investment on an inch-diameter mileage basis to provide a basis for allocation of this network investment among shippers utilizing KTC system's 12-inch diameter pipelines. Using the inch-diameter mileage analysis, Mr. Kem calculated that MPPL utilizes 65.37 percent of the 37-mile pipeline, and should be allocated 65.37 percent of the pipeline network value as that portion of the tariff reflecting MPPL's utilization of the pipeline network, or \$0.2846, (65.37% x \$0.435). Exh. Conoco 12-5, Part 2. Mr. Kem also allocated to the Milne Point shippers their respective portions of the tariff representing operating expenses and station value, or 6.34 percent for both. When multiplied by the other two portions, Milne Point shipper's additional allocations are \$0.0053 for operating expenses and \$0.0057 for station facility value. Exh. Conoco 12-5, Part 3. Adding these three allocated components results in a rate of approximately 30 cents. *Id.*

Staff, on the other hand, proposed the use of a barrel-mile allocation method, wherein Staff witness Hahn allocated overall cost of service between different connection points in such a way as to reflect the cost causation of each class of service. This was done by segregating KTC's system cost into two groups, namely volume-related costs and distance-related costs. To arrive at per unit costs for each group thus segregated, Mr. Hahn divided the distance-related costs by the total annual barrel-miles to arrive at the per barrel-mile unit cost and divided the volume-related costs by the total barrels transported during the year to arrive at per barrel unit costs. Mr. Hahn then multiplied the respective unit costs by the barrel-miles and volumes for each connection point to determine the total cost applicable to that class of service. The proposed rate for each connection point was calculated by adding the distance and volume costs allocated to each class and dividing those sums by their respective volumes. Exh. FERC 25-0 at 7-11.

Thus, these differing proposals present essentially two issues. First, is it reasonable and nondiscriminatory to apply the same "group rate", as proposed by KTC, to West Sak and Milne Point, notwithstanding the five mile distance between the two connections? I agree with Staff and Conoco that the application of the same rate to West Sak and Milne Point is

unreasonable and unduly discriminatory. As aptly stated by Staff witness Hahn:

Oil pipelines are common carriers, and it is an established principle of common carrier regulation that the customer pays only for the trip he takes. Distance of haul is a cost causative factor that cannot be disputed, and its routine recognition in the rates of oil pipelines and other common carriers is a matter of record. Thus an allocation is necessary in order to apportion system costs among shippers who require the transportation of oil in varying distance.

Exh. FERC 8-0 at 4-5.

Although KTC's presently effective rate reflects distance of haul as a cost-causing factor, it does so only to a limited extent.²⁹ While KTC takes into account the fact that West Sak and Milne Point should be accorded a lower rate than production shipped from KRU, it has not justified why shippers using these two separate points of connection should be charged the same rate, given the five mile differential in the distance of the haul between these points. *Id.* at 5-6. Staff has shown, to the contrary, that 86 percent of the total system costs are directly related to the West Sak shipments, but only 72 percent of total system costs are directly related to the MPPL shipments. Exh. FERC 25-1, Schedule 1; Staff Reply Brief at 79-80. KTC's own tariff structure, which provides for an intermediate West Sak rate of 55 cents, belies its argument that "point-to-point" regulation would be too difficult and complex to administer, for:

if it is proper to have one intermediate point rate for West Sak, it is surely proper to have another for MPPL ... there is nothing unduly complex or difficult about allocating costs to intermediate point users. It is a fairly common practice for the other entities this Commission regulates. The fact that a fair allocation procedure may perhaps take more time than making no allocation at all, is hardly a reasonable justification for failing to do it.

Staff Initial Brief at 174.

There is no reason why KTC's group argument could not just as easily apply to a three-group rate structure instead of KTC's two-group rate. KTC has not shown why the establishment of two groups is any more or less reasonable than one group (all shippers) or three groups (KRU shippers, West Sak shippers and Milne Point shippers), as Staff and Conoco propose. Furthermore, Opinion No.

154-B requires that oil pipeline rates be cost based. 31 FERC at p. 61,833. Thus, it would be unreasonable and unduly discriminatory to charge the Milne Point shippers rates which are not specifically cost-based for them; to do otherwise would require them to subsidize the costs of other shippers. This is especially true in light of the fact that KTC did not perform a cost allocation study of its own for Milne Point, although it did for West Sak, to determine if the two connection points should be grouped on a cost basis. Staff Reply Brief at 79.

Now that it has been determined that a separate rate should be established for Milne Point, the second issue of how that rate should be established must be resolved. Of the two cost allocation methods presented, Staff's is clearly superior to Conoco's. Staff's method is straightforward and conventional as seen in the fact that it allocates those costs which do not vary with distance of haul on a volumetric (i.e., barrels) basis and those costs which do vary with distance on a barrel-mile basis. The Commission has consistently employed, and indeed favors, an analogous allocation scheme, the Mcf-mile method, in allocating transmission costs for natural gas pipelines. Neither KTC nor Conoco has presented any evidence to refute the reasonableness or accuracy of Staff's allocation method, or its results. Exh. KTC 10-1 at 68; Tr. at 1195-1196. KTC merely stated that Staff's approach may be "too precise", KTC Initial Brief at 219, 225, and Conoco never raised any arguments in opposition to Staff's approach or its result.

Conoco's method, on the other hand, is seriously flawed and therefore unacceptable. Among other things, it (1) reflects an unjustified segregation of facilities in allocating costs to customer classes while ignoring the fact that KTC is an integrated system; (2) employs an inch (diameter)-mile method in allocating pipeline investment costs which ignores economies of scale and emphasizes capacity at the expense of actual annual use of facilities; (3) improperly adds together a cost-of-service item and two rate base items to derive the factor used to apportion the full length rate to MPPL; and (4) does not completely allocate costs, which would result in KTC's undercollection of its total allowed cost of service. Exh. FERC 25-0 at 11-15; Exh. KTC 10-1 at 67-68.

When applied to Staff's cost of service, Staff's barrel-mile allocation method, which is hereby adopted, results in a Milne Point rate of approximately 72 percent of the full-length rate, and a West Sak rate of approximately 86

²⁹ Although the cases cited by KTC allow for the grouping of shippers on the basis of factors in addition to distance of haul, according to these cases, mileage is still one of the primary considerations in establish-

ing the groupings. It should be further noted that a group rate should not result in undue prejudice to any part of the group. *The New York Harbor Case*, 47 ICC 643 (1917); Staff Reply Brief at 78.

percent of the full-length rate. Staff Initial Brief at 199.

IX. Future Rates, Test Period and Refunds

Rates for three separate periods are at issue in this proceeding: (1) October 1984 through January 15, 1985, when KTC's initial 69 cent tariff was in effect; (2) the period beginning January 16, 1985, the date on which KTC's 61 cent and 55 cent rates took effect after suspension, and ending on December 31, 1985; and (3) the future period commencing January 1, 1986. This section takes up the topic of future rates, but there are two preliminary matters which must be addressed prior to embarking on the discussion of the more substantive issues this section presents.

First, as to refunds for excessive rates in past periods, KTC argues that to the extent that the Commission finds its tariff rates to have been excessive for some past period, the ordering of refunds, which is within the Commission's discretion, would be inappropriate on equitable grounds, for here,

the equities weigh heavily in favor of ordering any relief that may be found appropriate on a prospective basis only. KTC filed both its initial 69-cent rate and its lowered 61-cent and 55-cent rates long before the Commission's current Opinion 154-B guidelines were issued... Thus, even if it were to be determined that KTC's managers had not guessed exactly right in setting their initial tariff rates (without benefit of Commission guidance), retroactive application of current guidelines to produce refunds for periods even before the formulation of Opinion 154-B would plainly be inappropriate.

KTC Initial Brief at 251 (footnote omitted).

KTC cites the *Farmers Union I* decision as strongly supporting the position that any relief should be in the form of prospective rate reductions rather than refunds. *Id.* at 251 n. 166; see *Farmers Union I*, 584 F.2d at 419. A careful reading of that decision compels no such result, for the Court was discussing the problem of regulated companies arguing that they had justifiably relied on the ICC's "fair value" method in adopting rates. The Court stated that the solution to this problem was "not to perpetuate that reliance but to end it prospectively without allowing reparations based on its occurrence in the past." 584 F.2d 419. KTC was never regulated by the I.C.C. and, thus, never relied on the I.C.C.'s valuation method.

Both the State and Staff strenuously oppose any such refund forgiveness. State Reply Brief at 97-98; Staff Reply Brief at 95-97. First, the State argues that *Farmers Union II*, which mandates that rates be cost based, was issued in March, 1984, long before KTC's tariffs were

filed, and that by then, "KTC knew that the Commission would not permit excessive returns no matter what the methodology." State Reply Brief at 97. Second, both the State and Staff argue that the record shows that KTC picked the highest rate from the range of many tariff scenarios it had modeled, including such models as depreciated original cost, trended original cost and I.C.C. valuation, and therefore, KTC should not now "be heard to claim that it would be 'inappropriate' to order refunds under the circumstances of this case." *Id.* at 98; Staff Reply Brief at 96-97; Tr. at 310-11.

I see no reason why KTC should be permitted to retain the benefits of unlawful rates. Therefore, refund of any excessive collections with interest is hereby ordered, such interest to be calculated pursuant to Commission regulations, namely 18 C.F.R. § 340.1(c).

As to the second preliminary issue, although KTC has presented a test year analysis presumably for the purpose of assessing future period rates, it argues that it would be premature for the Commission to set future rates at this time due to the many uncertainties surrounding the implementation of Opinion No. 154-B. KTC asserts that its rates can be adjusted to match whatever methodology is finally put in place. KTC Initial Brief at 250. Both Staff and the State, of course, oppose this peculiar plea for postponement of the resolution of future rates, Staff Reply Brief at 94-95; State Reply Brief at 97, and I see no reason why the decision should be deferred.

A. Future Rates—Test Year vs. Variable Tariff Methodology

In evaluating its forward-looking rates, KTC has employed a traditional test year methodology such as that used in ratemaking for natural gas pipelines. KTC Initial Brief at 228. Procedurally, this method requires estimating test year expenses and throughput by adjusting actual throughput and expense data for some base period to reflect known and measurable changes during the test year. *Id.*; see 18 C.F.R. § 154.63(e)(2)(i); *Arkansas-Louisiana Gas Co.*, 22 FERC ¶ 61,125 (1983). The rates so established typically remain in effect until changed voluntarily by the regulated entity or by the Commission after a hearing pursuant to the governing statute.

Both Staff and the State, however, propose that future rates be governed by a so-called variable tariff methodology (VTM) which would require KTC to annually self-adjust rates to reflect certain changes in cost factors (including throughput) which have varying degrees of impact upon the tariff. Staff Initial Brief at 181; State Initial Brief at 165. While they are in general agreement that a VTM

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should be adopted, Staff's and the State's positions differ substantially in regard to the particular form of VTM each would have the Commission adopt. The Staff's VTM would account solely for changes in net investment base, throughput and corporate income tax rates, whereas the State's method would account for all, or virtually all, changes in costs and throughput. Thus, the difference between the State's proposal and that of Staff is one of scope.

It should be noted that Staff states that maybe the VTM should also account for changes in the cost of debt, with the appropriate cap (see discussion on rate of return, *supra*), since KTC's short-term debt costs vary monthly, Exh. KTC 8-38, and there is no way a static cost of debt will continue to reflect KTC's debt costs or pass any savings onto the shippers. On the other hand, Staff witness Shriver stated that it is speculative for KTC to use short-term debt, for an increase in the interest rates would be passed on to shippers in the form of increased rates if the cost of debt was included in the VTM. Tr. at 1742. While I will not pass on the prudence of KTC using short-term debt, I find that at this time, KTC should not be allowed to include the cost of debt in the VTM. KTC need not be protected from all possible risks, especially in light of the fact that the risk of short-term financing was voluntarily assumed by KTC.

KTC raises two threshold legal arguments against the use of a VTM to determine future rates for oil pipelines. First, KTC argues that the use of a VTM is beyond the authority of the Commission because its self-implementing nature violates a carrier's right to initiate rates. KTC Initial Brief at 229-232. This argument is without substance. Staff argues persuasively that both Sections 6 and 15 of the Interstate Commerce Act (ICA) have comparable provisions in the Natural Gas Act and the Federal Power Act, and that the Commission has the authority to adopt, and in fact has adopted, a wide variety of automatic rate adjustment mechanisms for both natural gas pipelines and electric utilities under the latter provisions, depending upon the specific circumstances of the industry and the particular entity involved; similarly, the ICA permits automatic adjustments to common carrier rates based upon fixed formulas. Staff Reply Brief at 81-84. Further, both Staff and the State point out that the statute which gives the Commission authority to adjust rates based upon a VTM-type mechanism is both forward-looking and broad. See Section 15(1) of the ICA, 49 U.S.C. § 15(1); Staff Reply Brief at 83-84; State Reply Brief at 71-72. Thus, the Commission has the authority to approve formula rates

where it is the automatic adjustment formula itself, not the particular charges calculated under it, that constitutes the rate.

Second, KTC argues that although the Commission occasionally employs the use of the VTM with gas pipelines, such a mechanism is inconsistent with the unique nature of the oil pipeline industry. KTC Initial Brief at 232-235. KTC does not sufficiently explain the differences between oil pipelines, on the one hand, and regulated electric utilities and natural gas pipelines on the other, such that a rate form embodying automatic or self-executing changes in oil pipeline rate levels cannot be used. Not only will the use of a VTM avoid the need for duplicative, costly rate investigations, but as Staff suggests, a VTM may avoid any potential doubt that may be cast by KTC upon the Commission's statutory power to award reparations for rates found to be unreasonable at some later point in time. Staff Reply Brief at 85.

The real issue then is whether a VTM is necessary in this proceeding in order to assure just and reasonable rates. Because it appears that KTC's rate base will steadily and significantly decrease every year, even assuming a modest amount of property additions and trending of the equity portion of rate base, Exh. KTC 4-7, Sch. 1; Exh. FERC 24-4, pg. 3; Exh. AK 17-8, a VTM in combination with a test year approach will better insure that "KTC will [not] over time overcollect a greater amount of return dollars on a greater portion of rate base that no longer exists for regulatory purposes." Staff Initial Brief at 182. This is because a VTM will automatically adjust KTC's tariffs anytime certain costs or throughput change, not dependent upon whether that change is an increase or a decrease. As aptly stated by Staff witness Ferguson:

it is reasonable to provide for a mechanism that automatically adjusts a pipeline's tariff anytime there are cost factors inherent in the company's cost of service that we can predict will change dramatically over relatively short periods of time, and that will have a substantial impact upon the earned return if there is no immediate rate adjustment. Failure to adjust the current tariff to account for predictable and significant alterations to factors affecting the cost of service will produce a situation where the company is either greatly over or under compensated for its costs. A VTM will better synchronize dramatic shifts in expenses with revenue collections, thereby helping to insure that the company will earn no more and no less than its allowed return.

Exh. FERC 24-0 at 19.

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Federal Energy Guidelines

Thus, the only question which still must be answered is whether the VTM should apply only to those cost elements which will predictably vary significantly, as Staff proposes, or to the full range of cost factors, as the State proposes. Staff criticizes the State's approach as "overkill". Staff Initial Brief at 186, and further argues, correctly in my view, that a full-blown VTM would effectively eliminate almost all of KTC's risks which in turn would alleviate KTC's incentive for economical and efficient management. Exh. FERC 24-0 at 22. The State neither responds to these criticisms nor does it argue that its proposed VTM is better than Staff's and should therefore be selected over Staff's. State Reply Brief at 69-72.

Staff proposes that the Commission adopt a VTM that encompasses such factors as changes, whether they be increases or decreases, in throughput, net investment and the corporate income tax structure. I agree that the VTM should include these factors due to their predictability and potential significance. Because KTC's rate base will decrease over the years, KTC's net rate base investment merits inclusion in the VTM. KTC's throughput is also correctly included due to the volatility of its throughput as evidenced by the recent increase in its annual volumes from 80 to 100 million barrels, Exh. KTC 4-2, Sch. 2, and in a daily variability of from 42 to 313 thousand barrels. Exh. KTC 2-11. Last, the change in federal income tax law during 1986 and 1988 has resulted in substantial reductions to the corporate tax rate. Exh. FERC 19-3 at 1. This factor alone will cause KTC's annual income tax expense to decrease by over \$2.5 million, *Id.* at 2, and thus is very important to include in the VTM.

For all of the above reasons, Staff's proposal to include in a VTM changes in net investment base, throughput and corporate income tax rates is adopted. It is ordered that KTC file, for the future period in a form satisfactory to the Commission, a VTM encompassing Staff's cost elements as listed above.

B. Test Period Projections

In order to determine the total revenues which an electric utility or natural gas pipeline is entitled to earn, the Commission generally undertakes a thorough examination and appraisal of the company's projected costs and revenues in a forward-looking test year. Under the Commission's regulations, such regulated companies are required to substantiate their rate requests by submitting actual data, at the time they file their rate case, on all costs experienced in the most recent twelve-month period

and an estimate of the costs the company projects it will incur during a future period.

The same is not true for oil pipelines, for they are not required to file any data to support their rate filings. Therefore, KTC had no specifically established test year at the outset of this proceeding. Since the parties agree that there is no reason why the test-year concept, which reflects a relationship among costs and revenues over a period of years, should not be used in this proceeding, such a concept will be used.

There are several issues in regard to test year projections, many of which have been determined by disposition in other sections of this decision. The latter issues include depreciation expense, DR&R expense, working capital and throughput. Of these, only throughput will be addressed further in this section. Certain other issues raised at the hearing are no longer contested, including: (1) projected insurance costs, for the State is now agreeable to accepting KTC's proposed figures, State Initial Brief at 178-179, and (2) rental and maintenance expense, for although there is a \$53,000 difference between the State witness's projections and those of KTC's witness, the State does not seem to press for an adjustment to KTC's estimates. In any event, I do not believe that any adjustment to KTC's rental and maintenance expense projection has been supported by the State, for KTC's witness gave uncontroverted testimony as to why the adjustments would be improper. See Exh. 4-20 at 17-18 and 19.

The remaining issues to be decided are (a) throughput, (b) fuel and power expense, and (c) outside services.

1. Throughput

According to Staff, adoption of the VTM method as proposed by Staff or the State removes the necessity of having to estimate KTC's throughput for test year purposes, since the VTM automatically adjusts future rates on an annual basis to account for variations in throughput. Staff Initial Brief at 189-190. Neither KTC nor the State takes issue with this proposition. Accordingly, no further analysis of the throughput issue will be undertaken.

2. Fuel and Power Expense

Staff contends that fuel and power expense is directly related to pipeline throughput, for the greater the throughput, the greater the expense connected to that increased volume. Therefore, for test period purposes only, Staff made a \$182,000 proportional upward adjustment to KTC's 1985 expense to reflect Staff's proposed upward adjustment from 1985 actual to 1986 projected throughput. Staff Initial Brief at 194-195. KTC does not dispute Staff's method of relating projected fuel and power expense

proportionally to projected throughput. *Id.*; KTC Initial Brief at 194-195.

The State, on the other hand, relied on KTC's 1985 Long Range Plan which projected fuel gas consumption for the years 1986-1990. The State contends that because these projections implicitly establish economies in usage corresponding to throughput increases, changes in KTC's fuel and power expense will not be proportional to changes in throughput. Therefore, its witness Ungerer incorporated the expected economies into his 1986 projections, and, as a result, would allow a \$75,000 upward adjustment to KTC's 1986 projections of \$956,000, resulting in a figure of \$1.031 million. State Initial Brief at 179-180.

While it may be true that the energy required for pumping does not bear a straight-line relationship to the volume being pumped over all ranges of throughput, which is what the State is contending by relying on KTC's Long Range Plan, the adjustment proposed by the State will not be made. The reason for this is because, as KTC correctly states:

the State selectively used KTC's Long Range Plan only for this [fuel and power expense] adjustment and rejected all other aspects of that Plan. (Baden, Ex. KTC-4-20, at 16.)

KTC Initial Brief at 245 n. 162.

Furthermore, the actual operation of KTC's pipeline is significantly different from that envisioned when the Long Range Plan was prepared in June 1985, and reliance on specific fuel factors from that Plan is thus misplaced. *Id.*; Exh. KTC 4-20 at 16; Tr. at 333. The State's adjustment is rejected.

As to Staff's proposed adjustment, it would seem more appropriate to include the fuel and power expense adjustment in the VTM since the VTM encompasses throughput, and throughput and the fuel and power expense are directly related. Therefore, instead of adopting a specific dollar amount for this adjustment, the expense will instead be included in the VTM.

3. Outside Services

The principal issue in this subsection involves KTC's claimed litigation expense; this is the only issue raised by Staff, and the State proposes only certain additional small downward adjustments to KTC's test period projections.

As to the State's proposed additional adjustments, one of these, namely outside services/general expense, relates to costs which the State contends are "non-recurring." While KTC proposed an estimate of \$1,647,111 for these costs, the State identified and eliminated certain costs from KTC's proposal because of their supposed "non-recurring" nature, and

instead proposed an estimate of \$1,432,112. KTC contends that these eliminations were not all for non-recurring costs, arguing instead that the State eliminated \$3,031 for annual VSM monitoring and \$9,775 for annual quality bank evaluations. KTC Initial Brief at 246. For the remaining "non-recurring" costs identified by the State, KTC contends that they are for legal and accounting services that will probably occur in the future. *Id.* Because the State has not established the non-recurring nature of the costs it eliminated from the outside services/general expense, such downward adjustments are rejected.

Two other adjustments proposed by the State—\$23,016 of 1985 expenses booked in 1986 and \$31,421 of administrative services—have been shown by KTC to have been incorrectly made. As to the first adjustment, the State failed to increase KTC's 1985 expenses by the amount eliminated from KTC's 1986 test year. As to the latter adjustment, KTC had already credited the administrative expense to 1985; thus, the State has eliminated the amount twice. *Id.* at 246-247. Both of these adjustments are also rejected.

Last, the dispute between Staff and KTC as to the litigation expense must be resolved. KTC adjusted its 1985 actual expense upward by some \$883,000, of which \$800,000 represented an anticipated increase for 1986 litigation costs. Because, in Staff's view, it is unreasonable to expect that KTC will incur this rate case litigation expense each and every year, Staff proposes that the \$800,000 amount be amortized over a five-year period, i.e., \$160,000 per year. Accordingly, Staff would reduce KTC's test year projection for litigation costs by \$640,000. Staff Initial Brief at 195; Staff Reply Brief at 93-94; Exh. FERC 24-0 at 18-19. The State agrees with Staff's proposal. State Reply Brief at 94 n. 103.

KTC argues that 1986 litigation expenses actually exceeded the \$800,000 projection, that substantial additional expenses will be incurred in 1987 in connection with this lengthy proceeding which may exceed the \$160,000 allowed by Staff, and that the case may be appealed to the courts, thus leading to further litigation expenses. KTC Initial Brief at 244-245. Accordingly, KTC maintains that no amortization should be required. If any amortization is imposed, KTC asserts that the unamortized litigation balance, i.e., the \$640,000, must be included in working capital so that KTC may earn a return on this money, a treatment which, KTC argues, Staff witness Ferguson conceded would be appropriate. KTC Initial Brief at 243-245; KTC Reply Brief at 165.

As Staff points out, it is standard Commission policy to amortize gas pipeline and electric utility rate case expense, such as the litigation costs at issue here, over a period of years measured by the expected frequency of the company's rate cases. Staff Initial Brief at 196. No reason is advanced by KTC as to why that policy should not be given effect in this proceeding. It is not part of that policy, however, to give rate base effect to the unamortized balance of the expense as urged by KTC. See *Alabama-Tennessee Natural Gas Co.*, 11 FPC 75, 82-83 (1952); *Knoxville Utilities Board v. East Tennessee Natural Gas Co.*, 35 FPC 534, 538, 553 (1966); *Southwestern Public Service Co.*, 37 FERC ¶ 63,012 (1986); *Colorado Interstate Gas Co.*, 35 FERC ¶ 63,043 (1986); *Producer's Gas Co.*, 35 FERC ¶ 63,042 (1986); *Distrigas of Mass. Corp.*, 34 FERC ¶ 63,034 (1986); *Tarpon Transmission Co.*, 32 FERC ¶ 63,020 (1985). Although KTC cites the cross-examination of Staff witness Ferguson as conceding the propriety of such rate base treatment, Tr. at 1866-1867, it is unclear from that testimony whether the witness was giving an opinion on ratemaking treatment or simply explaining the proper bookkeeping entries to accomplish the amortization. Thus, such special treatment is denied.

The remaining questions are the amount of the litigation expense to be amortized and the length of the amortization period. As to the first, KTC will not now be allowed to impeach its own expense projection solely on the basis of an undocumented and otherwise unsupported remark of its witness that the projection had already been exceeded by late 1986, Tr. at 342, or simply on the strength of speculation regarding further, unquantified litigation costs. Staff Reply Brief at 93-94. As correctly pointed out by Staff:

[t]he original \$800,000 estimate of litigation expenses for the entire proceeding was introduced by KTC, not Staff. If that number was in error, KTC had ample opportunity to introduce updated, actual information into evidence before the record closed.

Id. at 93 (footnote omitted).

The question of the appropriate amortization period, however, is not as easily resolved. Since KTC has no lengthy operating experience, no frequency pattern of expected rate case filings has emerged. Staff's proposed five-year period is premised on its views that adoption of Staff's proposed VTM would make frequent rate case filings unlikely, and given the precedential first-time nature of the case, it is not "likely

that KTC will expend the same amount of money on its next rate case as it spent on this one." Staff Initial Brief at 195. The difficulty with Staff's position is that it is impossible to judge whether Staff's VTM will have a substantial impact on the frequency of KTC's rate cases, especially since significant cost items, such as labor costs, capital costs and outside service costs, are not encompassed by the VTM.

While circumstances may be somewhat different for gas pipelines and electric utilities, the amortization period commonly adopted by the Commission in cases involving such companies is approximately three years, as evidenced by the list of cases cited *supra*. Given the circumstances described here, I find that the use of a three-year amortization period (which would allow about \$267,000 in rates, compared with Staff's \$160,000) would yield a more equitable result. Thus, Staff's five-year amortization period is rejected, and a three-year period is hereby adopted.

C. Amortization of Excess ADIT

Beginning in 1984, KTC collected through rates normalized taxes from the shippers at the statutory federal income tax rate of 46 percent. Thus, a fund was created that includes an amount needed to pay future federal income tax liabilities. Because of the recent change in federal tax laws, taxes will only have to be paid at the new, lower rate of 34 percent. Thus, a portion of the deferred taxes collected from shippers, which Staff calculates to be about \$9.4 million as of the end of 1980, will never actually be paid by KTC. Staff Initial Brief at 197.

Staff recommends that such excess be refunded to shippers by amortizing it over the remaining life of the pipeline, with corresponding reductions in the ADIT balance. KTC apparently has no objection to Staff's recommendation, see Tr. at 1313-1314; KTC Reply Brief at 155 n. 108, and it is hereby adopted.

X. Order

Wherefore, it is ordered, subject to review by the Commission on its own motion or upon exceptions to this Initial Decision, that KTC shall file revised tariff sheets setting forth rates calculated in conformance with the findings and conclusions hereinabove set forth, and shall make refunds, with interest, of any amounts collected in excess of the just and reasonable determinations made herein.