CONGRESSIONAL BUDGET OFFICE
U.S. Congress
Washington, DC 20515

Douglas Holtz-Eakin, Director

December 7, 2005

Honorable Ted Stevens
United States Senate
Washington, DC 20510

Dear Senator,

In your letter of December 5, 2005, you asked for estimates of potential bonus bids for leases to develop the coastal plain of the Arctic National Wildlife Refuge (ANWR) under certain conditions. Specifically, you asked us to take into account recent projections by the U.S. Geological Survey (USGS) of economically recoverable oil in that area. You also asked us to assume that prospective bidders for ANWR leases would assume that long-term oil prices would be roughly $50 per barrel in 2010 (equivalent to about $45 per barrel in 2005 dollars). Under your assumptions, potential bonus bids might total at least $10 billion—roughly double CBO's official estimate. (Federal receipts net of payments to Alaska would be one-half of the bonus bids.)

CBO's Official Estimate of Bonus Bids from Leasing ANWR

As you noted in your letter, CBO's official estimate of gross bonus bids for ANWR leases under S. 1932, the Deficit Reduction Omnibus Reconciliation Act of 2005, was prepared early in 2005 under the assumptions that underlie the current budget resolution. Our estimate of bonus bid receipts totals $5 billion over the 2008-2010 period. (Under S. 1932, half of those receipts would be paid to Alaska, resulting in net federal receipts of about $2.5 billion over that period.)

CBO completed its estimate of ANWR bonus bids in March 2005, assuming that bidders' assessment of oil prices over the next several decades would fall within the range of $25 to $35 per barrel in 2005 dollars and that the amount of economically recoverable oil at those prices would range from about 4 billion barrels (at $25) to about 6 billion barrels (at $35 or more).[1] Those estimates include potential production from both federal and nonfederal lands

1. Those resource estimates were mean-value projections by the USGS. See U.S. Geological Survey, *The Oil and Gas Resource Potential of the Arctic National Wildlife Refuge 1002 Area, Alaska,* Open-File Report 98-34 (1999).

within the USGS study area, but CBO's estimate of bonus bids reflects only the federal portion of those resources. If economically recoverable oil is discovered, production could continue for 30 years or more.

In addition to assumptions about long-term oil prices and the quantity of oil that might be produced at those prices, that CBO estimate relies on assumptions about several other key variables including: capital costs for developing oil reserves, rates of return on investment, production patterns, and other operating expenses. In developing our estimate, CBO considered several alternative scenarios that reflect different assumptions for those variables. Those alternative scenarios suggest that winning bids—which would be the bids offered by the firms with the most favorable view of the economic value of the leases—could range from about $2 billion to $8 billion. CBO's estimate of $5 billion is in the middle of that range.

Potential Value of ANWR Leases Using New USGS Estimates and a Specified Alternative Long-Term Oil Price

Considering more-recent USGS estimates of potential oil production from ANWR leases,[2] and using your assumption that potential bidders would assume a long-term oil price of $50 per barrel (in 2010 dollars), gross bonus bids might total $10 billion or more. At an assumed price of about $50 per barrel in 2010 (or roughly $45 per barrel in 2005 dollars), the USGS mean value of economically recoverable oil from potential leases on the coastal plain is nearly 9.5 billion barrels, of which nearly 7 billion barrels might be produced from federal lands.

Factors Affecting Potential Bids

Estimates of ANWR bonus bids are uncertain. Potential bidders might assume that the values of key variables are significantly different than those used in the above estimates. For example, even if bidders assume that oil prices will remain near $50 per barrel over the next several decades, they might choose from a wide range of possible assumptions regarding capital investment costs, depreciation of such capital, likely operating costs, and alternative investment opportunities. In particular, oil companies have other domestic and non-U.S. investment options that they would need to evaluate and compare with a potential investment in ANWR. The potential profitability for a wide range of such worldwide investment options would likely be a significant factor in prospective bidders' ultimate choices of whether and how much to bid for ANWR leases. The cost of capital and the level of perceived risk also would play a significant role in bidders' decisions about how to value such leases.

2. See U.S. Geological Survey, *Undiscovered Oil Resources in the Federal Portion of the 1002 Area of the Arctic National Wildlife Refuge: An Economic Update*, Open-File Report 2005-1217 (2005).

Considering all of those factors—in addition to making assumptions about future oil prices and different possible levels of economically recoverable oil—leads to a wide range of potential bonus bids.

I hope this information regarding potential leasing of ANWR is helpful. If you would like further details, we would be pleased to provide them. The CBO staff contact is Megan Carroll, who can be reached at 226-2860.

Sincerely,

Douglas Holtz-Eakin
Director

cc: Honorable Judd Gregg
Chairman
Senate Committee on the Budget

Honorable Kent Conrad
Ranking Member

Honorable Pete V. Domenici
Chairman
Senate Committee on Energy
and Natural Resources

Honorable Jeff Bingaman
Ranking Member

Honorable Jim Nussle
Chairman
House Committee on the Budget

Honorable John M. Spratt Jr.
Ranking Member

Honorable Richard W. Pombo
Chairman
House Committee on Resources

Honorable Nick J. Rahall II
Ranking Democrat