

BEFORE THE  
OFFICE OF INDUSTRIAL RESOURCE ADMINISTRATION  
INTERNATIONAL TRADE ADMINISTRATION  
DEPARTMENT OF COMMERCE  
WASHINGTON, D.C.

ALASKAN NORTH SLOPE OIL STUDY; )  
INQUIRY )  
)

Docket No. 51194-5194

Comments of the Bureaus of Economics, Competition, and  
Consumer Protection of the Federal Trade Commission \*

The Office of Industrial Resource Administration,  
International Trade Administration, Department of Commerce  
(hereafter, Commerce) has requested comments to assist them in  
preparing a review of possible changes in production incentives  
for crude oil from the North Slope of Alaska and in laws limiting  
distribution of that oil. Possible changes include relaxation or  
repeal of existing export restrictions. The Federal Trade  
Commission's Bureaus of Economics, Competition, and Consumer  
Protection are pleased to respond to this request.

In August 1984, the Federal Trade Commission's Bureau of  
Economics published a staff report on The Benefits of Eliminating  
the Alaskan Crude Oil Export Ban. Under varying assumptions  
regarding the competitiveness of the West Coast oil market and

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\* These comments represent the views of the Bureaus of Economics,  
Competition, and Consumer Protection of the Federal Trade  
Commission (Bureaus) and do not necessarily represent the views  
of the Federal Trade Commission (FTC) or of any individual  
Commissioner. The FTC, however, has voted to authorize the  
Bureaus to submit these comments.

the market conditions facing tankers displaced from the Alaskan trade, the report estimated the gains to producers and taxpayers, the losses to shipowners and West Coast oil consumers, and the net gain to the U.S. economy as a whole. The estimates and a discussion of the economic models used to obtain them are presented in the attached copy of the staff report. These comments will summarize the staff report and present some additional estimation results obtained using the models presented in the report.

The staff report develops and uses a simple model of profit maximizing behavior on the part of Alaskan oil producers who are assumed, under the export ban, to ship oil to the West and Gulf Coasts of the United States. If the ban were removed, all shipments to the Gulf Coast and some shipments to the West Coast would be diverted to Japan. Different estimates of the effects of removal of the export ban were obtained under differing assumptions about the degree of competition in the West Coast oil market and differing assumptions about the existence of an excess supply of the tankers that carry oil from Alaska to the West and Gulf Coasts.

In some of the estimations, the West Coast oil market is assumed to be competitive; that is, no producer can affect the price by his choice of quantity shipped. Assuming the West Coast market is competitive, the quantity of Alaskan oil sold on the West Coast will be that quantity that leads to a price that makes the netback from West Coast sales--the price received on the West Coast minus the cost of transportation from Alaska--equal to the

netback from sales on the Gulf Coast, or in Japan, if the export ban were lifted.

In other estimations, it is assumed that a single Alaskan producer, or group of producers, can influence the price of oil on the West Coast through his choice of quantity shipped. In this dominant firm model, a fringe of other producers is assumed to lack the ability to exert this influence. The dominant firm will behave as a monopolist over his share of the West Coast market and choose a quantity of shipments that will result in a price on the West Coast at which his netback is greater than that earned on the Gulf Coast. Despite the higher netback, additional shipments will not be made to the West Coast because they would lower the price there and reduce the dominant firm's profits.

Because (under the Jones Act) only domestic tankers can transport oil from Alaska to the West and Gulf Coasts, whether or not there is an excess supply of domestic tankers is a relevant consideration for the model. The existence of an excess supply of these tankers affects the rates charged for such transport. If an excess supply exists, then rates will approximate variable costs, namely costs of fuel and labor. By contrast, if the tankers are not in excess supply, then the rates will exceed variable costs and make a contribution to the fixed costs incurred to construct the ships.

In some estimations, it was assumed that the domestic tankers on the Alaskan trades were in excess supply under the export ban and would be if it were repealed. In other estimations, it was assumed that repeal would cause an excess supply of these tankers, which were fully utilized under the ban.

Finally, in still other estimations, it was assumed that the tankers were fully utilized both with and without the export ban.

In addition to examining the total removal of the export ban, Commerce requests comments on a partial relaxation to permit exports at one of the following levels: 50,000 barrels per day (50 kb/d), 100 kb/d, 200 kb/d, and 500 kb/d. Estimates of the effects of a partial relaxation on producers, taxpayers, consumers, and shipowners can be obtained using the models developed in the staff report.

The staff report used 1983 data on Alaskan crude oil production and the pattern of shipments to the rest of the United States. Table 1 presents these and similar data for 1984 and January-October 1985. The 1985 numbers indicate that production and shipments to the Gulf Coast have expanded slightly, while shipments to the West Coast are unchanged. In all three years, the level of shipments to the Gulf Coast (800 kb/d) is greater than the levels of exports that would be permitted under the proposed relaxations of the ban (50-500 kb/d). This means that a partial relaxation would divert only a fraction of the shipments that currently go to the Gulf Coast and thus would not affect the

Table 1: Annual Production and Shipments of Alaskan Oil

Year	Alaskan Production	Shipments to West Coast	Shipments to Gulf Coast
	----- (kb/d) -----		
1983	1,700	900	800
1984	1,700	900	800
1985 (Jan.-Oct.)	1,800	900	900

Sources: Bureau of Economics Staff Report to the FTC, The Benefits of Eliminating the Alaskan Crude Oil Export Ban, August 1984; and telephone conversation with Department of Energy official.

quantity supplied or the price of oil on the West Coast. <sup>1</sup> As a result the effects of a partial relaxation would be limited to gains to producers and taxpayers, possible losses to shipowners, and a net gain to the U.S. economy as a whole. In other words, partial relaxation would have no effect on West Coast oil consumers.

By contrast, as shown in the staff report, the free market level of exports resulting from total repeal would exceed the 800 kb/d currently shipped from Alaska to the Gulf Coast. Hence, some shipments to the West Coast would be diverted to Japan, and the West Coast price would rise. As a result, total repeal would impose losses on West Coast consumers (partly offset by their gains as taxpayers) in addition to its effects on producers and shipowners.

As suggested above, the effects of either total repeal or partial relaxation will depend on the competitiveness of the West Coast oil market and on the market conditions facing the tankers currently serving the Alaskan trade. The staff report considers

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<sup>1</sup> Our model assumes that the quantity of oil supplied by all Alaskan producers is large enough to affect netback on the West Coast but not on the Gulf Coast, because of the availability on the Gulf Coast of oil from other parts of the world. This means that diversion of West Coast shipments to Japan would raise the West Coast netback, while diversion of Gulf Coast shipments would leave the Gulf Coast netback unchanged. As a result, diversion of oil from the Gulf Coast would impose a smaller sacrifice of profits than diversion of oil from the West Coast. Hence, other things equal, a profit-maximizing oil producer would divert all Gulf Coast shipments to Japan before diverting any West Coast shipments.

five cases: 1) competitive West Coast oil market, tankers in excess supply on Alaskan trade before and after exports permitted; 2) competitive oil market, no excess tanker supply; 3) competitive oil market, excess tanker supply after exports permitted; 4) non-competitive oil market, no excess supply of tankers; 5) non-competitive oil market, excess tanker supply after exports permitted.

Estimates of the effects of total repeal of the export ban for these five cases are presented in Table 1 of the staff report, which is reproduced in these comments as Table 2.<sup>2</sup> As shown in the table, the annual net gain for the U.S. economy as a whole is estimated to range from \$150 million to more than \$800 million.<sup>3</sup> Producers and taxpayers are the beneficiaries of removal in an amount estimated to range from \$600 million to more

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<sup>2</sup> Data from recent issues of Platt's Oilgram Price Report indicate that the price of Alaskan North Slope crude at the Gulf Coast is currently at approximately the same level as that assumed in the staff report. Moreover, in the report, no attempt was made to estimate price with great accuracy for three reasons: 1) reliable data were not readily available; 2) a simplifying assumption was made that crude oil is homogeneous, thus price variation due to heterogeneity was ignored; 3) the estimates of the effects of repeal of the export ban are not sensitive to reasonable variation in the price of crude.

<sup>3</sup> The estimates of welfare gains and losses in the staff report are sensitive to the shipping rates for crude oil. However, data on these rates may not be accurate. Because most Alaskan producers own their tankers, a market price for shipping is often not observable. Also, current tax laws create an incentive to overstate shipping costs. The different models analyzed in the staff report provide an indication of the impact of different assumptions regarding tanker rates. In each model, levels of tanker rates were assumed to be consistent with either a competitive or a dominant firm equilibrium.

Table 2: Annual Gains and Losses from Complete Removal of the Ban on the Export of Alaskan Oil.

Net Gains to U.S. Economy	Gains to Producers	Gains to Taxpayers	Losses to West Coast Oil Consumers	Losses to Shipowners <sup>1</sup>
----- (millions of dollars per year) -----				
--Competitive West Coast oil market.				
--Excess tanker supply before and after repeal.				
161-163	60	542	439-441	0
--Competitive West Coast oil market.				
--No excess tanker supply.				
379-389	141	1271	1023-1033	0
--Competitive West Coast oil market.				
--No excess tanker supply before repeal.				
--Excess tanker supply after repeal.				
161-163	106	955	439-441	459
--Non-competitive West Coast oil market.				
--No excess tanker supply.				
814-837	201-203	1810-1825	1188-1201	0
--Non-competitive West Coast oil market.				
--No excess tanker supply before repeal.				
--Excess tanker supply after repeal.				
151-159	223-225	2006-2026	1188-1201	891

Source: Bureau of Economics Staff Report to the FTC, The Benefits of Eliminating the Alaskan Crude Oil Export Ban, August 1984.

<sup>1</sup> If removing the export ban reduces the demand for domestic tankers, adjustment costs may be imposed on sailors who operate the tankers and who must find new jobs. No attempt has been made to estimate these one-time costs of transition. Because such costs would probably be incurred for only one or two years, they are unlikely to be significant by comparison to the net benefits of repeal, which will be reaped year after year.



than \$2.2 billion per year. Under present tax laws, 90 percent would be paid in taxes to state and federal governments, leaving producers with an estimated \$60 to \$225 million.<sup>4</sup> Of the increased tax revenues, an estimated \$360 million to \$1.35 billion would be collected by the federal government, and \$90 to \$360 million would go to the state of Alaska. It is estimated that West Coast oil consumers would lose between \$400 million and \$1.2 billion due to higher prices. Assuming that increased government revenues yield comparable increases in benefits to taxpayers or reductions in other taxes, at least some of consumers' losses will be offset by their gains as taxpayers. Finally, we estimate that owners of domestic tankers on the Alaskan trades would lose at least \$459 million if shipping rates fall due to repeal of the export ban.

As noted in the staff report, the analysis of the cases in which tanker rates fall is complicated by the fact that most Alaskan producers are the owners of the tankers that transport their oil to the rest of the United States. As a result, in deciding how to respond to a partial relaxation of the export ban, the Alaskan producers will take into account both their gains as producers and their losses as shipowners. Under current

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<sup>4</sup> Of this 90 percent, 30 percent goes to the state of Alaska in the form of royalties, severance taxes, and state income taxes, and 60 percent to the federal government in the form of windfall profit taxes and corporate income taxes. The windfall profit tax is scheduled to expire in 1990, reducing federal revenues from an export ban repeal by a half, and yielding a corresponding increase in benefits to producers.

tax rates, when total repeal lowers tanker rates, Alaskan producers' losses as shipowners exceed their gains as oil producers, thus making exporting less profitable than unchanged shipments to the Gulf Coast. <sup>5</sup> If, as suggested in the staff report, all Alaskan oil were valued for tax purposes as if sold to Japan, then the distorting effect of these tax rates would be eliminated.

Table 3 presents estimates of the effects of partial relaxation of the export ban on producers, taxpayers, shipowners, and the U.S. economy. These effects depend on the volume of exports permitted, as well as on the competitiveness of the West Coast oil market and the market conditions facing Alaskan trade tankers. The estimated annual benefits to producers range from \$1 million to \$83 million, while those to taxpayers range from \$9 million to \$747 million. If partial relaxation lowers tanker rates, then shipowners lose an estimated \$459 million per year. Finally, the estimated net benefits to the U.S. economy as a whole range from \$10 million to \$371 million.

As in the case of total repeal, partial relaxation will not make it profitable, at current tax rates, for Alaskan

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<sup>5</sup> It should be noted that this result is due to the higher marginal tax rate on oil profits than on shipping profits. If profits from the two operations were taxed at the same marginal rate, then the Alaskan producer/shipowners would realize net benefits even if their tankers' capital value were reduced to zero.

Table 3: Annual Gains and Losses from Partial Relaxation of the Ban on the Export of Alaskan Oil.

Quantity Exported (kb/d)	Net Gains to U.S. Economy	Gains to Producers	Gains to Taxpayers	Losses to Shipowners
----- (millions of dollars per year) -----				
--Competitive West Coast oil market.				
--Excess tanker supply before and after partial relaxation. 1				
50	10	1	9	0
100	20	2	18	0
200	40	4	36	0
500	100	10	90	0
--Competitive West Coast oil market.				
--No excess tanker supply. 2				
50	24	2	21	0
100	47	5	42	0
200	94	9	85	0
500	235	24	212	0
--Competitive West Coast oil market.				
--No excess tanker supply before partial relaxation.				
--Excess tanker supply after partial relaxation. 3				
50	10	47	422	-459
100	20	48	431	-459
200	40	50	449	-459
500	101	56	504	-459
--Non-competitive West Coast oil market. 4				
--No excess tanker supply.				
50	50	5	45	0
100	101	10	91	0
200	202	20	182	0
500	506	51	455	0
--Non-competitive West Coast oil market.				
--No excess tanker supply before partial relaxation.				
--Excess tanker supply after partial relaxation. 5				
50	38	50	447	-459
100	74	53	480	-459
200	149	61	547	-459
500	371	83	747	-459

Source: FTC Bureau of Economics staff calculations.

### Table 3 Footnotes

<sup>1</sup> With tankers in excess supply, the rates for shipping crude oil approximate average variable cost, which, assuming a competitive West Coast oil market, we have estimated to be \$0.50/b from Alaska to the West Coast, and \$2.13/b from Alaska to the Gulf Coast. At these rates, we estimate that Alaskan producers net back \$25.50 from shipments to the Gulf and West Coasts. A partial relaxation of the export ban would permit shipments to Japan, where we estimate the netback to be \$26.05. Hence, for each barrel diverted from the Gulf Coast to Japan, producers will net back an additional \$0.55 before tax.

<sup>2</sup> If tankers are currently not in excess supply and if they have alternative uses, then the rates for shipment of oil will exceed average variable cost. If the West Coast oil market is competitive, we estimate that the rate from Alaska to the West Coast is \$1.24/b, and the rate from Alaska to the Gulf Coast is \$2.87/b. At these rates, the netback to Alaskan producers from sales to these destinations is \$24.76. Hence, each barrel sold in Japan will increase the netback by \$1.29 before tax.

<sup>3</sup> If a partial relaxation creates an excess supply of tankers (because they have no alternative use), then shipping rates will fall to average variable cost. Producers will gain both from an increased netback of \$1.29/b before tax on shipments diverted from the Gulf Coast to Japan, and from a \$0.74/b reduction in the rates for the remaining shipments to the Gulf Coast and for the unchanged shipments to the West Coast. Shipowners will lose \$0.74/b due to this decline in rates.

For Alaskan producer/shipowners, current tax rates will make it unprofitable to divert shipments to Japan after partial relaxation of the export ban. At a 90 percent tax rate, an increased netback of \$1.29/b before tax is worth only \$0.13/b after tax. Assuming a 50 percent corporate income tax rate, the loss of \$0.74/b in shipping revenues above variable costs before tax is a \$0.37/b loss after tax. Hence, diverting shipments to Japan would impose a loss of \$0.24/b on Alaskan producer/shipowners.

<sup>4</sup> At a dominant firm equilibrium, we estimate the rate for shipping from Alaska to the Gulf Coast to be \$4.35, and the netback from these shipments to be \$23.28. As a result, diversion of shipments to Japan will increase the netback by \$2.77 before tax.

Table 3 Footnotes (continued)

<sup>5</sup> If partial relaxation creates an excess supply of tankers, rates will fall to average variable costs, which, for a dominant firm equilibrium, we estimate to be \$0.50 for shipments from Alaska to the West Coast, and \$3.61 for shipments from Alaska to the Gulf Coast. At these rates, diversion of shipments to Japan increases producers' netback by \$2.77 before tax. In addition, producers save \$0.74/b on shipments to the West and Gulf coasts. Shipowners lose the same \$0.74/b due to the decline in rates.

As in the competitive case, at current tax rates, Alaskan producer/shipowners will not find it profitable to divert shipments to Japan. Their before-tax increase in netback of \$2.77/b would be worth only \$0.28/b after tax, while their after-tax loss in shipping income would be \$0.37/b, resulting in a net loss of \$0.09/b.

producer/shipowners to divert oil to Japan. <sup>6</sup> If, as suggested in the staff report, all Alaskan oil were valued for tax purposes as if sold to Japan, then the distorting effect of these tax rates would be eliminated. <sup>7</sup>

### Summary and Conclusions

In these comments we have presented estimates of the effects of a total removal of the export ban on North Slope Alaskan crude oil. These estimates were obtained from a 1984 Bureau of Economics staff report to the Federal Trade Commission. In addition, using the models developed in that report, we have presented estimates of the effects of partial relaxation of the ban. Under all the conditions examined, permitting Alaskan oil exports would increase the net welfare of the U.S. economy by millions of dollars per year, with the amount depending on the competitiveness of the West Coast oil market, the market conditions facing tankers on the Alaskan trade, and the extent of relaxation of the ban. The effects on producers, shipowners, and

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<sup>6</sup> Exports will become profitable when the windfall profit tax ends, as scheduled, in 1990, other things equal.

<sup>7</sup> If oil were valued for windfall tax purposes as if shipped to Japan, then we estimate that the tax would be \$23.45/b, regardless of destination. Assuming a competitive West Coast oil market, if an Alaskan producer/shipowner did not export, his after tax netback on shipments to the Gulf Coast would be \$1.31/b. If he did export to Japan, his after tax netback would be \$2.60/b, yielding an increase of \$1.29/b after tax. Even with a loss of shipping profits of \$0.37/b, exporting would increase his overall profits by \$0.92/b. Assuming a non-competitive West Coast oil market, the Alaskan producer/shipowner's tax would exceed his before tax netback of \$23.28/b, yielding an after tax loss of \$0.17/b. Exporting to Japan would thus increase the netback by \$2.77/b, which, after subtracting the loss of shipping profits, would yield an increase in overall profits of \$2.40/b.

taxpayers would also depend on these factors. - By contrast with total removal, partial relaxation, to the extent considered in the request for comments, would not affect the price of oil to West Coast consumers. Although, at current tax rates, exporting oil to Japan would not be profitable for Alaskan producer/shipowners, valuation of Alaskan oil as if it were sold to Japan would make exporting profitable.