

SJR

6

ALASKA STATE LEGISLATURE
House Resources Committee

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FAX

To: Don Bullock, Legislative Legal

From: Debra Higgins

Fax: 2029

Phone:

Date: May 9, 2007

CC:

Re: CS for SJR 6

Pages with Cover: 3

Don,
The House Resources committee moved CSSJR 6(RES) out with one amendment. I've also attached a marked up version to illustrate the changes.

The amendment is:

Page 2, line 12, after "will":

Insert "strive to"

If you have any questions, my number is 3715.

Thanks,
Debbie

**CS FOR SENATE JOINT RESOLUTION NO. 6(RES)
IN THE LEGISLATURE OF THE STATE OF ALASKA
TWENTY-FIFTH LEGISLATURE - FIRST SESSION**

BY THE SENATE RESOURCES COMMITTEE

**Offered: 5/3/07
Referred: Rules**

Sponsor(s): SENATE RESOURCES COMMITTEE

A RESOLUTION

1 **Urging the United States Congress to defeat H.R. 39, titled "To preserve the Arctic**
2 **coastal plain of the Arctic National Wildlife Refuge, Alaska, as wilderness in recognition**
3 **of its extraordinary natural ecosystems and for the permanent good of present and**
4 **future generations of Americans."**

5 **BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

6 **WHEREAS** H.R. 39, titled "To preserve the Arctic coastal plain of the Arctic
7 National Wildlife Refuge, Alaska, as wilderness in recognition of its extraordinary natural
8 ecosystems and for the permanent good of present and future generations of Americans," has
9 been introduced in the United States House of Representatives; and

10 **WHEREAS** the oil industry, the state, and the United States Department of the
11 Interior consider the Arctic coastal plain to have the highest potential for discovery of very
12 large oil and gas accumulations on the continent of North America, estimated to be as much
13 as 10,000,000,000 barrels of recoverable oil; and

14 **WHEREAS** oil and gas exploration and development of the Arctic coastal plain of the
15 refuge and adjacent land could result in major discoveries that would reduce our nation's

1 future need for imported oil, help balance the nation's trade deficit, and significantly increase
2 the nation's security; and

3 **WHEREAS** in 16 U.S.C. 3142 (sec. 1002 of the Alaska National Interest Lands
4 Conservation Act (ANILCA)), the United States Congress reserved the right to permit further
5 oil and gas exploration, development, and production within the coastal plain; and

6 **WHEREAS** enhancements in technology can be used in a manner that minimizes the
7 area within the refuge that is used for exploration and development, while providing the
8 nation with a needed supply of oil and gas; and

9 **WHEREAS** the oil industry is using innovative technology and environmental
10 practices that are directly applicable to operating on the Arctic coastal plain and that enhance
11 environmental protection beyond traditionally high standards; and

12 **WHEREAS** the state will ^{strive to} ensure the protection of the land, water, and wildlife
13 resources during the exploration and development of the Arctic coastal plain; and

14 **WHEREAS** 8,900,000 of the 19,000,000 acres of the refuge have already been set
15 aside as wilderness;

16 **BE IT RESOLVED** that the Twenty-Fifth Alaska State Legislature urges the United
17 States Congress to defeat H.R. 39.

18 **COPIES** of this resolution shall be sent to the Honorable George W. Bush, President
19 of the United States; the Honorable Richard B. Cheney, Vice-President of the United States
20 and President of the U.S. Senate; the Honorable Dirk Kempthorne, United States Secretary of
21 the Interior; the Honorable Nancy Pelosi, Speaker of the U.S. House of Representatives; the
22 Honorable John Boehner, Minority Leader of the U.S. House of Representatives; the
23 Honorable Harry Reid, Majority Leader of the U.S. Senate; the Honorable Mitch McConnell,
24 Minority Leader of the U.S. Senate; the Honorable Jeff Bingaman, Chair of the Energy and
25 Natural Resources Committee of the U.S. Senate; the Honorable Ted Stevens and the
26 Honorable Lisa Murkowski, U.S. Senators, and the Honorable Don Young, U.S.
27 Representative, members of the Alaska delegation in Congress; and all members of the 110th
28 United States Congress by electronic transmission.

SJR 6

pg. 2, line 12

amend #1

insert "strive to"

between will - ensure,

moved -

ALASKA STATE LEGISLATURE

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Charlie Huggins
Senator

SPONSOR STATEMENT

Senate Joint Resolution No. 6

Urging the United States Congress to defeat H. R. 39, titled "To preserve the Arctic coastal plain of the Arctic National Wildlife Refuge, Alaska, as wilderness in recognition of its extraordinary natural ecosystems and for the permanent good of present and future generations of Americans."

Oil and gas exploration and development of the Arctic coastal plain could result in major discoveries that would reduce our nation's future need on imported oil, help balance the nation's trade deficit, and significantly increase the nation's security.

Federal revenues would consist primarily of corporate income taxes on profits earned by oil producers from the production and sale of ANWR oil. As landowner, the federal government would also collect royalties from such production on federal lands. At the circa-2006 price of \$75 per barrel, some have estimated the projected federal revenues from extracting 10.3 billion barrels in oil reserves to be as high as \$111 billion over the productive life span of the reserves, or \$76 billion in income taxes and \$35 billion in royalties. The development of ANWR properties would also generate federal revenues in the form of bonus bids from federal leases on federal lands, and income tax revenues from secondary feedback and multiplier effects from an expanding economy. Bonus bids have been estimated by the Congressional Budget Office to range from \$2 billion to \$10 billion or more, depending on crude oil prices.

At this time, 8,900,000 of the 19,000,000 acres of the refuge have already been set aside as wilderness. Enhancements in technology can be used in a manner that minimizes the area within the refuge that is used for exploration and development, while providing the nation with a needed supply of oil and gas.

FISCAL NOTE

STATE OF ALASKA
2007 LEGISLATIVE SESSION

Fiscal Note Number: 1
 Bill Version: SJR 6
 (S) Publish Date: 5/2/07

Revision Date/Time (Note if correction): _____ Dept. Affected: _____
 Title Oppose Wilderness Designation for ANWR RDU _____
 Component _____
 Sponsor (S) Resources Committee _____
 Requester (S) Resources Committee Component No. _____

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES						
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CHANGE IN REVENUES ()						
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FUND SOURCE (Thousands of Dollars)

FUND SOURCE	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2007) cost: 0.0

Mark this box (X) if funding for this bill is included in the Governor's FY 2008 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

Prepared by: SENATE RESOURCES COMMITTEE Phone 465-4907
 Division _____ Date/Time _____
 Approved by: /s/ Senator Huggins, Chair Date 4/30/2007
 Agency _____

HR 39 IH

110th CONGRESS

1st Session

H. R. 39

To preserve the Arctic coastal plain of the Arctic National Wildlife Refuge, Alaska, as wilderness in recognition of its extraordinary natural ecosystems and for the permanent good of present and future generations of Americans.

IN THE HOUSE OF REPRESENTATIVES

January 4, 2007

Mr. MARKEY (for himself and Mr. RAMSTAD) introduced the following bill; which was referred to the Committee on Natural Resources

A BILL

To preserve the Arctic coastal plain of the Arctic National Wildlife Refuge, Alaska, as wilderness in recognition of its extraordinary natural ecosystems and for the permanent good of present and future generations of Americans.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the 'Udall-Eisenhower Arctic Wilderness Act'.

SEC. 2. FINDINGS AND STATEMENT OF POLICY.

(a) Findings- The Congress finds the following:

(1) Americans cherish the continued existence of expansive, unspoiled wilderness ecosystems and wildlife found on their public lands, and feel a strong moral responsibility to protect this wilderness heritage as an enduring resource to bequeath undisturbed to future generations of Americans.

(2) It is widely believed by ecologists, wildlife scientists, public land specialists, and other experts that the wilderness ecosystem centered around and dependent upon the Arctic coastal plain of the Arctic National

Wildlife Refuge, Alaska, represents the very epitome of a primeval wilderness ecosystem and constitutes the greatest wilderness area and diversity of wildlife habitats of its kind in the United States.

(3) President Dwight D. Eisenhower initiated protection of the wilderness values of the Arctic coastal plain in 1960 when he set aside 8,900,000 acres establishing the Arctic National Wildlife Refuge expressly 'for the purpose of preserving unique wildlife, wilderness and recreational values'.

(4) In 1980, when the Congress acted to strengthen the protective management of the Eisenhower-designated area with the enactment of the Alaska National Interest Lands Conservation Act (Public Law 96-487), Representative Morris K. Udall led the effort to more than double the size of the Arctic National Wildlife Refuge and extend statutory wilderness protection to most of the original area.

(5) Before the enactment of the Alaska National Interest Lands Conservation Act, the House of Representatives twice passed legislation that would have protected the entire Eisenhower-designated area as wilderness, including the Arctic coastal plain.

(6) A majority of Americans have supported and continue to support preserving and protecting the Arctic National Wildlife Refuge, including the Arctic coastal plain, from any industrial development and consider oil and gas exploration and development in particular to be incompatible with the purposes for which this incomparable wilderness ecosystem has been set aside.

(7) When the Arctic National Wildlife Refuge was established in 1980 by paragraph (2) of section 303 of the Alaska National Interest Lands Conservation Act (Public Law 96-487; 94 Stat. 2390; 16 U.S.C. 668dd note), subparagraph (B)(iii) of such paragraph specifically stated that one of the purposes for which the Arctic National Wildlife Refuge is established and managed would be to provide the opportunity for continued subsistence uses by local residents, and, therefore, the lands designated as wilderness within the Refuge, including the area designated by this Act, are and will continue to be managed consistent with such subparagraph.

(8) Canada has taken action to preserve those portions of the wilderness ecosystem of the Arctic that exist on its side of the international border and provides strong legal protection for the habitat of the Porcupine River caribou herd that migrates annually through both countries to calve on the Arctic coastal plain.

(9) The extension of full wilderness protection for the Arctic coastal plain within the Arctic National Wildlife Refuge will still leave most of the North

Slope of Alaska available for the development of energy resources, which will allow Alaska to continue to contribute significantly to meeting the energy needs of the United States without despoiling the unique Arctic coastal plain of the Arctic National Wildlife Refuge.

(b) **Statement of Policy-** The Congress hereby declares that it is the policy of the United States--

(1) to honor the decades of bipartisan efforts that have increasingly protected the great wilderness ecosystem of the Arctic coastal plain;

(2) to sustain this natural treasure for the current generation of Americans; and

(3) to do everything possible to protect and preserve this magnificent natural ecosystem so that it may be bequeathed in its unspoiled natural condition to future generations of Americans.

SEC. 3. DESIGNATION OF ADDITIONAL WILDERNESS, ARCTIC NATIONAL WILDLIFE REFUGE, ALASKA.

(a) **Inclusion of Arctic Coastal Plain-** In furtherance of the Wilderness Act (16 U.S.C. 1131 et seq.), an area within the Arctic National Wildlife Refuge in the State of Alaska comprising approximately 1,559,538 acres, as generally depicted on a map entitled 'Arctic National Wildlife Refuge--1002 Area Alternative E--Wilderness Designation' and dated October 28, 1991, is hereby designated as wilderness and, therefore, as a component of the National Wilderness Preservation System. The map referred to in this subsection shall be available for inspection in the offices of the Secretary of the Interior.

(b) **Administration-** The Secretary of the Interior shall administer the area designated as wilderness by subsection (a) in accordance with the Wilderness Act as part of the wilderness area already in existence within the Arctic National Wildlife Refuge as of the date of the enactment of this Act.

END



Memorandum

May 8, 2006

TO: House Committee on Resources
Attn: Daniel Kish

FROM: Salvatore Lazzari
Specialist in Public Finance
Resources, Science, and Industry Division

SUBJECT: Possible Federal Revenues from Oil Development at ANWR and
Nearby Areas

This memorandum is in response to your request for an estimate of the potential revenues to the United States Treasury from oil development of the coastal plain study area of the Arctic National Wildlife Refuge (ANWR) should Congress approve such development.¹ In making these estimates it is assumed that: 1) commercial quantities of oil will be found, currently an unknown; 2) current revenue provisions would be applied, e.g., bonus bidding, ad-valorem royalty, and so forth (except that, per your request, we did not assume the 90% Alaska, 10% federal split of current law, but rather a 50-50 split, as found in many current bills); and 3) all of the coastal plain would be available for leasing.²

Federal revenues would consist primarily of corporate income taxes on profits earned by oil producers from the production and sale of ANWR oil. As landowner, the federal government would also collect royalties from such production on federal lands, which are included in the estimates. Revenues from bonus bids from federal leases, and rents on undeveloped leases, however, are not included. In addition, the federal government would collect income tax revenues resulting from the secondary feedback effects as a result of the stimulus to general economic activity, but these revenues are not included here. Estimates of technologically recoverable oil used in this memorandum include the resources from the federal lands, as well as Native lands in the Refuge and offshore state lands.

The revenue projections below are very long-term forecasts of what might happen, and not what will happen, given the methodology and the posited assumptions. All of the data used in this estimation are provided by the U.S. Energy Information Administration (EIA), as documented in the footnotes. Note that, according to the EIA and the U.S. Geological Survey

¹ For background and a discussion of ANWR legislation and surrounding issues, see CRS Issue Brief IB10136, *Arctic National Wildlife Refuge (ANWR): Controversies for the 109th Congress*.

² Some recent bills have restricted ANWR development footprints to 2,000 acres, which might not be sufficient to provide access to the entire coastal plain of the Refuge. This analysis assumes production from the whole of the Coastal Plain, Native lands, and nearby state waters.

(USGS), it would take between 7 and 12 years after congressional approval to commence production, if feasible, from ANWR properties. Further, production from the properties is projected to last at least 30 years.

Also, note other uncertainties, in addition to the production starting date and the lands that might be developed: 1) the size of the underlying resource base, 2) the underlying field structure, 3) the costs of development, 4) the market price of oil, 5) the average effective tax rate, and 6) the terms of the authorizing legislation. Thus, revenue projections are highly uncertain. Projections of federal revenue represent totals over the entire recovery period, until oil resources are no longer recoverable. Thus, they do not take into account any increased recovery based on changed economic conditions or the annual flow of production.

Finally, the projections below exclude also potentially large revenues from the development of natural gas, which according to probability analysis may exist in large quantities in the ANWR coastal plain (particularly the 1002 federal area). Revenue projections from natural gas development are excluded because there is currently no way to transport the gas to market (no pipeline or other means of transportation).

Table 1 summarizes the results of our estimation procedure, which is described in the remaining sections of this memorandum. It shows the projected increase in corporate income tax revenues and cumulative estimated royalties projected over the life of the ANWR and other nearby properties — from the production and sale of the estimated technically recoverable reserves of oil.

Table 1 presents sixteen projections (in real, 2006 dollars), each corresponding to an oil price and production scenario. For instance, if producers were able to recover 10.3 billion barrels of oil over the life of the properties — and there is a 50-50 chance that the ANWR coastal plain contains this amount of oil (or more)³ — and if oil prices are \$30/barrel then the federal government is projected to collect nearly \$45 billion in revenues over the production period, estimated to be at least 30 years once production commences. This consists of over \$30 billion in federal corporate income taxes (**Table 2**), and a projected \$14.3 billion in federal royalties (**Table 3**). (Tables 2 and 3 are each presented below in the sections detailing the estimation procedure for corporate income taxes and royalties.) Note from **Table 1** that if real oil prices remain at their currently high levels of about \$75, projected federal revenues from extracting 10.3 billion barrels in oil reserves — could be as high as \$111 billion over the productive life span of the reserves — \$76 billion in income

³ U.S. Department of Interior. U.S. Geological Survey. *Economics of U.S. Geological Survey's 1002 Area Regional Assessment: An Economic Update*, Open file Report 2005-1359. U.S. Department of Energy. Energy Information Administration. *Potential Oil Production from the Coastal Plain of the Arctic National Wildlife Refuge: Updated Assessment*. May 2000, SR/O&G/200-02.

XPΣ-3

taxes and \$35 billion in royalties. Note that these estimates assume that all of the oil that is technically recoverable is also economically recoverable, which is not necessarily the case.⁴

⁴ The amount of economically recoverable oil depends on unknown variables such as market oil prices and oil finding costs. With regards to oil prices, the higher the price, the more the amount of economically recoverable reserves approaches the magnitude of technically recoverable reserves.

The development of ANWR properties would also generate federal revenues in the form of bonus bids from the leases on federal lands, and income tax revenues from secondary feedback and multiplier effects from an expanding economy. Bonus bids have been estimated by the Congressional Budget Office to range from \$2 to \$10 billion or more, depending on crude oil prices.⁵ The additional federal income tax revenues (both individual and business) from the secondary economic effects are more difficult to estimate because they would depend on the annual expenditures generated by from oil development, the geographic dispersion of those expenditures, and the state of the general economy at the time. Neither bonus bids nor income tax revenues from secondary effects are included in Table 1.

Table 1. Possible Cumulative Corporate Income Tax Revenue and Royalties from ANWR Oil (billions of 2006 \$)

	Estimated Technically Recoverable Oil (billions of barrels)		
	At least 5.7 (prob. = .95)	10.3 (prob.= .5)	16.0 or more (prob. = .05)
Oil Price per Barrel (2006\$)	Revenues (billions of 2006 \$)		
\$75	\$61.7	\$111.5	\$173.2
\$60	\$49.4	\$89.3	\$138.7
\$30	\$24.7	\$44.7	\$69.4
\$10	\$8.2	\$14.9	\$23.1

Source: Author's estimates based on EIA data (see text).

Projected Corporate Income Tax Revenues

Increases in federal corporate income taxes would most likely represent the single biggest source of revenue for the federal government if oil were found and produced in ANWR. The basic methodology to estimate potential corporate income taxes is to multiply estimated domestic, pre-tax profits from the assumed oil production at ANWR, projected over the lives of the properties, by the estimated effective federal corporate income tax rate for the major integrated companies that would be expected to have an interest in developing ANWR.

⁵ Memorandum by Douglas Holtz-Eakin to Senator Ted Stevens, December 7, 2005.

Domestic, pre-tax profits are the difference between revenues (price times output) and production costs. Four hypothetical oil price scenarios are assumed (each in real 2006 dollars), reflecting the unpredictability (and volatility) of world crude prices. Per your request, a high oil price scenario (real crude prices of \$60/barrel); a median oil-price scenario (real crude prices at \$30/barrel) and a low crude price scenario (real oil prices at \$10/barrel). It is important to underscore that these are hypothetical price scenarios and do not constitute projections of what crude oil prices are likely to be. Given current prices, a \$75/barrel scenario is also considered.

Oil output is based on a report by the Energy Information Administration, which uses data provided by the U.S. Geological Survey.⁶ This report estimates projected oil (and gas) output for the three areas of the geographic coastal plain (including areas outside the ANWR boundary) expected to be developed should congressional approval be forthcoming. Within the Refuge these are: 1) the section 1002 area of federal lands;⁷ and 2) 92,000 acres belonging to Native Alaskan peoples.⁸ In addition, prospects for development of Alaskan state lands (offshore lands outside the Refuge out to the 3-mile limit) are likely to be improved by onshore development and were included in this analysis. Under §1003 of the Alaska National Interest Lands Conservation Act (P.L. 96-487), all lands inside ANWR are closed to development unless Congress changes the law. Were oil and gas development authorized for the federal lands in the Refuge, development would also be allowed or become feasible on the nearly 100,000 acres of Native lands in the refuge,⁹ possibly free of any acreage limitation applying to development on the federal lands, depending on how legislation is framed.

According to the USGS assessment of possible oil in the three areas described above, there is a 95% probability there are 5.7 billion barrels or more of technically recoverable crude oil and natural gas liquids in the three areas described above, and a 5% probability that

⁶ Energy Information Administration. *Potential Oil Production from the Coastal Plain of the Arctic National Wildlife Refuge: Updated Assessment*. May 2000, SR/O&G/200-02; U.S. Geological Survey. *The Oil and Gas Resource Potential of the Arctic National Wildlife Refuge 1002 Area, Alaska*. Survey Open File Report 98-34, 1999, Chapter EA (Economic Analysis).

⁷ This area of federal lands is referred to as the "section 1002 area" because of a study required in §1002 of Alaska National Interest Lands Conservation Act (ANILCA, P.L. 96-487) of 1980. The current prohibition on oil and gas development in ANWR is in §1003 of ANILCA.

⁸ The 92,000 acres belong to the Kaktovik Inupiat Corporation and the Arctic Slope Regional Corporation. In addition, several thousand acres are held in individual native allotments. The May 2000 EIA report considered only the 92,000 acres. See *Potential Oil Production from the Coastal Plain of the Arctic National Wildlife Refuge: Updated Assessment*. May 2000, SR/O&G/200-02, op. cit., p. vii.

⁹ The Native lands inside ANWR fall into three categories: approximately three townships of Native lands within the *geographic* coastal plain of the Refuge but outside the administratively defined 1002 area; one township of Native land also within the *geographic* coastal plain of the Refuge, but administratively part of the 1002 area; and a number of Native allotments scattered through the *geographic* coastal plain, with some concentrations along the coast and in the foothills. Offshore state lands are largely open to development, although the state and the federal governments have disputed precise boundaries. For legal background, see CRS Report RL31115, *Legal Issues Related to Proposed Drilling for Oil and Gas in the Arctic National Wildlife Refuge (ANWR)*, by Pamela Baldwin.

are 16.0 billion barrels or more. USGS's mean estimate — 50% probability — is 10.3 billion barrels. About three fourths of the possible oil and natural gas liquids¹⁰ are estimated to be under federal lands, and one fourth under Native Corporation lands and the adjacent offshore state lands.¹¹

For each recoverable oil quantity and price combination scenario, federal corporate income tax revenue was arrived at by (1) multiplying the quantity times the price, (2) subtracting production costs (operating costs plus depreciation, depletion, amortization, and administration), and (3) multiplying the result by the average effective federal corporate tax rate on major U.S. energy producers.

¹⁰ For production calculations, natural gas liquids are considered to be equivalent to oil.

¹¹ U.S. Geological Survey. *Frontier Areas and Resource Assessment: the Case of the 1002 Area of the Alaska North Slope*. USGS Open File Report 02-119. Hereafter referred to as "Frontier Areas."

Projections of production costs were based upon annual financial data on oil and gas industry operations published by the EIA in its *Performance Profiles* reports covering the major U.S.-based energy producing companies.¹² A ten-year average (for 1995-2004) was used to remove the volatility of profits over business cycles and fluctuations in volatile market oil prices to accurately reflect the long-term nature of oil development in the ANWR coastal plain, which, if successful, would be expected to produce oil for at least 30 years. Based upon the *Performance Profiles* data, production costs of domestic oil and gas producers averaged 69.3% of revenues over the 1995-2004 period and, consequently, net pre-tax profits for those companies averaged 30.7% of revenue.¹³ That percentage was used to project net pre-tax profits from ANWR output over the life of the wells. The production cost percentage was based upon cost data for all domestic U.S. operations rather than just for Alaska, which are not available. Also, the costs reflect the consolidated operations of largely major integrated producers, rather than just production operations.

The effective federal corporate income tax rate also was estimated using EIA's *Performance Profiles*. Based upon data in those reports, the average effective tax rate for the years 1998-2004 was 32%. This was derived by subtracting from the U.S. federal tax any foreign tax credit (which would not be claimed on income from ANWR operations), and dividing by U.S. pre-tax income.¹⁴ This effective tax rate probably is an upper bound; and the actual effective tax rate over the production horizon might end up being lower due to substantial industry investments in ANWR oil and gas development. Also, the estimation of the effective tax rate assumes that current legislation remains unchanged. Any future amendments to current tax laws could, of course, have the effect of either lowering or raising effective tax rates.

¹² Energy Information Administration. *Performance Profiles of Major Energy Producers (Issues 2004, 2002, 2000, 1998, and 1996)*. Data used are in the table that reports Income Components and Financial Ratios in Oil and Natural Gas Production for FRS Companies.

¹³ Ibid.

¹⁴ The effective tax rates were based upon both non-vertically integrated companies and vertically integrated companies. The EIA data are not disaggregated.

Table 2. Possible Corporate Income Tax Revenues from Successful ANWR Oil Development (billions of 2006 \$)

	Estimated Technically Recoverable Oil Output (billions of barrels)		
	At least 5.7 (prob. = .95)	10.3 (prob. = .5)	16.0 or more (prob. = .05)
Oil Price per Barrel (2006\$)	Revenues (billions of 2006 \$)		
\$75	\$42.0	\$75.9	\$117.9
\$60	\$33.6	\$60.7	\$94.3
\$30	\$16.8	\$30.4	\$47.2
\$10	\$5.6	\$10.1	\$15.7

Source: Author's estimates based on EIA data (see text).

Federal Royalties

Landowners typically collect royalties on minerals extracted from their lands by mineral operators and producers. Likewise the federal government earns royalties from production of oil and gas on federal lands. The federal lands in ANWR have been estimated by the U.S. Geological Survey to contain 74% of the total estimated technically recoverable reserves in ANWR. (The remaining 26% of total recoverable oil resides in state and Alaska Native Corporation lands.)¹⁵

¹⁵ *Frontier Areas*, op. cit..

Current federal laws effectively allocate 90% of the royalties from oil and gas production on federal lands to the states; the federal government retains the remaining 10%.¹⁶ However, in our revenue projections you have asked us to assume a 50-50 split of all royalties, although this is not settled.¹⁷ **Table 3** shows the projected total royalties collected over the expected productive lifetime of the federal ANWR properties.

Table 3. Projected Federal Royalties from Possible ANWR Oil (billions of 2006 \$)

	Estimated Technically Recoverable Oil from Federal Lands (billions of barrels)		
	At least 4.2 (prob. = .95)	7.6 (prob. = .5)	11.8 or more (prob. = .05)
Oil Price per Barrel (2006\$)	Revenues (billions of 2006 \$)		
\$75	\$19.7	\$35.6	\$55.3
\$60	\$15.8	\$28.6	\$44.4
\$30	\$7.9	\$14.3	\$22.2
\$10	\$2.6	\$4.8	\$7.4

Source: Author's estimates based on EIA data (see text).

¹⁶ However, the manner in which royalties are split between states and the federal government differs. For all states except Alaska, direct royalties under the Mineral Leasing Act (MLA) are divided equally (50-50) between the state in which the deposits are located and the federal government. The MLA also provides that all states except Alaska get back 40% from the Reclamation Fund (established by the Reclamation Act of 1902), in effect giving each state 90% of the royalties and the federal government 10%. Alaska does not receive allocations from the Reclamation Fund, so to equalize royalty treatment among the states, the Alaska Statehood Act and the Federal Land Policy and Management Act provide that Alaska's royalty share is 90% of the direct royalties (rather than 50%).

¹⁷ Many but not all bills that would approve development of ANWR provide for a 50-50 division of the royalties. Some bills (e.g., H.R. 39 in the 109th Congress) have been silent on revenue distribution, and it is not certain how courts would rule on certain revenue provisions. For more information see: U.S. Library of Congress, Congressional Research Service, *Arctic National Wildlife Refuge (ANWR): Controversies for the 109th Congress*. Issue Brief IB10136, (regularly updated).