TAXPAYERS for COMMON SENSE

O & G REPORT

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Drilling in the Arctic: Broken Revenue Promises in ANWR

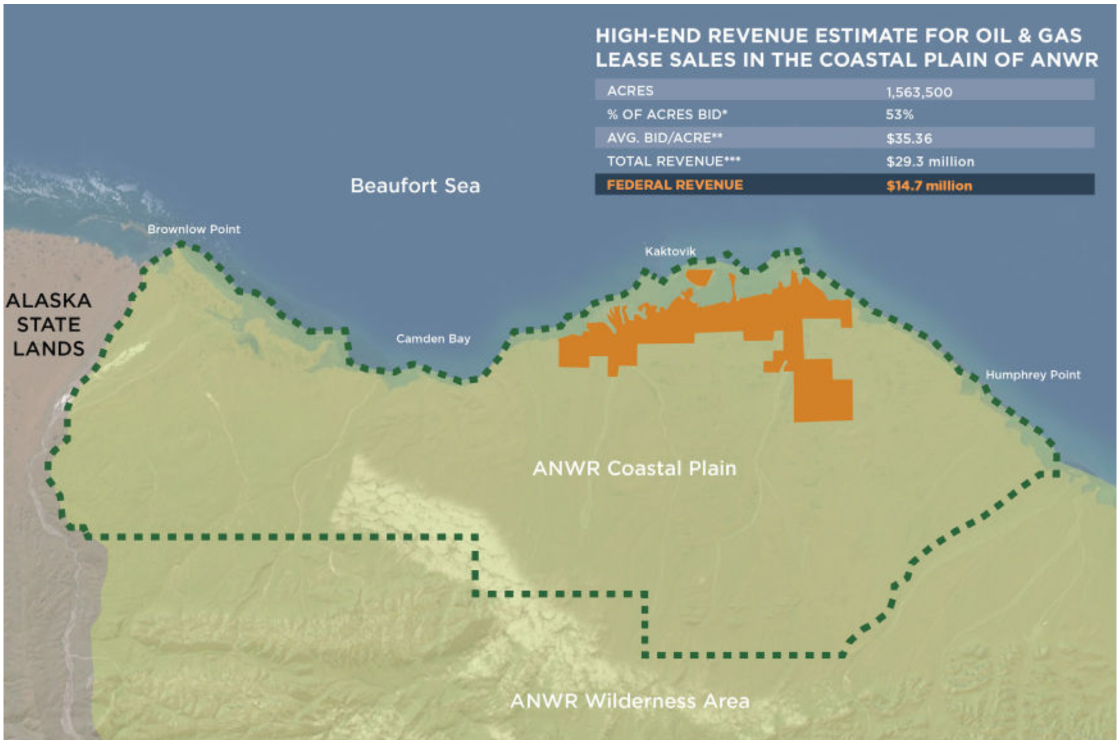
Recent lease sales in the region indicate revenue potential from oil and gas drilling in the Arctic National Wildlife Refuge is far from a billion-dollar boon.

The Canning River in the Coastal Plain of ANWR. Source: U.S. Fish & Wildlife Service

The 2017 tax cut included an extraneous provision authorizing the preparation and sale of leases for oil and gas development in the Coastal Plain of the Arctic National Wildlife Refuge (ANWR) in Alaska. Estimated to generate almost $1 billion in revenue, the measure was laughably included as a partial offset to the legislation's $1.4 trillion price tag. Past oil and gas lease sales in the neighboring area, known as Alaska's North Slope, indicate these ANWR lease sales will generate only a small fraction of the initial estimate. Comparable sales on neighboring state land suggest the new leases will generate only $14.7 million—less than two percent of the original offset. Moreover, new leases will expose taxpayers to significant liabilities from future drilling in the ecologically sensitive region.

- **Taxpayers can expect to receive $14.7 - $27.6 million in revenue—just three percent of the original $910 million estimate for drilling in ANWR**—based on the average bid price per acre for onshore sales in the Arctic region over the last five years.

- Over the last 20 years, oil and gas companies leased 12 million acres on Alaska's North Slope, or seven times the acreage of the entire ANWR Coastal Plain—1.56 million acres. These leases generated a total of $489 million in bids—roughly a quarter of projected revenues for the planned ANWR sales.



MAP LEGEND

Coastal Plain of ANWR

ANWR Wilderness Areas

Native Lands

* **% of Acres Bid**—The percentage (53%) of offered parcels adjacent to the Coastal Plain of ANWR ever bid on by the oil and gas industry, 2000-2019
** **High-end avg. bid/acre**—The 2015-2019 average bid for all onshore parcels sold on Alaska's North Slope, adjusted to $2019—$35.36/acre
*****Total Revenue**—Total bonus bids received for ANWR leases, of which half is shared with the State of Alaska

- **Of the 72 state parcels offered for lease in the area surrounding the Coastal Plain of ANWR in the last 20 years, only half have been leased.** In two 2018 and 2019 state auctions, a few dozen parcels were offered for lease in waters just off the coast of the ANWR Coastal Plain, and oil and gas companies bid on none of them.
- A recent downturn in the oil sector and increased reluctance from banks to finance arctic drilling projects may further limit the number of producers willing to bid on ANWR parcels and drive down revenues.
- By releasing its Record of Decision for the Coastal Plain Leasing Program in August 2020, the Department of the Interior has cleared the way for ANWR oil and gas development. The Secretary of the Interior has indicated the lease sales could be held as early as December 2020.

Background

Certain lands on Alaska's North Slope have been protected for wildlife habitation since before Alaska was admitted to the Union in 1959.[1] Congress created the Arctic National Wildlife Refuge the Alaska National Interest Lands Conservation Act (ANILCA) in 1980.[2] Within the 19 million acre refuge, ANILCA designated 1.57 million acres on the coast of the Beaufort Sea as the "Coastal Plain," and directed the Department of the Interior (DOI) along with state and tribal entities to study the region for possible energy development. ANILCA also prohibited all resource development activities within ANWR, including the Coastal Plain, unless Congress authorized it through a subsequent act.[3]

Since 1980, members of the Alaska congressional delegation and other members of Congress have proposed to open the Coastal Plain of ANWR, also known as the "1002 Area," to oil and gas development. All attempts to authorize oil and gas drilling ANWR have been unsuccessful, until recently.

In 2017, Congress included **budget reconciliation** instructions in the fiscal year (FY) 2018 budget resolution (**H.Con.Res.71**). The budget reconciliation mechanism makes it easier for subsequent bills that change spending, revenue, or debt-limit levels to be enacted because it precludes filibusters in the Senate and only

[1] For more on the history of ANWR, see Congressional Research Service Report — RL33872: "**Arctic National Wildlife Refuge (ANWR): An Overview**." January 9, 2018.

[2] P.L. 96-487 | 94 STAT. 2371, December 2, 1980

[3] P.L. 96-487 §1003

requires a simple majority for passage. As part of its reconciliation instructions, the FY2018 budget resolution directed the Senate Energy and Natural Resources Committee to produce legislation that would reduce the deficit by $1 billion. In response, the Committee chaired by Senator Lisa Murkowski (R-AK) **provided a measure** to raise revenues, in part, by selling oil and gas leases in the Coastal Plain of ANWR.

The measure, which was eventually passed as Section 20001 of the legislation (**P.L. 115-97**), directed the DOI to hold two oil and gas lease sales that together offer up at least 800,000 acres in the Coastal Plain for development within seven years. The legislation also stipulated that 50 percent of revenue generated from the lease sale and any subsequent production should be paid to the State of Alaska.

When the measure passed in December 2017, the Congressional Budget Office estimated that the two lease sales would generate $1.82 billion in bonus bid revenue, of which federal taxpayers would receive $910 million. That total was significantly less than what the CBO estimated in previous years,[4] and nearly $200 million less than **what CBO estimated** a month earlier, when the proposal first passed the Senate Energy and Natural Resources Committee. Yet **initial analysis** of the CBO's score demonstrated that the revenue projections were grossly overstated.

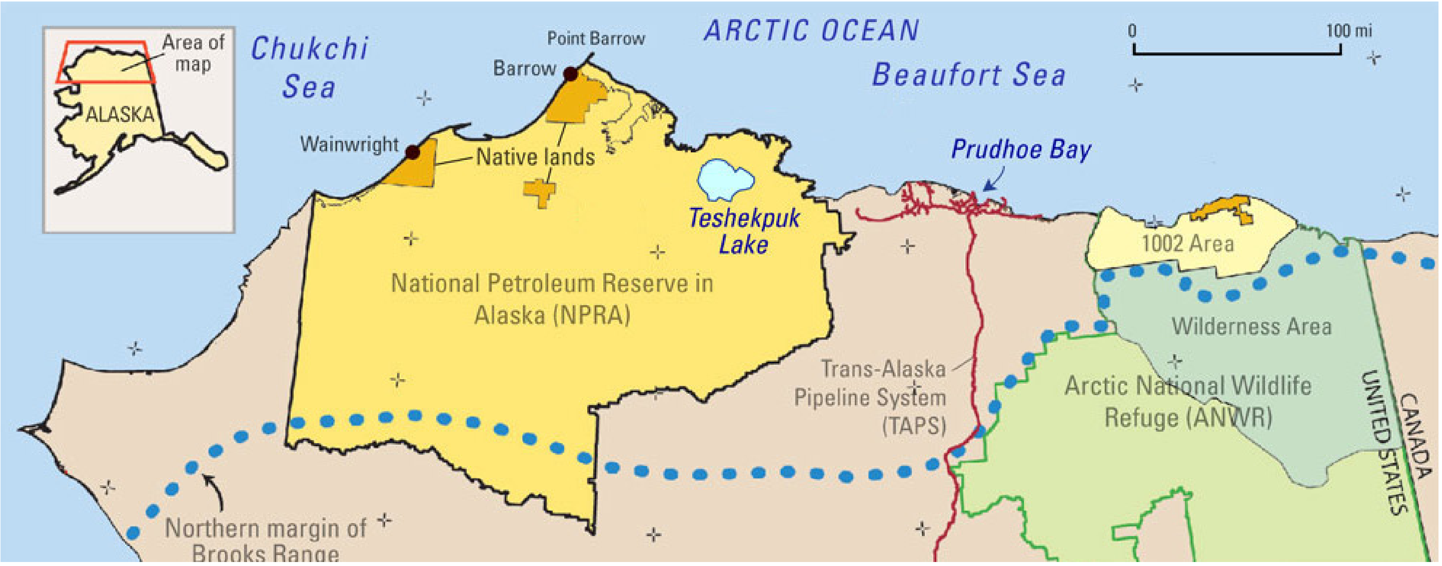
Oil pipeline on the North Slope in Alaska
Source: National Energy Technology Laboratory

Determining Revenue Projections

The amount of revenue generated by an oil and gas lease sale is determined by three factors: (1) the amount of land in the parcels offered for lease, (2) the proportion of parcels that receive bids, and (3) the level of bids per acre for those parcels. In its **June 2019 estimate** of leasing revenues, the Congressional Budget Office assumed the Bureau of Land Management (BLM) would offer 800,000 acres in the two sales—the minimum acreage set by the 2017 tax legislation. The CBO projected the two sales would generate $1.8 billion in bonus bids, half of which would go to the State of Alaska, leaving federal taxpayers with $900 million. The CBO also anticipated BLM would collect $5 million in rental payments for ANWR leases in the 10-year window, for a total of $905 million in revenue.

To generate $1.8 billion in bonus bid revenue from the ANWR lease sales, oil and gas companies would need to submit bids of $2,250 per acre on average if every single available parcel receives a bid, as the CBO itself noted. If only a portion of parcels receives bids, the average bid price needed to generate CBO-predicted revenue is correspondingly higher. For example, if only 50 percent of parcels receive bids, it would take an average bid of $4,500 per acre to generate $1.8 billion. Those levels of bidder interest and bid rates are unprecedented.

[4] See Appendix A for analysis of past CBO estimates



Since 1999, the U.S. DOI has held 19 sales for oil and gas leases in the Chukchi Sea, Beaufort Sea, and the NPRA. The State of Alaska has held 41 sales for leases on the Beaufort Sea coast, and in the general North Slope Area—the region between the NPRA and ANWR
Source: USGS. Modified for clarity.

Learning from Other Lease Sales in the Arctic Region

The amount of recoverable oil and gas reserves, and therefore the potential to attract high bonus bids, varies widely from one part of the North Slope to another, but the results from past lease sales in the region can indicate what's reasonable to expect for ANWR lease sales. For the sake of comparison, federal oil and gas lease sales in the Chukchi Sea, the Beaufort Sea, and the National Petroleum Reserve—Alaska (NPRA), as well as Alaska state sales in the Beaufort Sea and the North Slope area were all used in this analysis (see map).

In the last 20 years, the U.S. DOI and Alaska's Department of Natural Resources (DNR) have held a combined 58 sales for oil and gas leases in the North Slope region. **Bidding for those leases never approached the $2,250/acre average CBO predicts for ANWR in any of those sales.** Only seven of the sales had an average bid price of even $100/acre or more, measured in 2019 dollars. The highest average bid, and the only one greater than $200/acre, was recorded for DOI's 2008 sale in the Chukchi Sea that netted $1,146/acre ($2019). These parcels, however, are the furthest from the 1002 Area and likely the least useful as a comparison.

Oil and gas companies' production cost calculations differ greatly between offshore and onshore operations, and bids for onshore tracts might better approximate potential bids for 1002 Area tracts. Since 2000, DOI has held 14 sales for parcels in the NPRA, and the Alaska DNR has held 20 state sales for parcels in the region between the NPRA and ANWR, for a combined 34 onshore sales. For the 2,861 parcels covering 11.9 million acres sold in those 34 sales, the inflation-adjusted average bid price was $41.05/acre. That is less than two percent of the $2,250/acre average bid needed to generate the $1.8 billion in revenue projected by the CBO. In the 10 onshore sales conducted in the last five years, the average bid was only $35.36/acre.

In its **most recent revenue estimate** for the Coastal Plain lease sales, the CBO stated it expects parcels in the "western portion of ANWR—which contains the highest estimated concentration of resources—will be most attractive to bidders…" In fact, CBO expects that bidding for these parcels will exceed the projected average of $2,250/acre. The results from the sale of state parcels immediately adjacent to the western portion of ANWR, however, indicate that CBO's expectations are unfounded, if not completely unrealistic.

For years, the Alaska DNR has separately identified all parcels that are adjacent to federal lands in the documentation for its oil and gas lease sales (see example on p. 5), including 63 offshore parcels and 22 onshore parcels that abut the 1002 Area. Of those, roughly 46 adjoin the western portion of the 1002 Area. Under the assumption CBO makes that oil and gas reserves near these parcels are particularly attractive to producers, they would reasonably be expected to have historically sold at record-high bid prices. In fact, the opposite is true; the parcels adjacent to the 1002 Area, and its western portion specifically, have historically sold at relatively low levels (see Appendix B for detail).

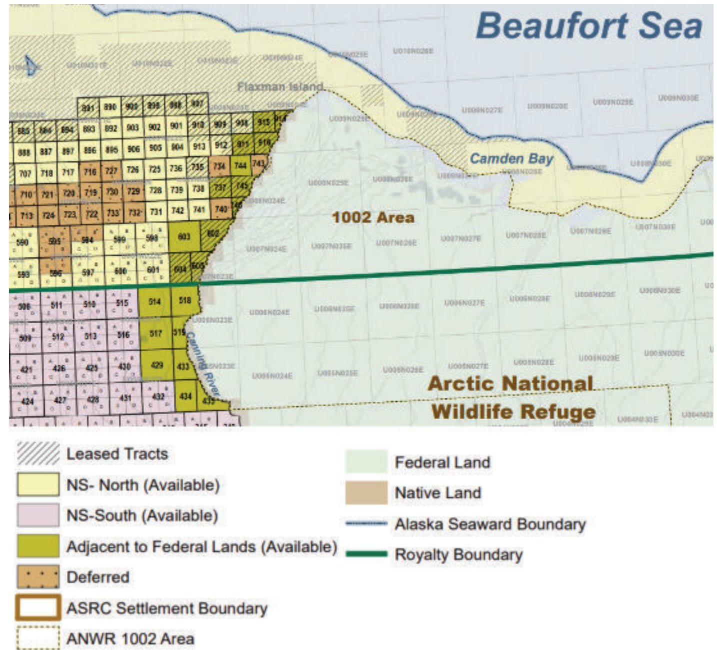
Results from the sale of parcels closest to ANWR—those adjacent to the 1002-Area offered in state auctions—provide an indicator of future interest and bidding. Of the 72 parcels[5] lying next to the Coastal Plain made available by the state, only 38 were ever leased, though each was available for lease multiple times over the last 20 years. This cumulative retrospective rate of adjacent parcels ever being leased, rather than an average from individual sales, likely best approximates ANWR bidding for two reasons: (1) the parcels included in DOI's plans for ANWR lease sales cover a similar geographical span as the combined Beaufort Sea and North Slope Areawide sales, and (2) there will likely be only one chance for interested parties to bid for Coastal Plain leases.

Rosy Revenue Estimates

All evidence from past oil and gas lease sales on Alaska's North Slope indicates that CBO's projections for ANWR leasing revenues are wildly overstated. No sale has demonstrated that ANWR parcels will receive anything close to the $2,250/acre average bid needed to generate $900 million in revenue for federal taxpayers. In fact, the range of revenue estimates created using benchmarks from recent leasing in the region all indicate that revenues will fall hundreds of millions of dollars short under even the most generous assumptions.

The bidding rates for the DOI's 2008 oil and gas lease sale in the Chukchi Sea were an aberration. The sale's inflation-adjusted average bid of $1,146/acre is more than seven times the next highest result for any other sale in the North Slope region. Similarly, oil and gas companies bidding on 42 percent of parcels offered in the 2016 NPRA sale was nearly

[5] Of the 85 parcels abutting ANWR, 13 parcels in the Beaufort Sea were never made available for lease and were thus omitted here for the purposes of gauging past industry interest in the region.



Portion of the Tract Map and legend published by Alaska's DNR for its 2012 North Slope Areawide lease sale that specifically identifies parcels adjacent to federal lands. The parcels north of the 1002 Area are similarly identified in the DNR's Beaufort Sea sales maps.

twice the frequency with which they bid in any other NPRA sale. Yet together, these parameters can be used as the upper bound of what taxpayers can expect for the ANWR lease sales.

If DOI puts 1.56 million acres up for auction as planned, and companies bid on 42 percent of the acreage at the record high of $1,146/acre, federal taxpayers would net $379 million. That is only 40 percent of what CBO counted on as an offset to the 2017 tax cut, which means taxpayers would lose $530 million under the best-case scenario.

Lease Sales Will Yield Disappointing Outcome for Taxpayers

The full range of estimates created using the parameters derived above are presented below. Of these, most revenue is anticipated if oil and gas companies bid on 53 percent of the 1.56 million acres—the total portion of parcels adjacent to the Coastal Plain they've historically bid on; and they bid an average of $35.36/acre—the average received for all onshore North Slope sales over the last five years. In that scenario, federal taxpayers would receive a mere $14.7 million. This would amount to a loss of $895 million for taxpayers.

In the more likely scenario, in which the portion of parcels receiving a bid and the average amount bid per acre mirror previous bidding for leases adjacent to the Coastal Plain, taxpayers would receive just $10 million. This would amount to one percent of what CBO projected.

Administration Moves Forward Despite Red Flags

Soon after Congress enacted the 2017 tax cut, the BLM **announced** it would prepare an environmental impact statement (EIS) for the new leasing program in ANWR. After holding a series of scoping meetings, the BLM **published** a draft EIS for the Coastal Plain lease sales in December 2018. In addition to a no-action scenario, the BLM considered three alternatives for oil and gas leasing and development.

In its **Final EIS** for Coastal Plain leasing published in September 2019, the BLM selected alternative B, which calls for offering all 1.56 million acres for lease with the least amount of operator restrictions. The agency's plan to open up all available acres for leasing was finalized in the **Record of Decision** for the program published in August 2020. Notably, the DOI stated it has spent nearly $4 million just preparing the EIS documents, further diminishing the net return to taxpayers from ANWR development.

The agency's analysis of potential development in the region relies on numerous optimistic assumptions, including that undiscovered oil would be found in all areas of the Coastal Plain and industry "would aggressively lease and explore the tracts offered."[6] Estimates of potential reserves in the 1002 Area are highly uncertain, but the mean estimate reported by the BLM relies on a price of $70 per barrel ($2018). The U.S. Energy Information Administration forecasts benchmark petroleum prices will not reach that level until 2030.[7] Aggressive development of the Coast Plain, therefore, does not seem likely.

Interest in ANWR leases in the near-term is also likely constrained by reduced capital expenditures for many producers and limited financing options. Existing downward pressure on oil prices due to surplus supply has been exacerbated by falling demand from COVID-19 related economic slowdowns. Many in the industry have tightened their belt in response, cutting spending for finding and developing new reserves. By May 2020, oil and gas companies' capital expenditures had reportedly fallen by more than **$85 billion**. As oil and gas companies' budgets for new leasing shrink, so too does the likelihood all the ANWR parcels will be developed.

BIDDING REVENUE SCENARIOS FOR CHOSEN LEASING ALTERNATIVE

	1.56 MILLION ACRES OFFERED	
Portion of Acres Sold	**Adjacent Parcels Average Bid**	**5-Yr. Onshore Sales Average Bid**
25%	**$4,704,291**	**$6,910,489**
53%	**$9,973,098**	**$14,650,236**
100%	**$18,817,165**	**$27,641,955**

Financing has also become harder to obtain. Oil and gas companies were highly leveraged coming into the year, and the market downturn has severely stressed balance sheets. Just in the second quarter of 2020, 18 North American exploration and production companies declared bankruptcy. Amid the wash of **bad debt** in the industry, financing for any project is hard to come by. But ANWR projects face unique difficulties due to increasing unwillingness among some of the world's largest financial firms to invest in the Arctic. Barclays, Blackrock, Goldman Sachs, JPMorgan Chase, Lloyds Bank, Wells Fargo, UBS, and many others have already said they will not finance Artic drilling. Limited financing sources may increase financing costs and further reduce the attractiveness of bidding for ANWR leases.

Since the 2017 tax legislation, some members of Congress have introduced legislation that would alter or repeal the BLM's authority to administer an oil and gas leasing program in ANWR. **One provision** tucked into the House's FY2021 appropriations bill for DOI would prevent BLM

[6] Bureau of Land Management, "Coastal Plain Oil and Gas Leasing Program: Final Environmental Impact Statement." September 2019, Appendix B.
[7] U.S. Energy Information Administration, "Annual Energy Outlook 2020," Table 12: Petroleum and Other Liquids Prices – Reference Case. January 2020.

from conducting any Arctic lease sale unless the agency sets a minimum bid for the auction high enough for the sale to generate at least $500 million in federal receipts. The House passed a package of several appropriations bills for FY2020 with the same provision included in June 2019, but it was omitted when the bill was enacted.[8]

No Money, Big Problems

Despite an overwhelming lack of evidence that drilling in the Arctic will provide any significant revenue or overall taxpayer benefit, the Department of the Interior continues to push forward with leasing plans.

By releasing its Record of Decision (ROD) for the Coastal Plain Leasing Program in August 2020, the DOI has cleared the way for ANWR oil and gas development. The ROD finalized where and under what conditions lease sales could occur and minimized revenue considerations despite the original revenue-focused intent of the program. The Secretary of Interior has indicated the lease sales could be held as early as December 2020.

It's time to face reality, use some common sense and table this political play to lease the Arctic.

[8] See H.R. 3055, Division C, Sec. 118

Arctic drilling platform on Alaska's North Slope
Source: USDOE via Flickr

Appendix A: Past Estimates for ANWR Drilling Revenues

In 2005, Congress passed a budget resolution for FY2006 that included instructions for the House Committee on Resources and the Senate Committee on Energy and Natural Resources to make proposals to reduce direct spending by $2.4 billion over 10 years.[9] In response, both committees submitted statutory changes that would allow for oil and gas leasing on the Coastal Plain of ANWR.[10] In its reviews of the **House** and **Senate** committees' recommendations, the CBO estimated that administering oil and gas leasing in ANWR would have generated slightly more than $5 billion over ten years, mostly from bonus bids for the new leases.[11] After deducting Alaska's share, the proposals would have ostensibly netted the federal government $2.58 billion.

In 2012, the CBO scored **another measure** that would have directed the DOI to institute a leasing program for the Coastal Plain. Again, the **agency projected** that bonus bids from lease sales would generate $5 billion in gross revenue, half of which would be directed to Alaska. The CBO has also cited this 2012 score in **subsequent materials**.

[9] 109th Congress. H.Con.Res.95 §201(a)2(F) and §202(a)(4)—**https://www.congress.gov/bill/109th-congress/house-concurrent-resolution/95**
[10] The two proposals differed on how this would be achieved and the recommendations by the House Committee on Resources included additional provisions that, among other things, would have opened up leasing in some federal waters.
[11] The CBO projected that very little revenue would be generated from production royalties in the 10-year window, due to the long lead time necessary to begin production in the Arctic. That differs from its 2012 and 2017 estimates, where the CBO projected no royalty revenue at all would be generated in the 10-year window.

Appendix B: Auction Bids for ANWR-Adjacent Leases

In its revenue forecasts for Coastal Plain leasing, the CBO assumes that oil and gas producers will be willing to pay considerably more for ANWR leases, particularly in the western-most part of the refuge, than leases in other parts of the North Slope. Yet results from historical auctions for development rights to land immediately adjacent to ANWR indicate the opposite.

Of the 46 tracts of Alaska state lands and waters that lie next to the western 1002 Area, some never sold while others were leased, relinquished, and re-sold several times. In total, 30 of the 46 tracts were sold a combined 52 times since 2000.[12] Adjusting for inflation, the winning bonus bids for those parcels total approximately $3.9 million. On average, the parcels adjoining ANWR's western border sold for just $26.64/acre.

The combined average for parcels neighboring ANWR on all sides was $24.07 which is roughly 60 percent of the $41.67/acre average for all parcels bid on in the 40 state sales in the region since 1999. That is, the land near ANWR has been leased for less, on average, than other parcels in state lands and waters in the region. The $24.07/acre average is also a mere one percent of the $2,250/acre the CBO predicts for parcels in the 1002 Area.

[12] Four additional parcels were leased after being reinstated through a court settlement in 2012.