

THE MYTH OF OIL SEVERANCE TAXES *

by Arlon R. Tussing

Alaska's decision to give each resident of the state a check for \$1000 has focused national attention on the contrast between the fiscal distress of some of the Northeastern and Midwestern industrial states and the oil wealth of Alaska and other oil-producing states. A number of columnists and public officials, looking for ways to lower consumer energy costs and believing that Alaska's "Permanent Fund dividend" was financed by severance taxes, have urged Congress to put a cap on the severance taxes these oil states may collect on oil produced within their borders.

This proposal to limit state severance taxes is based upon two misconceptions. First, while a severance-tax ceiling would reduce the revenue of oil-producing states like Alaska, it would **not** save any money for the nation's consumers. In this respect **oil** severance taxes are very different from the severance taxes that some states levy on **coal**, which are, in fact, often paid by out-of-state consumers in the form of higher electricity rates. **Oil severance taxes are not passed on to consumers.**

Second, Alaska's \$1000 check distribution did not come from severance taxes at all, but from **interest** the State government earned on its earlier **oil-royalty** income --- earnings, that is, from the sale of **state-owned oil**. (Alaska's royalty income, like its severance-tax revenue, has no influence on the price of petroleum products to out-of-state consumers.)

Severance Taxes and Oil Prices

All producers of US domestic crude oil, including Alaska, are "**price-takers**" in national and world oil markets, not "**price-makers**". The market value of crude-oil produced in the United States is not determined in the state of origin at all, but rather at the "refinery gate", be it in California, Texas, Ohio, or wherever. There, its price is set by the price the refiner would have had to pay for a similar grade of crude oil from another source.

After all, no refiner is likely to buy Alaska oil, for example, if he can get the same kind of crude oil elsewhere at a lower price. Likewise, no Alaska crude-oil

producing company is likely to part with its oil voluntarily for much less than its refiner-customers would have to pay another producer for the same grade of oil.¹ Since the early 1970's a deficiency in US domestic crude-oil production has had to be made up largely with OPEC oil from the Middle East. For this reason, the market value of US-produced crude oil at US coastal refineries has been roughly the price of Arabian oil at the Persian Gulf,² plus tanker charges to a US port.³

It is the "wellhead" or "field" price of domestically produced crude oil, rather than the refinery-gate price, which is the basis on which the oil-producing states calculate their severance taxes. The wellhead price of Texas or Alaska oil is a "netback" price equal to the US refinery-gate price, **minus** transportation costs from the well to the refinery.

A one-dollar-per-barrel change, up or down, in the OPEC price at the Persian Gulf therefore tends to change the refinery value of US-produced crude oil by about one dollar per barrel, and also changes the wellhead price of Texas and Alaska crude oil by about one dollar per barrel. Since Alaska's effective severance-tax rate on Prudhoe Bay crude oil is about 13 percent, a one-dollar-per-barrel change in the OPEC price will, on the average, increase or decrease Alaska's severance-tax receipts by about 13 cents per barrel.

Here is a simplified illustration of the way wellhead prices are determined for Alaska's Prudhoe Bay oil:⁴

	Price FOB Saudi Arabia	\$32.00 per barrel
plus	Tanker charge to US Gulf Coast refinery	<u>1.25 per barrel</u>
equals	Price of Saudi oil at US Gulf Coast	\$33.25 per barrel
less	Quality discount (Alaska oil vs Saudi)	<u>.50 per barrel</u>
equals	Value of Alaska oil to Gulf Coast refiner	\$32.75 per barrel
less	Tanker from Valdez, Alaska, to US Gulf	\$5.50 per barrel
equals	Netback price at Valdez, Alaska	<u>\$27.25 per barrel</u>
less	Pipeline charge, Prudhoe Bay to Valdez	5.10 per barrel
<u>equals</u>	<u>Wellhead price at Prudhoe Bay</u>	<u>\$22.15 per barrel</u>
	<u>Alaska state severance tax @13.1%</u>	<u>\$2.91 per barrel</u>

A change in severance tax rates, in contrast, will have no effect at all on US refinery-gate prices or on the prices of petroleum products refined from US-produced oil. A severance-tax-rate change would, instead, only change the division

of the netback price between the state and the producing companies. A lower severance tax rate or a federal ceiling on state severance tax collections would **reduce the state's share** of the wellhead receipts and **increase the share retained by the oil companies**. A national limit on state severance-tax rates, therefore, would not reduce the cost of the refined oil products to the US consumer.

In this respect, state severance taxes work in exactly the same way as the federal windfall profits tax. Both are carved out of the producing companies' share of the netback price at the wellhead, and neither tax can be passed on to consumers of refined petroleum products. While the effective rate of Alaska's severance tax on Prudhoe Bay crude oil is about 13 percent, the effective marginal rate of the federal windfall profits tax on the same oil is about 52 percent --- four times as high.⁵

It is ironic that the same Midwestern and Eastern Congressmen who have recently been calling for a ceiling on state oil-severance taxes also voted for the federal windfall profits tax in the (correct) understanding that it was **not** a consumer tax. State severance taxes on crude oil are not consumer taxes either.

State Taxes on Oil Production vs State Taxes on Coal Production.

Some of the journalists and public officials who are urging Congress to pass a law limiting state crude-oil severance taxes are confusing the effect of oil severance taxes (which **cannot** be passed on to final consumers) with that of coal severance taxes, which are indeed often passed "downstream". Oil and coal markets are quite different, in that most Western coal is sold on long-term "cost-of-production" contracts to regulated electric utilities in other states. These contracts treat higher producing-state taxes as higher costs, and the utilities are required to pay them. The utilities are, in turn, permitted to pass these higher fuel costs right through to their own customers in the form of higher electric rates.

Unlike Rocky Mountain coal producers who sell their product to Midwestern electric utilities, US crude-oil producers can not raise market prices in response to higher severance-tax rates, nor would they have any incentive to reduce prices in response to lower severance tax rates, because they do not control the world oil-

price level. There are only two ways a state's oil severance tax could hurt the nation's consumers --- (1) if the state set its tax rate so high that production from established fields became so unprofitable the producing companies decided to shut them in; or (2) if the tax rate were so high that it convinced oil companies their return from new discoveries would be insufficient to justify the front-end cost of drilling production wells.

These are plausible scenarios but unlikely ones, because the oil-producing states have a powerful incentive for self-restraint: A state's own revenues suffer when it sets oil taxes too high. Alaska and other oil-producing states, in other words, are not likely to establish severance taxes at levels that leave them no production to tax.

The Permanent Fund Dividend

Finally, it is important to note that the \$1000 Alaska is distributing to each of its citizens does not come from severance-tax revenues, or from taxes at all. It is a part of the **interest** earned on **savings** from the sale of state-owned royalty oil.⁶ Before Prudhoe Bay royalties started flowing into the state treasury, Alaskans adopted a Constitutional amendment requiring at least 30 percent of this once-and-for-all royalty income to be deposited in a "Permanent Fund" rather than spent for general government operations or public works. Permanent Fund **principal** may **never** be spent or distributed --- only a portion of the earnings on that principal. The checks for \$1000 are, simply stated, a reward to Alaskans for not squandering the money they receive from the sale of the state's non-renewable natural resources.

NOTES

* Written for the office of the Governor, State of Alaska

1 Even when the domestic crude-oil producer is an "integrated" company that refines its own US-produced crude oil, the refinery-gate value of that crude oil still reflects the cost of buying a similar crude oil from someone else. In this case, however, the world price works its influence through **the price of refined petroleum products sold by other oil companies** who do have to buy crude oil in the world market. Arco, for example, runs almost all of its Alaska oil through its own West Coast refineries, but the amount Arco can charge for gasoline or heating oil depends on the petroleum-product prices charged by **competing companies** like Chevron and Union (who are not major Alaska producers), prices which reflect the amounts that these companies have to pay for crude oil in the world market.

2 A word is in order here on the way world oil prices are determined. US and world prices have always been set by the interaction of supply and demand, but since about 1935 **supply** has been manipulated by varying groups of companies and governments. Between 1935 and the late 1960's, regulatory agencies in a handful of states (principally Texas), together with a cartel of international oil companies, controlled oil prices by deciding how much oil would be produced in the world. During this period, the crucial "basing-point" for crude-oil prices everywhere was the US Gulf Coast.

Between about 1969 and 1974, this power passed over to a group of Middle Eastern OPEC governments. Saudi Arabia was the chief "price-maker" from 1974 to 1981, and prices everywhere moved more-or-less in tandem with prices at the Persian Gulf. By 1981, however, OPEC's high prices had caused a sharp fall in world petroleum demand, and especially the demand for OPEC oil. The world now seems to be entering a period in which no group of companies or governments will control a big enough share of the world oil market to manipulate prices effectively.

For a full treatment of this issue, see the author's "Notes for an OPEC Obituary," to be published by the University of Alaska's Institute of Social and Economic Research in October 1982.

3 The market value of both domestic and foreign crudes at US **inland** refineries, say in Ohio, tends to reflect the US Gulf Coast price (the Persian Gulf price plus tanker charges) plus pipeline charges from the US Gulf.

4 This account of crude-oil price-making is necessarily sketchy, and passes over a number of details and special circumstances. A "surplus" of crude oil on the US West Coast, for example, results in a price discount there relative to Middle Eastern prices plus tanker charges. The reason is that West Coast refiners have a more immediate alternative to

Alaska crude oil than Middle Eastern oil, in the form of California crude oil or Alaska crude oil bought from another producer.

The reader will find a more detailed explanation of the relation between Gulf Coast, West Coast, and Alaska crude-oil prices in the appendix "West Coast Oil Markets" to the author's study of Alaska's Economy and the Merchant Marine Act of 1920 (The Jones Act), to be published by the Alaska Statehood Commission in October 1982.

- 5 Alaska's severance tax on Prudhoe Bay oil is 15 percent of the wellhead price, on the taxable seven-eighths of production. The state's one-eighth royalty share is not taxed. ($15\% \times 87.5\% =$ a 13.1% effective rate) The marginal rate of the federal windfall profits tax is 70 percent on the taxable seven-eighths, after deduction of the 15-percent state severance tax. ($70\% \times 87.5\% \times 85\% =$ 52.1% effective rate)
- 6 Oil and gas royalties are not a tax but are, rather, the share that a landowner receives from oil or gas on land it has leased. A one-eighth royalty (the amount Alaska receives out of oil and gas produced on state lands at Prudhoe Bay) is the same share that both private and public landowners in the United States have customarily received for more than one hundred years. The federal government, by the way, demands a royalty of one-sixth or more of the oil and gas produced from Outer Continental Shelf leases. In any case, royalty costs, like severance taxes, are **not** passed on to the consumers of petroleum products, but must be absorbed by the oil companies.