1094 HRES FERC, ORDER SETTING VALUES

The project sponsors, on the other hand, asserted that the methodology for calculating the Project Risk Premium only explicitly compensated for the extraordinary risk of non-completion for this project, and that any compensation for the normal risks of building a pipeline, including a competitive pre-decision risk, must be incorporated in the value of the AFUDC equity rate. 73/ The Commission has been persuaded by these arguments and has used an equity AFUDC rate to calculate the "risk adjusted rate base" that is equal to the Operation Phase Rate of 14 percent.

Based primarily on the project sponsors' methodology, and using most of the same parameter values, with one important exception, the Commission has calculated a

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73/ One particular risk for which this higher value of the equity AFUDC rate compensates is the risk incurred during competitive proceedings before this Commission. The Commission regards this risk as one of the normal risks of the pipeline business, for which the normal rate of return allowed regulated gas pipelines, and thus the Operation Phase Rate for this project, provides compensation. Thus, the Commission's calculation of the "risk adjusted rate base," and the Project Risk Premium, in this Order does not explicitly consider the probability of abandonment prior to the Decision and the issuance of the conditional certificates of public convenience and necessity in December 1977. In their initial comments, both the State of New York and the Upper Tanana Development Corporation argued against a higher Project Risk Premium to compensate for this risk, and no party argued for it.

Project Risk Premium of 2.0 percentage points for the Alaska segment. 74/

74/ The time profile of equity investment is taken from the response of the sponsor to an interrogatory from the Alaskan Delegate (dated May 3, 1979) which was served on all parties. As stated earlier, the probability of successful completion is assumed to be approximately 67 percent, making the chance of abandonment approximately one-in-three. The equity AFUDC rate used to calculate the "risk adjusted" and normal rate base is the Operation Phase Rate of 14 percent.

The calculations necessary to derive the Project Risk Premium for the Alaskan segment discussed herein are as follows:

	1978	1979	1980	1981	1982	1983	1984
Equity Investment (% of total)	9.0	5.3	5.3	20.1	27.5	20.1	12.7
Normal Rate Base (RBN) (14.0 % AFUDC rate)	10.26	17.74	26.26	52.85	91.60	127.34	159.64
Risk of Abandonment	.06	.12	.12	.05	.03	.01	.005
Risk Adjusted Rate Base (RBA) (14.0 % AFUDC rate)	10.63	19.66	31.00	59.23	100.89	138.88	173.42

Project Risk Premium = .1931 (173.42/159.64 - 1) = .0167

Applying a higher equity AFUDC rate (e.g., 14 percent vs 13 percent) to the RBA/RBN ratio results in a lower Project Risk Premium, other factors being equal. Under the conditions

(Footnote continued on next page.)

For the Northern Border segment, the construction p risks are considerably less than for the Alaska segment. Essentially, Northern Border will be of conventional pipe design, traversing areas where natural gas pipelines have previously been constructed. Thus, the likelihood of proj abandonment during construction due to extreme cost overru is virtually non-existent.

The required expenditures on pipeline design, engineeri and testing for Northern Border are of a lower magnitude relative to total costs than for the Alaskan segment. Hence, if Northern Border had to be abandoned during the early stage of pipeline design and engineering, the lost investment relative to total cost would be less than for Alaska.

74/ (Footnote cont'd)

above, as an example: Project Risk Premium at 14% = 1.67; at 13% = 1.87. As indicated above, the fact that the Commission specifies a lower AFUDC Rate than contemplated in Order No. 17, results in a higher Project Risk Premium and a higher Center Rate. The premium of 1.67% would be fair compensation for the risk-neutral investor who was willing to accept a fair gamble in the narrow statistical sense. The Commission, however, believes that the premium must be higher to compensate risk averse investors and has selected a value of 2.0%. For more information about the methodology, see Northwest Alaskan, "Determining Project Risk Premium," cited at n.11 above.

The Northern Border segment also has the potential for transporting gas from two sources of supply, Western Canada as well as Alaska. Because of the possibility of "pre-building" most of Northern Border to carry Canadian gas in advance of Alaskan gas, the risk of abandonment of Northern Border will be obviated sooner than the risk of abandonment of the Alaska segment.

Weighing all of these factors, the Commission concludes that the appropriate Project Risk Premium for the Northern Border segment is 1.5 percent.

5. IROR Risk Premium

The IROR Risk Premium is to compensate equity investors for the risks introduced by the variability in the allowed rate of return created by the IROR mechanism. The IROR Risk Premium, when added to the Operation Phase Rate and the Project Risk Premium, yields the Center Rate. 75/

The IROR Risk Premium compensates for the various uncertainties attendant to implementing a new regulatory mechanism. For example, since the Inflation Adjustment and Change in Scope mechanisms established in this Order have no prior history, some uncertainty exists regarding their implementation and their effects on the return that will finally be realized by investors in this project. As is discussed more fully in Section III, the composite inflation index required by the Commission may over or underestimate the actual inflationary experience

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75/ In order for the ANGTS to obtain private equity financing, the IROR schedule must be designed in such a way that the statistical concept of the expected discounted stream of revenues (i.e. depreciation and return on equity) is at least equal to the expected discounted equity investment. Because of the design of the IROR schedule, the discounted expected returns to equity investors will exactly equal the expected equity investment if the Center Rate equals the cost of equity capital to the project, given the risks of the project.

of the project during construction. This creates additional uncertainty about the final outcome of the IROR mechanism. This uncertainty is the major reason why the Commission has decided to increase the IROR Risk Premium for Alaska from the 0.5 percent proposed in the April 6 Notice to the figure, established in this Order, of 1.5 percent. Similarly, the IROR Risk Premium for Northern Border has been increased from 0.25 percent to 0.5 percent.

Suppliers of very large sums of equity capital are likely to be risk averse. If presented two investments, both of which have the same average expected rate of return but one has a wide range of possible outcomes and one has a smaller range, most investors would prefer the latter. This would be true even if possible positive returns balance possible negative returns. Most investors prefer relative certainty to variability; therefore variable rates of return have to be higher than relatively sure rates of return.

Adoption of an IROR schedule confronts investors with a variable allowed rate of return in the form of a schedule of rates depending on cost control performance, rather than the single allowed rate of return as provided in the usual situation for public utility investment. Moreover, while

in the usual utility investment, actual or realized rates of return may vary from allowed rates of return due to unanticipated inflation, demand shifts, or other economic changes, this project could have more variance due to the inflation and Change in Scope adjustments. Thus, an IROR Risk Premium is necessary to attract private equity investment in the project as compensation to investors for the risk created by the variable allowed rate of return.

There is no clear basis for determining the trade-off between a single allowed rate of return and a schedule, but the Commission in its judgment has concluded that a 1.5 percent IROR Risk Premium is appropriate for the Alaskan segment and that a 0.5 percent IROR Risk Premium is appropriate for the Northern Border segment. 76/ These figures, when added to the Non-Incentive Rate, yield Center Rates of 17.5 percent and 15.0 percent, for the Alaskan and Northern Border segments, respectively.

76/ Hass concludes that ". . . the IROR Risk Premium does not need to be very high and could be set to zero with justification." Hass Report at 42. Project sponsors, on the other hand, have expressed a concern that uncertainties associated with the IROR mechanism compound the already formidable task of arranging private financing for the project.

The State of Alaska has argued in its comments that the IROR Risk Premium is unnecessary and inconsistent with the rationale presented for it by the Commission. It states that the expected rate of return, in the statistical sense, can never be less than the Non-Incentive Rate (that is, the sum of the Operation Phase Rate and the Project Risk Rate) and will probably exceed the Non-Incentive Rate. It concludes that there is no downside risk inherent in the IROR mechanism and that even a schedule which embodied no IROR Risk Premium would offer investors a schedule of returns which are higher than necessary to induce equity investment in the project.

The Commission is not persuaded by these arguments because they fail to address the fundamental issue of the variability of the earned rate of return relative to the Center Rate. The actual Cost Performance Ratio, and thus the Incentive Rate which will be achieved, is by no means known with certainty. By definition, there is some probability of a Cost Performance Ratio in excess of the Center Point. Therefore, investors face the possibility of receiving a rate of return less than the Center Rate, even though the expected rate of return (by the narrow statistical definition) may be in excess of the Non-Incentive Rate.

The IROR mechanism does confront investors with downside risk, and thus, a reasonable IROR Risk Premium is appropriate. 77/

The Commission Staff has proposed that no IROR Risk Premium should be incorporated into the IROR schedule. They assert that upside variance in returns (i.e., the contribution to that variance due to returns above the expected

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77/ In addition, the Commission does not agree with the State of Alaska that an IROR schedule which embodied a zero IROR Risk Premium would offer investors higher returns than necessary. Although it is true, as the State of Alaska notes, that the statistical concept of the expected rate of return is likely to exceed the Center Rate, rational investors are not likely to base their investment decisions on the expected rate of return, per se. The expected rate of return is a weighted average of all possible rates of return, using as weights the assumed probabilities of each rate of return being received. Such a procedure does not take into consideration the different levels of investment associated with different allowed rates of investment return. A rate of return in excess of the Center Rate would be received on a smaller rate base than a rate of return which is less than the Center Rate. Thus, the dollar amount of gain, in an opportunity cost sense, from achieving a Cost Performance Ratio less than the Center Point by a certain percentage would be smaller than the dollar amount of loss resulting from achieving a Cost Performance Ratio in excess of the Center Point by the same percentage. In order to induce investment in the project, the expected discounted dollar amount of return to investors from the project must be at least equal to the expected discounted dollar amount of incremental investment. As was shown in the April 6 Notice, a zero IROR Risk Premium would produce an expected discounted return just equal to the investment.

level) is a desirable feature to investors. They contend that since the upside variance due to the IROR mechanism is proportionally much greater than the downside variance (i.e., the contribution to total variance due to returns below the expected level), no IROR Risk Premium is needed.

This approach for assessing risk is one with which the Commission has had no previous experience. Even if the ratio of good or upside variance to bad or downside variance is a useful measure of risk, the Commission is uncertain as to how it should be employed in determining the IROR Risk Premium. While the Staff's approach is interesting, it is not sufficiently developed to constitute a reliable basis for Commission action.

In sum, in light of those attributes of the rate of return mechanism for this project that could produce a variance between actual and allowed rates of return greater than the variance usually observed in regulated situations, it is appropriate to establish a special IROR Risk Premium. The Commission's judgment is that on the basis of an overall assessment of the project, 1.5 percent is reasonable for Alaska and 0.5 percent is reasonable for the Northern Border.

6. Marginal Rate

a. Definition

The Marginal Rate is the return on the incremental dollar invested in moving from one Cost Performance Ratio to another. Alternatively, it can be thought of as the rate of return allowed on cost overruns or the rate of return enjoyed if costs can be reduced. However, as previously discussed in Section I, a single Incentive Rate will be earned on all investments in the project. The marginal rate is merely an analytical device for determining, in part, what the rate of return will be depending on cost performance.

This order establishes an overall schedule of rates of return called the IROR schedule, but implicit in any schedule is one or more Marginal Rates of Return. To illustrate this relationship between the overall IROR schedule and the Marginal Rate, consider the following abbreviated IROR schedule where the marginal rate is constant at 8 percent. When the marginal rate is applied to the additional equity investment, the average rate of return on equity (IROR) is reduced.

Equity Share of Capital Costs	Cost Performance Ratio	IROR
$ 1.2 million	1.2	18.29
1.3 million	1.3	17.50
1.4 million	1.4	16.82

Assume that the Cost Performance Ratio of 1.3 has already been reached shortly before project completion and the equity share of these costs is $1.3 million. But in order to complete the project, additional funds equal to 10 percent of projected costs must be expended. The equity share of this increase is $100,000. This increases the Cost Performance Ratio to 1.4. Because of this increase in costs, the IROR is reduced from 17.50 percent to 16.82 percent. This reduction occurs because the Marginal Rate implicit in this schedule is 8 percent and the equity investor will only earn an 8 percent return on his $100,000 investment. 78/ Conversely, if the project sponsor can find some way to reduce construction costs so as to reduce the Cost Performance Ratio from 1.4 to 1.3, then the equity

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78/ The IROR for the Cost Performance Ratio of 1.4, i.e, 16.82 %, can be calculated as the weighted average of the 17.50 % return allowed for the 1.3 Cost Performance Ratio and the 8 % Marginal Rate earned on the $100,000 increase in costs.

The weights in the average are the share of the total investment earning each of the two rates of return.

$$(1.3/1.4) \times (17.50\ \%) + (0.1/1.4) \times (8.0\ \%)$$
$$= (0.92\ \%) \times (17.50\ \%) + (0.071) \times (8.0\ \%)$$
$$= 16.25\ \% + 0.57\ \%$$
$$= 16.82\ \%$$

Again, however, there is only one overall rate of return, in this case 16.82 %.

investor will have avoided investing $100,000 at the low Marginal Rate of 8 percent.

b. Impact of the Marginal Rate

The Marginal Rate plays three important roles in the IROR mechanism:

(1) Incentive to reduce costs. Because the Marginal Rate is the implicit rate of return allowed on all equity to finance increases in costs, this rate primarily determines the incentives to reduce costs created by the IROR. If the cost of capital is more than the allowed return, investors have a strong incentive to avoid making that investment. In addition to any other incentives already in existence, the Marginal Rate will create an incentive to reduce costs if the Marginal Rate is set below the cost of capital. 79/

79/ In their joint initial comments, the sponsors argue that the fundamental incentive to reduce or control cost: is the need to remain within the pool of funds committed to the project. (Joint Comments at 36.) We agree that this financial restriction will create a powerful and practical incentive. Marginal Rate is designed to discourage the expenditure of funds which exceed the cost estimates upon which the project was certificated. This is a separate and distinct issue from that raised by the sponsors of whether the funds will be available to finance will be available to finance cost overruns. The President's Decision is clear that the IROR must be constructed so as to create "substantial incentives" to reduce costs. The Commission, to meet this requirement, must consider the implicit Marginal Rate in the IROR schedule and compare it with the cost of equity capital for this project.

(2) Slope of IROR schedule. The Marginal Rate determines the steepness of the IROR curve. A low marginal Rate will mean that the Incentive Rate will decline more as cost overruns occur. A high Marginal Rate will mean that the Incentive Rate will decline slowly as cost increases occur. From another perspective, a low Marginal Rate creates greater risk or uncertainty about the final outcome since the range or variability of rates is large. A high Marginal Rate creates little or no variability, and provides a substantial likelihood that even if there is substantial cost growth relative to the projected costs the earned rate will be close to the Center Rate.

(3) Floor of the IROR schedule. If a constant Marginal Rate is used, the Marginal Rate then becomes the floor on the IROR schedule. Since the Marginal Rate is effectively the rate allowed on all cost increases, the Incentive Rate can never be reduced below the level of the Marginal Rate no matter how large the Cost Performance Ratio becomes.

(c) Alternative Marginal Rates

In the Commission's April 6, 1977 Notice, in the comments received pursuant to this Notice, and in comments received in the earlier rulemakings dealing with the IhOR, a number of different methodologies or approaches have been advocated for determining the Marginal Rate. The fundamental principle in choosing a Marginal Rate is that it should be less than the cost of equity capital. However, the comments demonstrate considerable controversy about the appropriate measure of the cost of capital and how much less the Marginal Rate must be. Here, we will review briefly the alternative approaches suggested to the Commission and discuss their merits. The Commission, however, must exercise its best judgment and choose a reasonable value from the various values presented in the comments.

The highest value for the Marginal Rate has been advocated by the project sponsors, Northern Border and Northwest Alaska. That rate is 12 percent. Their argument is that the Marginal Rate only needs to be slightly less than the "rate potential investors will require to accept the Project's risks," or, in other words, only slightly less than the Operation Phase Rate plus the Project Risk Premium. (Initial Comments, page 30). This order specifies that rate to be 16.0% for the Alaska segment and 14.5% for Northern Border.

The Commission, however, believes that there are three compelling reasons why the Marginal Rate must be substantially less than the Operation Phase Rate plus the Project Risk Premium to create a significant incentive. First, the risk of an investment in this project is reduced substantially as the project nears completion. 80/ In fact, an investment just prior to completion has avoided all of the construction phase risks and is only confronted with the operation phase risks. Even adopting the sponsors' argument that the Marginal Rate need only be slightly less than the rate required to compensate for the risks of the project, the relevant rate is the Operation Phase Rate. This Order specifies an Operation Phase Rate of 14.0 percent for Alaska and 13.0 percent for Northern Border.

Second, the Commission believes that the incentive to reduce costs increases as the difference between the Marginal Rate and the rate that would otherwise be adequate compensation for the risks of investment increases. A Marginal Rate only slightly less than the Operation Phase Rate will only create a slight incentive to avoid overruns. In order to create a substantial incentive, the Marginal

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80/ See, e.g., Northwest Alaskan, "Determination Project Risk Premium" at 39.

Rate must be substantially less than the Operation Phase Rate. 81/

Third, the Commission believes that it may be appropriate in determining the Marginal Rate to examine the cost of the funds used to make the equity investment in the project. If the equity investor can borrow a substantial portion of the funds to make the investment, then th · average cost of funds could be much less than the Operation Phase Rate. In the Commission's September 15, 1978, Revised Notice of Proposed Rulemaking (at page 45), an example was presented where equity investors could borrow 60 percent of the funds to make an equity investment in the Alaska gas project. This produced a weighted cost of capital funds of about 8 percent. 82/

The lowest value of the Marginal Rate was advocated in the comments by the Staff. The Staff argued th·t a zero Marginal Rate was appropriate by analogy to the proposed

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81/ See, Initial Comments of the People of the State of California and the Public Utilities Commission of the State of California at 3 (May 4, 1979) which, for a similar reason, advocated a Marginal Rate of 5 %.

82/ This figure is derived from:

(share of equity) x (equity rate of return)
+ (share of debt) x (after-tax cost of debt)
= (0.4) x (13 %) + (0.6) x (5 %) = 8.2 %

tariff provisions that would reduce equity return in the event of a service interruption. Since the return on equity is reduced proportionately to the reduction in throughput resulting from a service interruption, the return on equity per thousand cubic feet (Mcf) of throughput would be constant 83/ This provision provides an incentive for sponsors to minimize or reduce service interruptions. The Staff argues that the same incentive should be provided to sponsors to reduce construction costs. A zero Marginal Rate would effectively keep the total dollar equity return constant for all levels of cost overruns or underruns and thus all levels of equity investment.

Though this analogy with the service interruption provision of the tariff is interesting, the Commission believes that the circumstances surrounding the two situations are quite different. In setting the Marginal Rate, the primary criterion is to reduce the equity return on cost increases to a level less than what equity can earn in other investments of similar risk. This same criterion is not relevant for the service interruption tariff provision. The

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83/ The reduction in equity return only occurs if the service interruption reduces throughput to less than 90 % of the contracted quantities.

Commission believes that a zero Marginal Rate would be unnecessarily below the rate of return necessary to create a substantial incentive to avoid cost overruns.

The project sponsors, in their initial comments, argue that a low Marginal Rate may well prevent the project from obtaining both equity and debt financing (Initial Comments, Tab 4, pp. 7-8, and pp. 18-21). The Commission believes that the IROR schedule will prevent equity financing only if potential investors perceive such a high probability of large cost overruns that the IROR mechanism would result in a low average rate of return. The Marginal Rate has been set at a relatively high level in part to assure that the Incentive Rate -- the rate that the project will actually earn -- will decline only gradually as actual costs exceed projected costs. As will be discussed in the later section dealing with the overall impacts of the IROR mechanism, the allowed rate of return for the project is competitive with other project investments in the gas industry and the economy in general. If investors perceive a high probability of such large overruns that the realized rate of return will be low, then it would seem to follow that the projected costs and estimates of cost overruns have grown to such an extent since the President's Decision that the construction of this project may not still be in the public interest.

The project sponsors list three reasons why a low equity return may prevent debt financing even if equity financing is available. 84/ All of these reasons are only relevant if there is a significant probability that large cost overruns will reduce the Incentive Rate to a low level. The project sponsors however, fail to mention what the Commission considers to be the greatest deterrent to the attraction of debt capital for this project, the threat of such a large amount of cost growth that the economic viability of the

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84/ Initial Comments, Tab 4, at 7. These reasons are:

(1) The project must offer an equity return high enough to attract completion capital from investors who did not participate in the initial financing. The Commission's response is that the original investors may have to sacrifice some of their return in order to make the project attractive to new investors in the event of large overruns or else face the loss of their investment due to abandonment. A similar argument was made by the State of California in its initial comments (p. 3).

(2) Debt amortization schedules may require that the debt principal payments be funded in part from the equity returns. The Commission notes that the IROR mechanism does not interfere with the return of equity through depreciation but only reduces the return on equity. It would seem to be very unlikely that debt amortization would exceed the total depreciation expense for the project.

(3) Debt investors will consider debt coverage ratios in their decision to invest and the IROR may reduce these ratios. The Commission believes that the cost of service tariff for this project reduces the importance of conventional measures of debt coverage.

project would threaten the security of the debt investor. The IROR mechanism requires the project sponsors and other equity investors to suffer a low rate of return only if large cost overruns occur. If the equity investor is willing to go ahead with the project, then he must be confident that the cost estimates for the project are accurate and large cost overruns will not occur. The existence of equity investment, then, should assure the debt investors that large cost overruns will not occur. Thus the debt investment should be secure.

The Commission, in choosing a Marginal Rate, must balance the requirement in the Decision that the IROR mechanism provide "substantial incentives" with the need to attract equity and debt financing. The Commission has set a relatively high Marginal Rate. An 8 percent Marginal Rate will not lower the levels of the Incentive Rates unless very large cost overruns occur. However, we believe that an 8 percent Marginal Rate is sufficiently below the rates of

return that equity investors could earn elsewhere so as to provide a significant incentive for superior cost control. 85/

85/ The State of New York suggests that the Marginal Rate should be reduced for large values of the Cost Performance Ratio, but does not explain what specific benefit would result from this proposal. Comments of the Public Service Commission of the State of New York on Proposed Values for Incentive Rate of Return, Change of Scope and Inflation Adjustment and Tariff Issues, Docket No. RM78-12 at 6 (May 4, 1979). During this and the previous rulemakings dealing with the IROR mechanism, the Commission has examined a number of proposals for a non-constant Marginal Rate. Upon close re-examination of this issue, the Commission fails to see any significant benefits that would result from a non-constant Marginal Rate.

7. Synopsis of Components

The following table presents the determined values for the IROR parameters:

Parameter	Segment	
	Alaskan	Northern Border
Center Point 86/	1.30	1.10
Operation Phase Rate	14.00	13.00
Project Risk Premium	2.00	1.50
IROR Risk Premium	2.00	.50
Center Rate	17.50	15.00
Marginal Rate	8.00	8.00
Equity AFUDC Rate	14.00	13.00

With these values the entire range of the IROR schedule can be calculated. 87/ The result of the calculation is produced below in tabular form:

86/ These values for the Center Point are used only for illustration. The values for this component for each of the segments will be determined at a later date. See section II.B.2.

87/ The formulas by which the calculation would be made gives any Cost Performance Ratio (A) would be:

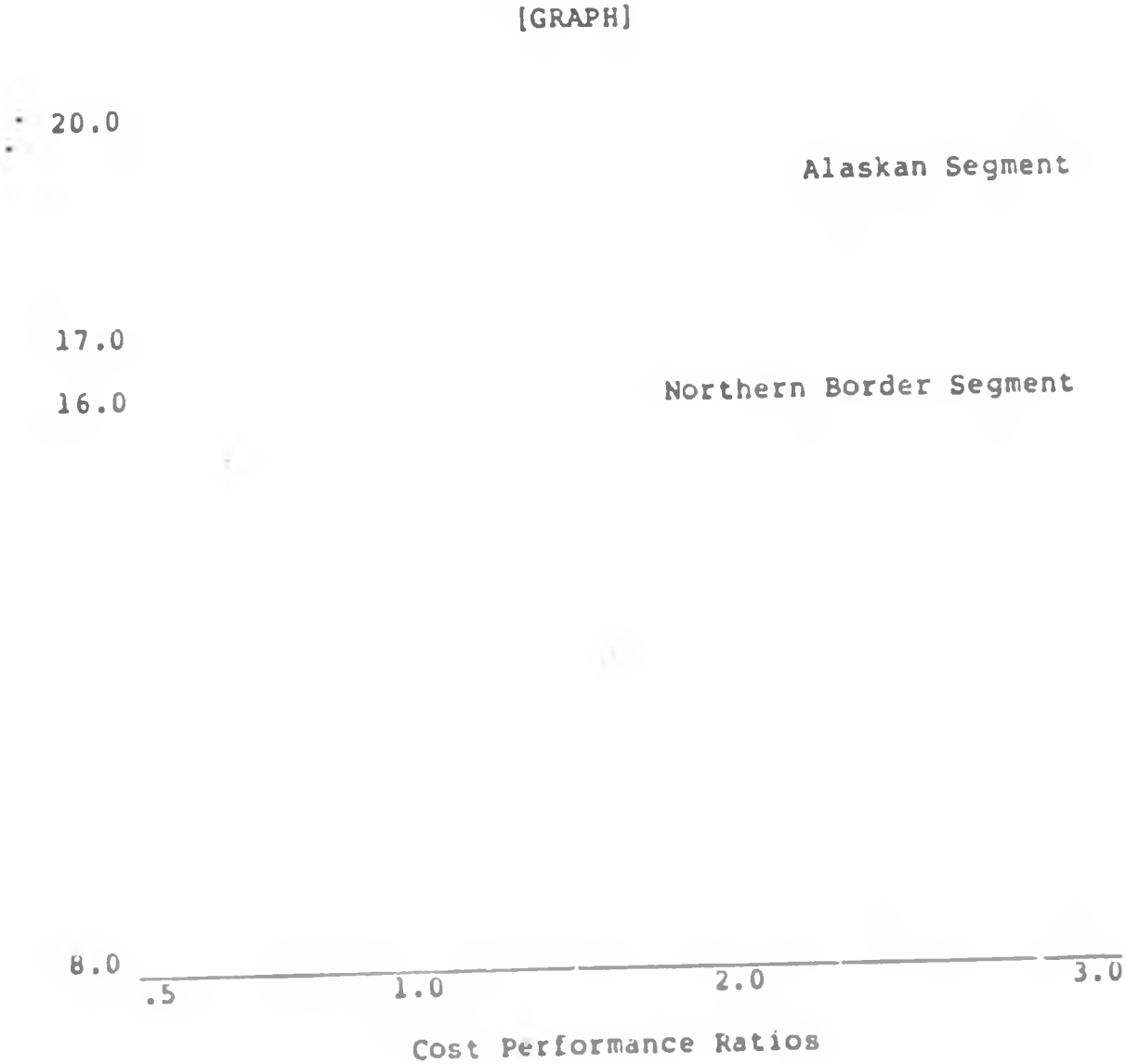
(1) For Alaska: $R = [(17.5)(1.3) + 8(A - 1.3)]/A$
$= 8 + 12.35/A$

(2) For Northern Border: $R = [(15.00)(1.1) + 8(A - 1.1)]/A$
$= 8 + 7.7/A$

Where: R = the incentive rate of return

INCENTIVE RATE OF RETURN

Cost Performance Ratio	Alaska	Northern Border
0.8	23.44	17.62
0.9	21.72	16.56
1.0	20.35	15.70
1.1	19.23	15.00
1.2	18.29	14.42
1.3	17.50	13.92
1.4	16.82	13.50
1.5	16.23	13.13
1.6	15.72	12.81
1.7	15.26	12.53
1.8	14.86	12.28
1.9	14.50	12.05
2.0	14.17	11.85
2.1	13.88	11.67
2.2	13.61	11.35
2.3	13.37	11.35
2.4	13.15	11.21
2.5	12.94	11.08
2.6	12.75	10.96
2.7	12.57	10.85
2.8	12.41	10.75


20.0
Alaskan Segment
17.0
16.0
Northern Border Segment
8.0
.5
1.0
2.0
3.0
Cost Performance Ratios

C. One-Time Adjustment to Rate Base

Order No. 17 specifies a procedure for determining a one-time adjustment to the rate base of the project, in lieu of using the Incentive Rate during the operating life of the project. This section reviews the rationale for this procedure, and describes how the one-time adjustment will be calculated, including examples. Also, this section discusses certain accounting, ratemaking, and tariff implications of the one-time adjustment that were not included in Order No. 17.

The preceding analysis of the IROR mechanism is based on the premise that the Incentive Rate would be applied to the actual equity component of the project's rate base to determine the cost of service. However, Order No. 17 requires an alternative but equivalent procedure. Instead of applying the Incentive Rate to a normal rate base, the Operation Phase Rate will be applied to an adjusted rate base. The adjustment to the capital structure and rate base will be such that the present worth of the future income or cash flow to equity investors will be the same as would result from using the Incentive Rate and an unadjusted rate base. The one-time adjustment would be amortized with the annual amortization charge included in the cost of service and the Operation Phase Rate would be earned on the unamortized portion of the one-time adjustment.

The Commission has adopted the one-time adjustment

approach for two reasons. First, the use of a one-time adjustment simplifies the determination of just and reasonable rates of return in the future, because the risks attached to the construction phase, including the risk of the IROR mechanism itself, are already recognized in the adjusted capital structure and rate base. By compensating for these risks through an adjustment to the project's rate base, future rate of return determinations need only address project risks and financial market conditions at the time of determination, not those risks associated with the construction of the project which took place in the past.

The second reason is to simplify future financing for, and rate determinations on, expansions or looping of the ANGTS. The risks of participation in this project prior to and during construction are significantly different from the risks associated with project investments made in the future when in an operational phase. 88/ The IROR mechanism is a concept

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88/ The project sponsors have already provided some recognition of the changing nature of project risks as the project progresses with the discount schedule for late entry which was made part of their Partnership Agreement. The Commission endorsed that concept in approving the relevant portion of the Partnership Agreement, by Order of June 30, 1978, in Docket No. CP78-123 (at pp. 7-11), and seeks to reinforce it with the rate base adjustment methodology.

developed to recognize the project sponsors' performance in the initial construction phase only, and the resulting adjustment should not affect the return on future investment in an expansion of that project. The one-time adjustment ensures this result without the need for separate return determinations for investments made in the ANGTS at different times.

The Commission believes that the adjustment should be the present value of expected future cash flows 89/ resulting from the application of the difference between the Incentive Rate of Return and the Operation Phase Rate as applied to the equity-supplied capital of the system. 90/ Table illustrates how to calculate the one-time adjustment that

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89/ The expected cash flow includes both the return on and the return of the one-time adjustment. The one-time adjustment is, in effect, additional equity provided to the project as a result of the performance of the sponsors during construction.

90/ Some of the comments argue that uncertainties about the future operation of the pipeline will make the present value of the return of equity and the return to equity uncertain, and thus make the precise size of the one-time adjustment uncertain. The Commission agrees that it is impossible to predict with certainty such things as throughput, tax rates, operation costs, or ultimate capacity. However, the type of cost-of-service tariff that this Commission is likely to approve will provide a high degree of certainty as to the return of equity and the return to equity over the life of the project, once the size of the equity investment and the allowed rate of return have been finalized.

is equivalent to an Incentive Rate of 17 percent when the Operation Phase Rate is 14 percent. Instead of earning a 17.5 percent return on the unadjusted equity investment in the project, the investor will earn a 14 percent return on a larger adjusted equity investment. Based on the assumption that the equity investment in the project will be reduced on a straight line basis over a 25-year period, Table 1 shows that the one-time adjustment should equal 18.3 percent of the original investment. 91/

Table 2 shows the one-time adjustment to the equity investment that results for each possible value of the Incentive Rate for both the Alaska segment and Northern Border. In the case of the Alaska segment, a Cost Performance Ratio less than 2.1 will result in an Incentive Rate greater than the Operation Phase Rate (14 percent), and thus in a positive one-time adjustment. For Cost Performance Ratios greater than approximately 2.1, the Incentive Rate will be less than the Operation Phase Rate, and the one-time adjustment will be negative.

91/ Using a 14 percent discount rate, the present worth of the return of and return on equity resulting from a 17.5 percent rate of return on an unadjusted equity investment of $100.00 is the same as the present worth of the return of and return on equity resulting from a 14 percent rate of return on an adjusted equity investment of $118.13.

TABLE 1

Example of One-Time Adjustment Calculation

Assumptions:
Operation Phase Rate - 14%
Incentive Rate - 17.5
Equity Investment - $100
Depreciation Period - 25 years

Year	Return of equity	Return * on equity	Total	Discounted Total (14% discount rate)
1	$4.00	$17.50	$21.50	$18.86
2	4.00	16.80	20.80	16.00
3	4.00	16.10	20.10	13.57
4	4.00	15.40	19.40	11.49
5	4.00	14.70	18.70	9.71
6	4.00	14.00	18.00	8.20
7	4.00	13.30	17.30	6.91
8	4.00	12.60	16.60	5.82
9	4.00	11.90	15.90	4.89
10	4.00	11.20	15.20	4.10
11	4.00	10.50	14.50	3.43
12	4.00	9.80	13.80	2.86
13	4.00	9.10	13.10	2.39
14	4.00	8.40	12.40	1.98
15	4.00	7.70	11.70	1.64
16	4.00	7.00	11.00	1.35
17	4.00	6.30	10.30	1.11
18	4.00	5.60	9.60	0.91
19	4.00	4.90	8.90	0.74
20	4.00	4.20	8.20	0.60
21	4.00	3.50	7.50	0.48
22	4.00	2.80	6.80	0.38
23	4.00	2.10	6.10	0.30
24	4.00	1.40	5.40	0.23
25	4.00	0.70	4.70	0.18
Total	$100.00	$227.50	$327.50	$118.13

One-Time Adjustment = $18.13

* Computed on remaining balance of one-time adjustment as of January 1 of each year.

TABLE 2

One-Time Adjustment as Percent of Equity Investment

Alaska			Northern Border	
Cost Performance Ratio	Incentive Rate	One-Time Adjustment % (14% Discount Rate)	Incentive Rate	One-Time Adjustment % (13% Discount Rate
0.8	23.44	48.38	17.62	25.15
0.9	21.72	40.00	16.56	19.33
1.0	20.35	32.89	15.70	14.68
1.1	19.23	27.07	15.00	10.87
1.2	18.29	22.23	14.42	7.70
1.3	17.50	18.13	13.92	5.02
1.4	16.82	14.61	13.50	2.72
1.5	16.23	11.57	13.13	0.73
1.6	15.72	8.90	12.81	-1.02
1.7	15.26	6.55	12.53	-2.56
1.8	14.86	4.46	12.28	-3.93
1.9	14.50	2.59	12.05	-5.15
2.0	14.17	0.91	11.85	-6.25
2.1	13.88	-0.62	11.67	-7.25
2.2	13.61	-2.00	11.50	-8.15
2.3	13.37	-3.26	11.35	-8.98
2.4	13.15	-4.42	11.21	-9.74
2.5	12.94	-5.49	11.08	-10.44
2.6	12.75	-6.47	10.96	-11.08
2.7	12.57	-7.38	10.85	-11.68
2.8	12.41	-8.23	10.75	-12.23

For accounting purposes, the one-time adjustment can be actually recorded as an adjustment to the original cost of plant in the accounting records of the project. This one-time adjustment could be entered into just one of the plant accounts specified by the Commission's Uniform System of Accounts or spread over a number of the plant accounts. Since the tariff of the project relies on the cost of plant as recorded according to Uniform System of Accounts, the one-time adjustment would be incorporated into the rate base of the project for ratemaking purposes. Thus, application of the provisions of the tariff to the project's rate base as specified by the adjusted account(s) would then yield the appropriate revenue streams.

The Commission rejects this approach for a number of reasons. First, it could result in a distorted picture of the actual earnings of the project. To record the adjustment as an increase in the original cost of the plant would be contrary to generally accepted accounting principles, since it would not be in accord with the cost concept of asset accounting. Also, it would violate the original cost concept of regulatory accounting. Other problems might arise in the future if there was a significant change in the project plant, such as an extraordinary retirement or replacement of a significant component of the project plant. If the original cost of this component also included some part of the one-

time adjustment, special recognition of this fact must be given in order to ensure continued recognition of the impact of the IROR on rates of return.

The Commission proposes instead to record the one-time adjustment as a memorandum entry in the project's accounts to be used for ratemaking purposes only. The purpose of the one-time adjustment is to reward or penalize the project sponsors for their performance during the construction phase of the project, and to compensate the investors for unusual risks involved in building a project of such magnitude. Under this proposal, the one-time adjustment would be treated as a matter of rates and rate of return on a given investment, not an adjustment of that investment.

The use of the memorandum entry concept will require modification of the tariffs to include a schedule of the one-time adjustment and its amortization over the project's life. Also, the definition of rate base will be changed to include the average remaining balance of the IROR one-time adjustment, and the definition of the components of cost of service will include the scheduled amortization of the IROR one-time adjustment for the tariff computation period. Finally, the equity in the project to be used for the rate determination

will include the unamortized one-time adjustment as an adjustment to book equity. 92/

92/ The one-time adjustment to rate base is a means of obtaining a desired result in an uncomplicated manner. The Commission realizes that there are many variables in the ratemaking process which will affect the results of any method used to implement the IROR. The Commission believes that the one-time adjustment, amortized over the life of the project, will result in the closest approximation of the desired results, and any differences will be minimal when reviewed over time.

III. ADJUSTING FOR INFLATION

The Commission believes that it is not reasonable to penalize project sponsors for cost increases resulting from general inflation in the nation's economy. As proposed in our Notice of April 6, the Commission will adjust the Actual Capital Costs to eliminate the effect of general inflation before calculating the Cost Performance Ratio and the IROR.

Extensive research has been done on this subject, and there is substantial information in the record on the appropriate inflation adjustment procedure. Both the Alaskan Delegate and the project sponsors have prepared papers on the inflation adjustment mechanism, and the comments received pursuant to the Commission's Notice of April 6 discuss the inflation adjustment mechanism in considerable detail.

The Commission has evaluated potential inflation adjustment mechanisms against four criteria. These are: (1) the accuracy with which the mechanism would adjust the actual costs of construction for general inflation in the nation's economy; (2) the extent to which it would provide incentives to reduce construction costs; (3) the burden on the Government and the sponsors of administering the inflation adjustment mechanism; and (4) the attendant risk and uncertainty to investors and lenders. Different proposals rank differently when judged by these criteria individually. The Commission must balance the conflicts or differences to arrive at the best possible solution under all of these criteria.

The Commission's proposal for an inflation adjustment mechanism has been criticized (for different reasons) by both the sponsors and the Commission's Staff in their comments. While the Commission has made some modifications in response to the technical criticisms of the sponsors, the Commission still believes that the proposal in the Notice achieves the best balance among the four goals.

The Commission's inflation adjustment mechanism has the following major features:

- o A hybrid or composite index of construction costs for this project will be constructed.
- o This index will be used to deflate Actual Capital Costs back to base year price levels for comparison with the Projected Capital Costs, also in base year prices.
- o The composite index will be a weighted average of 42 indices currently available from the Government or other recognized sources.
- o Each of the 42 indices will measure the price increase for one category of construction costs (e.g., valves, line pipe, welders, cement, and so forth).

- The weights to construct the average will change from quarter to quarter and will be based on the proportion of that cost category in the total costs for the project as taken from the estimates in the Certification Cost Estimate. (For example, if valves amount to 15 percent of total costs for a particular period, valves would be given a weight of 15 percent in the composite index for that period.)

- Weights to be used for any construction occurring after the end of the estimated construction period would be those weights used for the last year of construction in the estimated schedule.

This inflation adjustment mechanism is based in large part on the proposal made by the project sponsors in a paper submitted to the Alaskan Delegate on March 7 and later distributed to all other interested parties. 93/ In their comments on the April 6 Notice, the project sponsors are critical of the

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93/ Northwest Alaskan, "Recommended Inflation Adjustment."

Commission's deviation from their proposal. The Commission's major reason for deviating from the sponsor's proposal is that the proposal would not adequately realize the goals of creating incentives to reduce costs and of limiting administrative burdens. The Commission's procedure results in some attendant uncertainty about the final outcome of the IROR mechanism or, in other words, uncertainty about the realized rate of return. As discussed in Section II.B.5. on the IROR Risk Premium, this is one reason why the Commission has increased the IROR Premium.

The first difference between the mechanism specified in this Order and that proposed by the sponsors is the weights to construct the composite index. The sponsors advocate using the actual costs incurred in each category during construction to determine the weights, while the Commission's procedure is to use the estimate of costs in each category found in the Certification Cost Estimate. There are two major advantages to using estimated costs rather than actual costs to derive the weights.

First, the use of actual costs as weights does not give any incentive to substitute low-cost items in one cost category for high-cost items in another category since the weights would be adjusted to offset this change. Using fixed weights based on estimated costs gives the sponsors a greater incentive to substitute low for high-cost items whenever

possible, and thus t· achieve a lower Cost Performance Ratio (and a higher IROR).

Second, the determination of the weights prior to the start of construction as part of the certification process means that there will be one less issue or potential controversy to resolve during construction. In general, the project sponsors have emphasized the need to resolve all IROR parameters as soon as possible.

The use of actual costs to determine weights could result in a more accurate measure of inflation for each cost category than using estimated cost weights. However, we believe the overall accuracy of the estimates will be good, since any underestimation of inflation for one of the 40 or more categories will probably be offset by an overestimation in another category. Also, any inaccuracies are just as likely to benefit the project sponsors by overestimating inflation as to harm the sponsors by underestimating inflation.

The second and more important difference between the sponsor's proposal and the Commission's mechanism is in the use of actual prices paid as a measure of inflation. The sponsors argue that no existing index accurately measures their likely inflationary experience for steel prices and wage rates for labor. Though there is merit to this argument, the Commission cannot reconcile the use of actual prices to measure inflation with the requirement in the Decision that

the IROR mechanism must provide "substantial incentives" to reduce costs. Labor costs and steel costs will likely account for more than 75 percent of the total costs of this project. By using actual prices paid to measure inflation for these two cost categories, the Commission would in effect be eliminating any extra incentive created by the IROR mechanism 94/ for the sponsors to negotiate for lower wage rates or lower steel prices.

We do not believe that the use of existing indices for these two cost categories creates an inordinate amount of risk for the sponsors. Prices for all steel products generally follow the same price trends, and labor rates in all parts of the country for all skill categories also generally increase together. We do not deny that there may be some divergence in growth rates, but the sponsors are just as likely to benefit from differences as to be penalized.

As we stated in the April 6 Notice, the Commission expects that the Certification Cost Estimate will incorporate a premium for labor rates or steel prices if it can be shown that wages or steel prices for this project can be expected to be higher than other wage rates or steel prices incurred in other major construction projects in the lower-48 states.

94/ There may be other powerful incentives to bargain for lower wages and prices, but the IROR mechanism would not add to them in this case.

Labor prices in Alaska will be higher than in the lower-48, and prices of 48-inch pipe exceed the prices for 36-inch pipe (the largest diameter for which price indexes are available). 95/ However, there is no evidence that future increases in Alaska labor rates or future changes in prices for 48-inch steel would be greater than increases in other wage rates or other steel prices. In fact, there is at least some probability that increases will be smaller and that the sponsors will benefit from the inflation adjustment mechanism required by this Order. 96/

95/ In estimating the prices for labor or steel to be used in the Certification Cost Estimate, we believe that a reasonable procedure would be to estimate the premium (in percentage terms) that will have to be paid for Alaskan labor or 48-inch pipe above lower-48 prices for labor or 36-inch pipe during actual construction. These premiums should then be added to the base year prices for lower-48 labor or 36-inch steel pipe to determine base-year prices for Alaskan labor or 48-inch pipe. The Trans-Alaska Oil Pipeline experience could provide a starting point for determining the premium for labor.

96/ The sponsors argue that incorporating premiums for Alaskan labor or 48-inch pipe in their cost estimates will put them at a competitive disadvantage in their negotiations with labor unions or pipe manufacturers. Joint Comments at Tab 2, p. 10. Even if there was no IROR mechanism, and thus no inflation adjustment mechanism, the Commission would still expect the Certification Estimates to contain the best estimates possible for labor rates and steel pipe prices, including any premiums that the sponsors expect to pay over other more common labor rates or prices. Even assuming, arguendo, that the sponsors are correct, the argument would seem to apply with even more force to the situation where wage and price increases could be passed through to ratepayers by means of an inflation adjustment mechanism with no adverse impact on earnings.

The sponsors also object to the Commission's requirement to use the weights for the last scheduled period of construction to deflate costs during any period of schedule overrun. This may introduce some error, but again, the sponsors are just as likely to benefit as to be harmed. It is doubtful that any inaccuracies as a result of this arrangement could be substantial. The types and quantities of labor and material used during any period of schedule overrun should be similar to the types and quantities estimated to be us for the last period of the planned construction schedule. 97/

97/ The Commission Staff in their initial comments (pp.45-47) argue for a method of adjusting for inflation that would impose a much more severe penalty for schedule delay than would the Commission's mechanism. The Staff would not only use the same weights in the schedule overrun as used in the last scheduled period, but would also use the same values for the cost indices. In other words, there would be no adjustment for any inflation that occurred duri. the schedule overrun period. This proposal would result in an unneccessarily severe penalty for schedule delay. The true cost of schedule delay is measured by the time value of money, interest charges, or discount rates. The sponsors will be penalized for this cost since the Finance Charge will continue to be added to the Actual Capital Costs, thus increasing the Cost Performance Ratio and lowering the IROR. However, the increased costs due simply to inflation can not be considered an increase in the real costs of the project. In money terms, the costs have increased due to inflation, but then so have all other prices as well as the incomes of gas consumers. Since incomes are likely to increase in step with inflation, consumers are not really worse off simply because inflation has increased construction costs.

In their initial comments, the sponsors raise some technical issues concerning a few of the price indices proposed by the Commission in the Notice of April 6. Upon review, the Commission finds the sponsor's criticisms to be valid and the table of price indices included in Condition No. 18 has been modified to correct these errors.

IV. CHANGE IN SCOPE

A. Mechanism

The Change in Scope mechanism is an essential part of the overall Incentive Rate of Return mechanism. Its purpose is to protect the project sponsors against reductions in their rate of return caused by major events that drastically increase the cost of the project.

In formulating the Change in Scope mechanism the Commission had four goals in mind. 98/ The first was to avoid dilution of the incentive to reduce costs. The second was to limit the administrative burden of implementing the Change in Scope mechanism. The third was to develop clear and unambiguous rules, in order to minimize controversy and disagreement over when a Change in Scope event had occurred. The final goal was to avoid inadvertent, perverse incentives that might have a capricious effect on the project.

To best achieve and balance these four goals, the Commission proposed a Change in Scope mechanism that would only adjust the target cost for cost increases

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98/ See April 6 Notice at 43-45 (mimeo).

resulting from four events. If any of these four events occur the Projected Capital Cost of the project will be altered prior to determining the Cost Performance Ratio. The events are (1) wars, (2) any disaster declared by the President of the United States pursuant to the Disaster Relief Act of 1974, Pub. L. 93-288, 88 Stat. 143, (3) major design changes compelled by changes in Federal or State laws or regulations applicable to natural gas pipelines enacted or adopted subsequent to the Federal Inspector's approval of the Final Design of the pipeline, and (4) major changes in pipeline routing or capacity ordered by Federal or State Governments for the ANGTS from that approved by the Federal Inspector in the Final Design of the pipeline. For the reasons stated below, this Order adds a fifth Change in Scope event: delay in the issuance of a government permit or certificate necessary for completion of the pipeline system, when such delay (a) occurs subsequent to approval of the Final Design, (b) occurs through no fault of the project sponsors, and (c) causes significant cost increases.

The Staff's comments seek clarification as to the nature and consequences of design changes and cost estimate revisions that occur subsequent to approval of the Certification Cost Estimate but prior to the approval

of the Final Design. This concern is also reflected in many of the comments of the project sponsors. These comments raise an important point which must be clarified at the outset.

The Change in Scope mechanism set forth above applies solely to changes that occur subsequent to the approval of the Final Design. Changes that occur subsequent to that date will be governed by the Change in Scope mechanism set forth in Condition No. 10, as implemented through the Change in Scope procedure set forth in Condition No. 11. Changes that occur prior to approval of the Final Design are governed by Condition No. 9. Such changes, for instance, could include design changes generated by new technology or further study by the project sponsors.

Condition No. 9 provides a strong incentive, and wide latitude, for the project sponsors to consider seriously and study intensively all of the problems and risks that they will confront, and to evaluate, propose and justify any design changes that they deem necessary and appropriate, including all of the cost consequences of such proposed changes. If properly justified as desirable changes in design that cause real changes in cost, those cost changes will then be reflected in revisions to the Certification Cost Estimate and the Projected Capital Costs (but not in the Center Point).

During the period between approval of the Certification Cost Estimate and approval of the Final Design, major permits or approvals from government agencies may be granted, including terms and conditions attached thereto. Thus, the sponsors can incorporate the effect of these terms and conditions in their final design and cost estimates. If the granting of the major permits takes longer than anticipated in the Certification Cost Estimate, thus delaying the final design, the Commission expects that the final design cost estimate will incorporate the effect of such delay, both in direct costs, in schedule, and in the projected allowance for funds used during construction. (The final construction schedule should also contain a schedule for the issuance of government permits during construction.) The Commission's goal is that, at the time of approval of the Final Design, all possible uncertainties surrounding the pipeline, whether the result of governmental permitting processes or inherent technical problems, will have been resolved to the maximum extent possible. Once the Final Design and cost estimate revisions have been approved, the project sponsors will be expected to build the pipeline, following that Final Design and construction plan, without significant deviation.

In sum, design changes prior to approval of the Final Design can be proposed by either the project sponsors or the Federal Inspector (through the process of the Inspector's review and approval of the Final Design). The Inspector's determination will be final (subject only to applicable judicial review), with respect to both changes in the design itself as well as cost revisions resulting from such changes. The Federal Inspector will make these determinations pursuant to such procedures as he may adopt. The Inspector will advise the Commission of his determinations, but they will not be subject to administrative review by the Commission.

Once the final design has been approved, however, the energies of the project sponsors, the Federal Inspector and the Commission should be devoted, to the maximum extent possible, to the expeditious construction of the pipeline system. By then, the project sponsors will have had ample opportunity to fully consider and evaluate all of the risks and problems inherent in the project, including the attendant cost implications. Thus, as of that point in time, all subsequent IROR cost changes will be governed by the much more restrictive provisions set forth in Conditions No. 10 and 11.

The Upper Tanana Development Corporation, while generally approving the concept of a limited scope change mechanism, proposes in its comments that "socio-economic expenditures" should be allowable as a fifth category of Change in Scope events. For the reasons discussed below, prudent expenditures of that nature should be included in the Certification Cost Estimate at the outset, and should not be included in the Change in Scope mechanism.

The project sponsors, in their comments, urge a substantially expanded range of events that would qualify as Changes in Scope. In particular, they urge inclusion of:

"(1) Changes caused by government requirements, delays in government approvals, and reimbursement for government oversight.

"(2) Standard force majeure conditions such as acts of God, earthquakes, abnormal weather, terrorism, sabotage, riots and civil disturbances, and embargos, strikes, work stoppages and slowdowns.

"(3) Field conditions not ascertainable at the time of final design.

"(4) Right-of-way acquisition where rights of eminent domain may not exist."

The Change in Scope mechanism must be examined in its proper context. First of all (unlike the scope change concept in the normal government contract context), it applies solely to determining the rate of return, and not the rate base itself. For instance, in the event of a small flood, fire, or landslide, etc., in which the project sponsors prudently incur unanticipated costs, those costs will be fully recoverable through inclusion in the rate base. All that is at issue here is the effect of such an occurrence on the allowed rate of return.

In this regard, the Commission is faced with a basic choice of alternatives. One alternative is to adopt the very broad range of eligible scope changes proposed by the sponsors, and to take account of that generous and protective approach by adopting a less generous Center Rate and Center Point. The other alternative is to impose a higher degree of risk on the sponsors, by restricting the range of scope changes, and to reflect that higher risk in determining the Center Rate of Return and the Center Point. We have chosen the latter course. 99/ Our reasons for that choice can best be explained through

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99/ As discussed previously, this is policy reflected in the IROP Risk Premium; see Section II.B.5.

illustratives discussion of the project sponsors' proposed alternative.

We start with "abnormal weather." Arctic weather can be brutal. 100/ The project sponsors know that it is brutal; that is a risk that they can and must evaluate in planning the cost of the project, and it is a risk for which they are being compensated in their rate of return. Scope change applications and controversies in the context of the Alaska pipeline project would plunge the sponsors and the Federal Inspector into potentially endless inquiries into comparative temperatures, wind/chill factors, and thaw conditions (for which historic weather data may or may not be available), measured in terms of consecutive days of such weather, at particular geographic locations, over the past 20, 50 or 100 years, with commensurate time and motion studies of the effects of abnormally brutal weather (versus normally brutal weather) on labor productivity. This is precisely the diversion of engineering, scientific and legal time, expertise and expense that the Commission seeks to avoid. The

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100/ See, e.g., J. London, To Build a Fire; R. Service, "The Cremation of Sam McGee."

project sponsors should evaluate weather problems realistically (including a factor for delays caused by abnormal weather) when preparing their Certification Cost Estimate (including the Center Point). Then, when abnormal weather occurs, the efforts of all concerned can be focused exclusively on coping with it.

Similarly, fires, floods, landslides and other "acts of God," as well as "terrorism, sabotage, riots and civil disturbances, and embargos, strikes, work stoppages and slowdowns" are all risks that the project sponsors can evaluate in advance, in the sense of considering a reasonable cost factor for some level of unanticipated and undesirable events that may occur during the course of the project. Some of these events can be influenced to at least some extent by the sponsors; others cannot, but steps can be taken to cope with their effects. With respect to truly catastrophic events which cannot reasonably be factored into cost planning, such as a war, or a severe earthquake or tsunami, etc., the Change in Scope mechanism affords protection of the rate of return.

With respect to field conditions, there is an economic trade-off. Field conditions can be ascertained

in advance through sampling and other scientific techniques. On the other hand, there comes a point at which the cost of elaborate advance ascertainment would exceed the cost of coping with whatever unexpected conditions may eventually be encountered. The project sponsors are in the best position to strike the proper balance between incurring the cost of totally comprehensive ascertainment in advance versus coping later with unanticipated conditions that had not been fully ascertained. The project sponsors should be the ones to make that judgment, to estimate their costs accordingly, and to bear the responsibility for whatever unanticipated conditions they eventually encounter.

Similarly, right-of-way acquisition is a problem that the project sponsors can and should evaluate when preparing their Certification Cost Estimate (including the Center Point).

Finally, regarding "changes caused by government," the Change in Scope mechanism does in fact provide rate of return protection with respect to major design changes compelled by changes in government laws or regulations applicable to gas pipelines, and with respect to government ordered major changes in the (Alaska segment) pipeline

routing or capacity. During the course of construction, it is probably inevitable that the Federal Inspector will require, and the project sponsors will themselves propose, numerous minor changes in design or routing, or even capacity. Again, this is an eventuality that the project sponsors should consider in preparing their Certification Cost Estimate, and one that the Commission itself has considered in setting the Center Rate and Center Point procedure. When such minor changes are determined to be either necessary or desirable, the energies of all concerned ought to be devoted to making those changes, unencumbered by diversions into the processing of scope change applications.

B. Provision for Delay

In their comments, the project sponsors also take the Commission to task for failing to fulfill an "unconditional assurance with regard to delays caused by the government." 101/ In response to the valid aspect of that criticism, the Commission has added a fifth Change in Scope event.

101/ Joint Comments at 20-22.

Most permits and certificates will be issued prior to approval of the Final Design. To the extent that delays occur in the issuance of those certificates or permits -- and regardless of the cause of those delays -- the project sponsors will have ample opportunity to seek appropriate adjustments in the Projected Capital Cost up to and at the time of approval of the Final Design. That procedure was discussed above.

Some permits, however, will not be applied for or granted until during the construction period. The Commission expects that a detailed timetable for application and issuance of the necessary permits will be established and agreed to by the project sponsors and government agencies, including State agencies as necessary and appropriate, as part of approval of the Final Design and Cost Estimates. 102/

Commission representatives have had extensive discussions with representatives of other government agencies regarding their permitting processes and the importance of timely issuance of permits, particularly during the

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102/ Such a timetable, and establishing responsibility for adherence to that timetable, is within the contemplation of § 202(b) of Reorganization Plan No. 1 of 1979, transmitted by the President to the Congress on April 2, 1979.

construction period. Those agencies have been uniformly responsive to requirements for adhering to a permitting timetable. However, any agency's ability to adhere to the agreed schedule is directly related to the timely filing of all relevant applicant information by the project sponsors.

It is the Commission's expectation that all applications will be timely filed and all permits timely granted. If receipt of a permit is delayed because an application was not timely filed, or if the case for issuing the permit is not adequately set out, then the resulting increase in costs (and in Cost Performance Ratio) is a consequence of action (or inaction) by the project sponsors and should count against them. If, on the other hand, issuance of a permit during construction is delayed by the permitting agency, which fails to process the application to a conclusion, and the cost consequences of such action (or inaction) are significant, then some adjustment is appropriate. This Order revises the April 6 Notice by providing the Federal Inspector with discretion to treat as an allowable scope change event, government failure to take action toward issuing a required government permit, if such delay has significant cost consequences. Under no circumstances, however, shall a government denial of a permit or certificate be construed as a Change in Scope

event, unless such denial is subsequently reversed by a court on review; this provisions is directed solely to delay in processing of applications, and not to denial of the permit sought.

The IROR mechanism fully protects the project sponsors from one other form of delay that could otherwise have a potentially serious impact on the rate of return. The project sponsors or investors in any one segment, Alaskan or Northern Border, of the pipeline will not be responsible for cost increases resulting from construction delays in the other segments, or from a delay in the initiation of gas production at Prudhoe Bay. This is accomplished by defining the Actual Capital Cost for a segment as those costs incurred up to the point that that segment is capable of rendering service, even though other segments are not yet capable of delivery from Prudhoe Bay. In other words (for IROR purposes only), AFUDC will cease to be added to the Actual Capital Costs for a segment when that segment is complete and ready to begin transporting gas even if, for whatever reason, it is not actually transporting gas. (AFUDC will, of course, continue to accrue for rate base purposes.)

C. Procedure

When the project sponsors believe that a Change in Scope event (as defined above) has occurred, the project sponsors shall submit to the Federal Inspector both an explanation of the alleged Change in Scope and an estimate of the increase in Projected Capital Costs for the project. The Federal Inspector will evaluate the information submitted, and determine whether the event qualifies as a Change in Scope event and, if so, the appropriate adjustment to the Projected Capital Cost.

The Commission intends for the Federal Inspector to act on each Change in Scope case as expeditiously as possible after the alleged Change in Scope has occurred, pursuant to whatever appropriate procedural regulations the Inspector may promulgate. The Federal Inspector's decision will constitute final agency action, subject to applicable judicial review but not subject to review by the Commission. This procedure is designed to ensure prompt resolution of all Change in Scope issues.

The Staff's comments seek clarification of these procedures, on several points. First, the Staff suggests the possibility of the Federal Inspector, or some third party, seeking to obtain a reduction in the Projected Capital

Costs. Such a reduction presumably would be premised on potential - and sizable - construction cost savings that might emanate from (a) a war, (b) a natural disaster, (c) involuntary major design changes after the final design is approved, or (d) major changes in pipeline routing or capacity after the final design is approved. While the hypothetical symmetry of the Staff's suggestion is not devoid of surface appeal, we do not readily perceive how any of the above enumerated events could significantly reduce the total cost of the project. Moreover, even if a major change in design, routing or capacity could in fact significantly reduce the total cost, we would not want to discourage such changes by reducing the rate of return if such a change is implemented. Accordingly, and in order to preclude hypothetical uncertanties in this aspect of the IROR formula, we are limiting the Change in Scope procedure to changes submitted by the project sponsors.

Second, the Staff inquires as to whether interested parties, including the Staff, will be afforded an opportunity to participate in the Change in Scope proceedings before the Federal Inspector, and finally, whether the Inspector's decision could be appealed to the Commission.

The Change in Scope procedure is premised on Reorganization Plan No. 1 of 1979, as submitted by the President to the Congress on April 2, 1979. Section 102 of the Plan transfers to the jurisdiction of the Federal Inspector "[s]uch enforcement functions of . . . the Federal Energy Regulatory Commission related to compliance with: the certificates of public convenience and necessity, issued under Section 7 of the Natural Gas Act . . .." By incorporating the Change in Scope Mechanism and Procedure into conditions attached to the project sponsors' certificates, it is the Commission's intent and purpose to transfer to the Fede al Inspector the jurisdiction to enforce and implement those conditions, by transferring to the Inspector's jurisdiction the authority to make the Change in Scope determinations. The Commission and the Inspector may, in the future, seek to further clarify the precise boundaries of their respective jurisdiction, on this or othe matters, through means of an interagency agreement, as authorized by the last sentence of section 202 of the Reorganization Plan:

> Upon agreement between the Federal Inspector and the head of any agency, that agency may delegate to the Federal Inspector any statutory function vested in such agency related to the inctions of the Federal Inspector.

While the Commission would have no objection to -- indeed, would welcome -- the opportunity for its Staff and other interested parties to participate in the Federal Inspector's deliberative processes, the Inspector should have the latitude to determine, in whatever appropriate procedural regulations the Inspector may promulgate, the nature and extent (if any) of such participation.

While it would not be implausible for the Commission to retain the power to make the Change in Scope determinations itself, the worst possible procedure would be for both the Inspector and the Commission to participate in that decisionmaking through seriatum administrative deliberations. ANGTA and the President's Decision mandate expedition in decisionmaking, and the project sponsors and their lenders and investors are entitled to receive the promptest possible determinations consistent with applicable requirements of due process. The Federal Inspector and his staff will be located at the scene of the pipeline, monitoring its construction on a full time, day-to-day basis. They will be in the best position to render prompt determinations of Change in Scope events and adjustments. Those determinations should be final, subject only to judicial review.

Finally, as indicated in the preceding section of this Order, the above described procedures will also be generally applicable to the Federal Inspector's approval of design changes, including resultant revisions in the Certification Cost E. imate, pursuant to the Inspector's approval of the Final Design.

V. END RESULTS

In responding to the Commission's proposal for an Incentive Rate of Return mechanism, the project sponsors have emphasized that, individual parameters aside, it is the end result which is all important: "[t]he end result. . . [should be] the final determination of an equitable, practical, and definitive IROR mechanism which will not prohibit financing." 103/ The Commission believes that the IROR mechanism and values established by this Order will in fact increase the prospects of obtaining private project financing. It remains the responsibility of the project sponsors to convince potential debt and equity investors of their ability to complete the project within a range of construction costs at which the average rate of return

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103/ Joint Comments of Alaskan Northwest Natural Gas Transportation Co., and Northern Border Pipeline Co. at 7 (Docket No. RM78-12) (May 4, 1979) [hereinafter cited as Joint Comments]; see also Joint Comments at 6-7, 26-27, 30; Alaska Northwest Natural Gas Transportation Co., "Petition for Expedited Rulemaking and Issuance of Final Order Establishing Rate of Return Range" (Docket No. RM78-12) (Feb. 15, 1979).

is comparable to that which could be earned in alternative investment opportunities of comparable risk. 104/

As noted in the Introduction section of this Order, the Decision was written against a backdrop of concern for the impact of cost overruns on the economic benefits of ANGTS. In response to that concern, the President imposed a framework for project implementation designed to insure that the project would be of economic benefit to the nation. The IROR mechanism and values established by this Order play their role in that framework by providing ". . .substantial incentives to construct the project without incurring overruns." 105/

In evaluating the project's economic benefits to the nation, the President found that ". . .Alcan's direct costs could increase almost 124 percent over the cost overrun case before it would become socially

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104/ In this vein, the Commission recognizes that not even Federal government debt instruments are completely free of uncertainty, and were the project sponsors to be able to find investments which were totally free of uncertainty and ambiguity, the Commission expects that the rates of return on those investments would be a mere fraction of those contained in this Order.

105/ Decision at 37.

uneconomic;. . ." 106/ The project sponsors have insisted that they not be exposed to the risk of earning less than 13 percent on equity. 107/ As Table 3 shows, rates of return less than 13 percent will not be reached until costs overrun the March 1977 estimates in the Decision by 140 percent in Alaska and 60 percent for Northern Border. 108/ Such large overruns approach the levels at which the analysis in the President's Decision suggests that the economics of the entire project should be reviewed.

If the project sponsors believe that the probability of earning less than 13 percent on equity is substantial, the procedure for setting the Center Point allows the project sponsors to argue for a different Center Point

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106/ Decision at 180. The "Alcan" system referred to here is the precurser of the system proposed by the sponsors and now referred to as the ANGTS. See June 30 order.

107/ Joint Comments at 8.

108/ Note that the measurement of overruns excludes the effects of inflation, design changes prior to the final design, and certain changes in scope for the project.

and thus a different IROR schedule. The project sponsors may offer such arguments at the time they present their Certification Cost Estimates. Until such information or evidence concerning the ultimate costs of the project are presented, the Commission cannot conclude that the IROR mechanism required in this Order creates a significant probability that the Incentive Rate will be less than the 13 percent floor requested by the sponsors.

Comparative IROR Schedule Proposed

	Commission		Project Sponsors		Staff	
	Alaska	N. Border	Alaska	N. Border	Alaska	N. Border
Center Rate (%)	17.5	15.0	18.0	17.0	12.5	11.0
Center Point	1.3 1/	1.1 1/	1.3 2/	1.2 2/	1.3	1.1
Marginal Rate (%)	8.0	8.0	12.0	12.0	0	0
Cost Performance Ratio	Incentive Rate of Return (%)					
0.8	23.4	17.6	21.8	19.5	20.3	15.1
0.9	21.7	16.6	20.7	18.7	18.1	13.4
1.0	20.4	15.7	19.8	18.0	16.3	12.1
1.1	19.2	15.0	19.0	17.5	14.8	11.0
1.2	18.3	14.4	18.5	17.0	13.5	10.1
1.3	17.5	13.9	18.0	16.6	12.5	9.3
1.4	16.8	13.5	17.6	16.3	11.6	8.6
1.5	16.2	13.1	17.2	16.0	10.8	8.1
1.6	15.7	12.8	16.9	15.8	10.2	7.6
1.7	15.3	12.5	16.6	15.5	9.6	7.1
1.8	14.9	12.3	16.3	15.3	9.0	6.7
1.9	14.5	12.1	16.1	15.2	8.6	6.4
2.0	14.2	11.9	15.9	15.0	8.1	6.1
2.1	13.9	11.7	15.7	14.9	7.7	5.8
2.2	13.6	11.5	15.5	14.7	7.4	5.5
2.3	13.4	11.3	15.4	14.6	7.1	5.3
2.4	13.2	11.2	15.3	14.5	6.8	5.0
2.5	12.9	11.1	15.1	14.6	6.5	4.8
2.6	12.8	11.0	15.0	14.2	6.3	4.7
2.7	12.6	10.9	14.9	14.2	6.0	4.5
2.8	12.4	10.8	14.8	14.1	5.8	4.3

1/ These values are based on March 1977 cost estimates. They will be revised late upon the Certificate Cost Estimates if appropriate.

2/ Project sponsors propose that the Commission set these values now.

TABLE 3

AGO 886127

The sponsors have requested a floor of 13 percent on the Incentive Rate. They argue that the IROR must be within a "zone of reasonableness." 109/

In deciding rates of return, the Commission must balance the need to protect the consumer from unreasonably high rates while maintaining the financial

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109/ Alaskan Northwest Natural Gas Co., "Petition for Expedited Rulemaking and Issuance of Final Order Establishing Rate of Return Range" (Docket No. RM78-12) (Feb. 15, 1979). In arguing for a "zone of reasonableness," Alaskan Northwest directs our attention to the standards of FPC v. Hope Natural Gas Co., 320 U.S. 591 (1944). Presumably the sponsors have in mind the following passage:

> The rate-making process under the [Natural Gas] Act, i.e., the fixing of "just and reasonable" rates, involves a balancing of the investor and the consumer interests. Thus we stated in the Natural Gas Pipeline Co. case that "regulation does not insure that the business shall produce net revenues.". . . But such considerations aside, the investor interest has a legitimate concern with the financial integrity of the company whose rates are being regulated. 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 the debt and dividends on the stock. . . . By that standard the return to the equity owner should be commensurate with returns 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)(citations omitted)

integrity of the project and providing the investors an adequate return on investment. The Commission believes that this classic balancing test must be applied to the IROR in a manner consistent with the mandate of the President's Decision to establish an incentive to control costs. While the Commission must consider the financial integrity of the project, this consideration is tempered in light of the purpose of the incentive; the result must be just and reasonable and must not be confiscatory.

The IROR mechanism, with its inflation adjustment and scope change procedures, strikes the required balance. As advocated by the sponsors, the mechanism does have a de facto floor; this is the practical consequence of the Marginal Rate. More importantly, however, the IROR schedule provides, over the range of reasonable Cost Performance Ratios, a rate of return equal or greater to that advocated by the sponsors. This is the practical result of applying an average incentive rate over the range of Cost Performance Ratios. Given this result, the mechanism provided here cannot be considered either unjust or unreasonable; it certainly cannot

be construed as confiscatory. Investors, if they perform, are afforded ample opportunity to earn generous rates of return, while consumers will be able to obtain the natural gas they need at an acceptable price.

VI. Tariff Issues

This section of the Order addresses the proposed tariffs submitted by the project sponsors for the Alaskan and Northern Border segments of ANGTS. 110/ The Commission will accept the tariffs, subject to conditions described herein. The Commission shares the project sponsors' assessment of the importance and relevance of the tariffs. The tariffs are indeed the "economic lifeline" of the project. There must therefore be a degree of certainty for project sponsors and potential financers adequate to ensure that there will be a flow of revenues sufficient to service debt and pay all other current expenses once billing has been allowed to commence. The mechanisms for providing this assurance are described in the tariffs themselves and the Commission's considerations herein.

The Commission will resolve in this Order four tariff issues identified by the Alaskan Delegate as affecting the risk to be borne by project sponsors. The Commission will also decide in this Order certain other tariff issues that have been identified in the

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110/ The proposed tariffs were filed on March 12, 1979, pursuant to the Commission's Order set forth in "Notice of Delegate Report and Order Directing Tariff Filing", Docket No. RM78-12 (February 22, 1979) [hereinafter Delegate's Report].

comments of parties and by the Commission's own analysis of the proposed tariffs. 111/

Not all tariff issues are to be decided in this rulemaking. The Commission reaffirms the April 6, 1979 Notice that reserved for resolution in a separate proceeding the issue of the depreciation rate to be used to calculate the cost of service for "pre-delivery" of Canadian gas transported through the Northern Borde. pipeline (Notice at 60-61). Further, the Commission will defer to the proceedings in Northwest Alaskan Pipeline Company, Docket Nos. CP78-123, et al., the question of whether, and to what extent, there should be any apportionment of costs of Northern Border's "pre-delivery" facilities between deliveries of "Canadian bubble" gas and future deliveries of Alaskan gas. The Commission views these issues to be more closely related to the questions to be decided in that certificate proceeding; hence, that proceeding is the more appropriate forum for their resolution.

111/ The Alaskan Delegate provided notice of these issues in letters addressed to the project sponsors. Those letters were dated April 20, 1979 and April 27, 1979. Copies of each were sent to all parties of record in this docket as well as in Northwest Alaskan Pipeline Company, Docket Nos. CP78-123, et al.

Another issue that will not be resolved here concerns specific mechanism(s) for shipper tracking. 112/ A tracking mechanism involves questions of the timing of any flow-through of charges, the necessity of being assured that there will be a matching of costs and revenues, and recognition that appropriate tracking mechanisms for individual shippers may vary because rate designs and rate forms will differ among shippers. Thus, appropriate flow-through arrangements can only be properly addressed when the individual shipper tariffs are filed with the Commission.

Although it would be premature to specify appropriate methods at this time, the Commission can state, however, that it is in basic agreement with the concept that any amounts paid ANGTS under a tariff approved by this Commission will be allowed to be included in the rates

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112/ The Commission has previously addressed this issue. By motion dated April 18, 1979, Alaskan Northwest and Northern Border requested reconsideration of the Notice of Proposed Rulemaking in this docket. Specifically, petitioners requested that the Commission "provide for inclusion in [Docket No. RM78-12] of issues relating to shipper compary recovery of all amounts paid under the Alaskan Northwest and Northern Border tariffs." (Motion at 2.)

By order dated April 27, 1979, the Commission denied the motion but indicated that parties would not be precluded from commenting on the flow-through issue or from the filing of pro forma tariffs by the shippers. Parties filed comments on this issue but pro forma shipper tariffs were not filed.

of those shippers that are interstate gas pipeline companies, subject to appropriate reconciliation of all other aspects of ratemaking to ensure that there is no overcollection of costs attributable to the tracking arrangements themselves. Interstate gas pipeline companies shipping through the ANGTS system will be expected to pay all charges properly due to ANGTS. Any such amounts paid ANGTS will be allowed to be included in the rates of those shippers that are interstate gas pipeline companies. Allowance of those amounts will require that there is a matching of costs and revenues in order that overcollection or undercollection of fixed costs of the shipper company does not occur. 113/

113/ The possibility of overcollection (or undercollection) of fixed costs arises because the commodity charges included in interstate pipeline rates typically recover certain of the fixed costs. For example, under the United 25/75 cost apportionment approach 75 percent of the fixed costs of a shipper would be assigned to the commodity rates of the shipper. The unit amount of fixed costs to be recovered would be determined in a rate proceeding on the basis of the projected costs and throughput of the pipeline for the test period. As Alaskan gas begins to flow through the shipper's pipeline, it will recover the unit fixed costs included in the effective rates. Should the Alaska natural gas volumes not have been included in the billing determinants underlying the "base" charges, the result could be an over recovery of fixed costs, i.e., the fixed costs would be recovered by greater billing determinants than had been used to develop rates. The Commission will require assurance that any mechanism used to flow-through ANGTS costs will not result in this or a comparable situation.

The Commission also defers to a later date the resolution of the question of the permissible level of CO_2 that is to be contained in the gas. 114/ This issue was addressed in the comments of both the State of Alaska and Sohio Natural Resources Company. 115/ The permissible level of CO_2 is a significant issue that involves an evaluation of the impact of the different CO_2 levels on capital and operating costs. However, because of the absence of adequate data available on this record to enable complete evaluation of this issue, the Commission recently requested the parties to file additional information on this matter. 116/ The evaluation of the data filed in response to that request has not yet been completed. The Commission will, therefore, issue a separate order on this issue rather than withhold issuance of its disposition of the other issues raised in this rulemaking. An order establishing the CO_2 quality

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114/ Questions concerning other quality standards are discussed at Section VI.B.5.

115/ Initial Comments of the State of Alaska at 6-7 (Docket No. RM78-12) (May 4, 1979); Comments of Sohio Natural Resources Company on Notice of Proposed Rulemaking Issued April 6, 1979, at 2 (Docket No. RM78-12) (May 7, 1979).

116/ Order Requesting Further Submission of Data, Views, and Comments (Docket Nos. RM78-12 and RM79-19) (issued May 16, 1979).

standard(s) will be issued as soon as the Commission can complete its evaluation of the additional material.

Finally, the Commission will decide in Docket No. RM79-19 the issue of cost responsibility for processing Prudhoe Bay gas to pipeline quality standards. The Notice of Proposed Rulemaking in Docket No. RM79-19 specified that the cost responsibility issue would be decided in that docket. 117/ The record being compiled in that rulemaking will provide the Commission with the information necessary to resolve the issue. Accordingly, the Commission will defer decision on those portions of the tariff that affect this issue. After the issue is resolved in Docket No. RM79-19, a supplementary order in this proceeding will be issued to reflect that resolution in the tariffs of the project sponsors.

117/ Federal Energy Regulatory Commission, "Treatment of Certain Production-Related Costs for Natural Gas to be Sold and Transported through the Alaska Natural Gas Transportation System: Notice of Proposed Rulemaking and Statement of Policy" (Docket No. RM79-19) (issued Feb. 2, 1979).

A. Issues Identified by the Alaskan Delegate

The four major tariff issues identified by the Alaskan Delegate are: (1 determination of the date on which the project sponsors will be permitted to commence billing their shipper-customers; (2) whether an interim rate should be imposed during the initial build-up phase of the project; (3) the extent to which the effect of a service interruption should be shared by the project sponsors as well as by shippers and consumers; and (4) the billing procedure to be used to levy charges for transportation services. 118/

1. Billing Commencement Date

At issue here is the appropriate interpretation of the President's Decision and the setting of the billing commencement date. The Alaskan and Northern Border segments of the system will be project financed, which means their debt will primarily be secured by the revenues they collect. Commencement of the collection of those revenues is triggered by the commencement of billing, and is, therefore, important to an assessment of project

118/ Report of the Alaskan Delegate on Tariff and Operation Phase Rate Issues 6-7, accompanying Notice of Delegate Report and Order Directing Tariff Filing (Docket No. RM78-12) (issued Feb. 22, 1979).

risk. The sooner billing can commence, the less risky the project will appear to potential investors.

The third finance condition in the President's Decision prohibits any payments by the purchaser or ultimate consumer of Prudhoe Bay gas "prior to completion and commissioning of operation of the system". 119/

Definition of this phrase does not appear in ANGTA, the President's Decision, the Natural Gas Act, or the Commission's Regulations. The Report of the Alaskan Delegate, however, offers four possible interpretations of when billing might commence:

1. Charges begin when all segments of the pipeline are complete and gas is being transported.
2. Charges begin when all segments are capable of rendering service, even if no gas is flowing.

119/ The third finance condition provides:

> 3. Neither the successful applicant nor any purchaser of Alaska gas for transportation through the system of the successful applicant shall be allowed to make use of any tariff by which or any other agreement by which the purchaser or ultimate consumer of Prudhoe Bay natural gas is compelled to pay a fee, surcharge, or other payment in relation to the Alaska natural gas transportation system at any time prior to completion and commissioning of operation of the system. Decision at 37-38.

3. Charges begin for each segment when it is complete and capable of rendering service.

4. Charges begin at a date certain.

The proposed tariff of Alaskan Northwest provides that "completion and commissioning" shall occur when the "Company's pipeline is capable of rendering service even if, for whatever reason, gas is not being delivered to, or transported through Company's pipeline system." (Section 1.10 of the General Terms and Conditions.) The tariff of Northern Border contains an identical provision (Section 1.10 of the General Terms and Conditions). Both tariffs would thus prescribe a billing commencement date that follows the third definition suggested by the Alaskan Delegate.

The project sponsors assert in their joint comments that the billing commencement date contemplated in the respective tariffs is both consistent with the President's Decision and promotes financing of the system. The sponsors argue initially that neither the Decision nor its accompanying Report address the specific question of the initiation of billing once a segment has been completed. 120/ Considering that argument, together with the requirement that the project must be privately

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120/ Joint Comments at 48.

financed, the sponsors contend that the Commission must be presumed to have been given broad discretion in approving or fashioning conditions that would encourage private financing. Private financing can best be achieved, according to the sponsors, through Commission assurance that the billing commencement date for one segment will not be tied to the billing commencement date for another segment. 121/

Staff, on the other hand, relies on the President's Decision and accompanying Report to contest the billing commencement date set forth in the tariffs. 122/ Staff argues that in designating different companies to construct and operate different portions of the system, the President was fully aware of the distinction between the "system" and "portions" thereof. According to Staff, the President maintained that distinction in the third finance condition, which precludes any fee, surcharge, or other payment in relation to the ANGTS

121/ Id. at 49-50, 52-55.

122/ Staff, Initial Comments at 6-9. Staff also cites to the Initial Decision in El Paso Alaska Company, to the effect that until a company begins to provide service a "natural gas company" does not exist within the meaning of the Natural Gas Act and, consequently, no effect can be given to a tariff provision of a company that has not yet attained jurisdictional status. Id. at 6. The Commission finds it unnecessary to address this question in light of the determinations made here.