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Arctic National Wildlife Refuge (ANWR): Controversies for the 108th Congress

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SUMMARY

One major element of the energy debate in the 108th Congress is whether to approve energy development in the Arctic National Wildlife Refuge (ANWR) in northeastern Alaska, and if so, under what conditions, or whether to continue to prohibit development to protect the area's biological resources. The Refuge is an area rich in fauna, flora, and commercial oil potential. Sharp increases in prices of gasoline and natural gas from late 2000 to early 2001, followed by terrorist attacks, and further increases in 2003, have renewed the ANWR debate for the first time in 7 years; however, its development has been debated for over 40 years. Few U.S. locations onshore stir as much industry interest as the northern area of ANWR. Current law forbids energy leasing in the Refuge.

The first key vote in the 108th Congress came in the Senate. On March 19, the Senate passed an amendment by Senator Boxer to strip language from the Senate Budget Resolution that would have facilitated subsequent passage of ANWR development legislation. The second group of votes came April 10 in the House on the way to passage of a comprehensive energy bill (H.R. 6). The House adopted an amendment by Representative Wilson (NM) to limit certain features of federal leasing development to no more than 2,000 acres. It rejected an amendment by Representative Markey to delete ANWR development from the bill. The Senate passed its version of H.R. 6 by adopting the provisions of the Senate's version of omnibus energy legislation from the 107th Congress. The Senate version contained no provision to open the Refuge to development. The conference committee did not include ANWR development in the conference report. Many observers feel that passage of ANWR development legislation in the remainder of the 108th Congress is now unlikely. If Congress does not act, the status quo, which prohibits development unless Congress acts, will continue.

Another bill, H.R. 39, to open the refuge to development, has been introduced in the 108th Congress. Two bills (H.R. 770 and S. 543) have been introduced to designate the area as wilderness.

Development advocates argue that ANWR oil would reduce U.S. energy markets' exposure to crises in the Middle East; boost North Slope oil production; extend the economic life of the Trans Alaska Pipeline System; and create many jobs in Alaska and elsewhere in the United States. They maintain that ANWR oil could be developed with minimal environmental harm, and that the footprint of development could be limited to 2,000 acres. Opponents argue that intrusion on this ecosystem cannot be justified on any terms; that oil found (if any) would provide little energy security and could be replaced by cost-effective alternatives; and that job claims are overstated. They also maintain that proposals to limit any footprint size have not been worded so as to apply to Native lands, which could then be developed if the Arctic Refuge were opened.

MOST RECENT DEVELOPMENTS

On July 31, 2003, in a surprise move, the Senate passed the text of its omnibus energy legislation as adopted in the 107th Congress. It inserted that text as a substitute for the House-passed version of H.R. 6. This version has no ANWR development language, though it does contain other provisions relating to northern energy development. On April 10, the House passed the Wilson (NM) amendment to H.R. 6, the Energy Policy Act of 2003, to limit certain features of development to a total of 2,000 acres (yeas 226, nays 202, Roll Call No. 134). The House rejected a Markey amendment to delete the title of the bill opening the refuge to development (yeas 197, nays 228, Roll Call No. 135). By voice vote, it also approved a Peterson (PA) amendment to authorize appropriation of any ANWR revenues from bonus bids (up to $2.1 billion) to the Low Income Home Energy Assistance Program (LIHEAP). The conference committee did not include ANWR provisions in the conference report for H.R. 6. As a result, many consider the chance of passage of ANWR legislation in the remainder of the 108th Congress to be remote.

BACKGROUND AND ANALYSIS

The Arctic National Wildlife Refuge (ANWR) consists of 19 million acres in northeast Alaska. It is administered by the Fish and Wildlife Service (FWS) in the Department of the Interior (DOI). Its 1.5 million acre coastal plain is viewed as one of the most promising U.S. onshore oil and gas prospects. According to the U.S. Geological Survey (USGS), there is a small chance that taken together, the fields on this federal land could hold as much economically recoverable oil as the giant field at Prudhoe Bay, found in 1967 on the state-owned portion of the coastal plain west of ANWR, now estimated to have held 11-13 billion barrels (billion bbl).

At the same time, the Refuge, and especially the coastal plain, is home to a wide variety of plants and animals. The presence of caribou, polar bears, grizzly bears, wolves, migratory birds, and many other species in a nearly undisturbed state has led some to call the area "America's Serengeti." The Refuge and two neighboring parks in Canada have been proposed for an international park, and several species found in the area (including polar bears, caribou, migratory birds, and whales) are protected by international treaties or agreements. The analysis below covers, first, the economic and geological factors that have triggered new interest in development, followed by the philosophical, biological, and environmental quality factors that have triggered opposition to it.

The conflict between high oil potential and nearly pristine nature in the Refuge creates a dilemma: should Congress open the area for oil and gas development or should the area's ecosystem be given permanent protection from development? What factors should determine whether to open the area? If the area is opened, to what extent can damages be avoided, minimized, or mitigated? To what extent should Congress legislate special management of the area if it is developed, and to what extent should federal agencies be allowed to manage the area under existing law?

(Basic information on the Refuge can be found in CRS Report RL31278. For legal background, see CRS Report RL31115. State lands on the coastal plain are at [http://www.dog.dnr.state.ak.us/oil/products/maps/maps.htm]. An extensive presentation of development arguments can be found at [http://www.anwr.org], sponsored by a consortium of groups. Opponents' arguments can be found variously at [http://www.alaskawild.org], [http://www.protectthearctic.com/], or [http://www.tws.org/OurIssues/Arctic/index.cfm ?TopLevel=Home].

Legislative History of the Refuge

The energy and biological resources of northern Alaska have been controversial for decades, from legislation in the 1970s, to a 1989 oil spill, to more recent efforts to use ANWR resources to address energy needs or to help balance the federal budget. In November 1957, an application for the withdrawal of lands in northeastern Alaska to create an "Arctic National Wildlife *Range*" was filed. The first group actually to propose to Congress that the area become a national wildlife range, in recognition of the many game species found in the area, was the Tanana Valley (Alaska) Sportsmen's Association in 1959. On December 6, 1960, after statehood, the Secretary of the Interior issued Public Land Order 2214 reserving the area as the "Arctic National Wildlife Range."

In 1971, Congress enacted the Alaska Native Claims Settlement Act (ANCSA, P.L. 92-203) to resolve all Native aboriginal land claims against the United States. ANCSA provided for monetary payments and created Village Corporations that received the surface estate to roughly 22 million acres of lands in Alaska. Village corporations obtained the right to select the surface estate in a certain amount of lands within the National Wildlife Refuge System. Under §22(g) of ANCSA, the chosen lands were to remain subject to the laws and regulations governing use and development of the particular Refuge. Kaktovik Inupiat Corporation (KIC, the local corporation) received rights to three townships along the coast of ANWR. ANCSA also created Regional Corporations which could select subsurface rights to some lands and full title to others. Subsurface rights in Refuges were not available, but selections to substitute for such lands were provided.

The Alaska National Interest Lands Conservation Act of 1980 (ANILCA, P.L. 96-487, 94 Stat. 2371) renamed Arctic Range as the Arctic National Wildlife Refuge, and expanded the Refuge, mostly southward and westward, to include an additional 9.2 million acres. Section 702(3) designated much of the original Refuge as a wilderness area, but not the coastal plain. (Newer portions of the Refuge were not included in the wilderness system.) Instead, Congress postponed decisions on the development or further protection of the coastal plain. Section 1002 directed a study of ANWR's "coastal plain" (therefore often referred to as the "1002 area") and its resources to be completed within 5 years and 9 months of enactment. The resulting 1987 report was called the *1002 report* or the Final Legislative Environmental Impact Statement (FLEIS). ANILCA defined the "coastal plain" as the lands on a specified map — language that was interpreted as excluding most Native lands, even though these lands are *geographically* part of the coastal plain.

Section 1003 of ANILCA prohibited oil and gas development in the entire Refuge, or "leasing or other development leading to production of oil and gas from the range" unless authorized by an Act of Congress. (For more history of legislation on ANWR and related developments, see CRS Report RL31278; for legal issues, see CRS Report RL31115.)

In more recent years, the 104th Congress attempted to authorize the opening of ANWR in the FY1996 reconciliation bill (H.R. 2491, §§5312-5344), but the measure was vetoed. President Clinton cited the Arctic Refuge sections as one of his reasons for vetoing the measure. (For key provisions of that legislation, see archived CRS Issue Brief IB95071, available from the authors.) While bills were introduced, the ANWR issue was not debated in the 105th Congress. In the 106th Congress, bills to designate the 1002 area of the Refuge as wilderness and others to open the Refuge to energy development were again introduced. Assumptions about ANWR revenues were included in the FY2001 budget resolution (S.Con.Res. 101) as reported by the Senate Budget Committee on March 31, 2000. An amendment to remove the language was tabled. However, conferees rejected the language. The conference report on H.Con.Res. 290 did not contain this assumption. The report was passed by both Houses on April 13.

Only three recorded votes relating directly to ANWR development occurred from the 101st to the 106th Congress. All were in the Senate. First, in the 104th Congress, on May 24 1995, there was a motion to table an amendment that would have removed ANWR development titles from the Senate version of H.R. 2491, the reconciliation bill. The motion passed (Roll Call No.190), leaving ANWR development in the bill. Second, in the same Congress, on October 27, 1995, there was another motion to table a similar amendment to H.R. 2491. This motion also passed (Roll Call No.525). Third, in the 106th Congress, the vote to table an amendment to strip ANWR revenue assumptions from the budget resolution (S.Con.Res. 101; see above) was passed (April 6, 2000, Roll Call No.58), leaving those assumptions in the bill.

Legislation in the 107th Congress. H.R. 4, with ANWR development provisions, passed the House on August 2, 2001 (yeas 240, nays 189; Roll Call No. 320). Title V of Division F was the text of H.R. 2436 (H.Rept. 107-160, Part I), which would have opened ANWR to exploration and development. The previous day, an amendment to limit specified federal surface development to 2,000 acres was passed (yeas 228, nays 201; Roll Call No. 316). An amendment to strike the title was defeated (yeas 206, nays 223; Roll Call No. 317).

There were a few recorded votes in the Senate on Refuge development in the first session. Senator Lott offered S.Amdt. 2171 to an amendment on pension reform (S.Amdt. 2170) to H.R. 10, a bill also on pension reform. The amendment included the ANWR development title in H.R. 4 as passed by the House. A cloture motion failed (1-94, Roll Call No. 344) on December 3, 2001. Instead, the Senate voted the same day to invoke cloture on the underlying amendment (S.Amdt. 2170), by a vote of 81-15 (Roll Call No. 345). Because cloture was invoked on the underlying amendment, Senate rules required that subsequent and pending amendments to it be germane. The Senate's presiding officer subsequently sustained a point of order against the Lott amendment (which was still pending) that it was not germane to the underlying amendment.

In the second session, S. 517, as reported, concerned only energy technology development. Senator Daschle offered S.Amdt. 2917, an omnibus energy bill. It did not contain provisions to develop the Refuge, but S.Amdt. 3132 and S.Amdt. 3133 to do so were offered on April 16. The language of the two amendments was similar to that of the House-passed version of H.R. 4 (Division F, Title V). On April 18, the Senate essentially voted to prevent drilling for oil and gas in the Refuge. The defeat came on a vote of 46 yeas to 54 nays on a cloture motion to block a threatened filibuster on S.Amdt. 3132, which would have

ended debate and moved the chamber to a direct vote on the ANWR issue. Conferees could not reconcile the many differences between the two bills. (For a more extensive history of congressional action, see CRS Report RL31725, *Arctic National Wildlife Refuge: Legislative Issues Through the 107th Congress*.)

Legislation in the 108th Congress. Work began on FY2003 Interior Appropriations in the 107th Congress but was not completed until the next Congress. In the 107th Congress, for the FY2003 Interior Appropriations bill, the House Committee on Appropriations had agreed to report language on the Bureau of Land Management (BLM) energy and minerals program in general, and stated that no funds were included in the FY2003 funding bill "for activity related to potential energy development within [ANWR]" (H.Rept. 107-564, H.R. 5093). But §1003 of ANILCA contained the prohibition on leasing "or other development leading to production of oil and gas" unless authorized by Congress. Thus, the Committee's report language was viewed by some as barring the use of funds for preleasing studies and other preliminary work related to oil and gas drilling in ANWR. The report of the Senate Committee on Appropriations did not contain this prohibition. A series of continuing resolutions provided for DOI into the 108th Congress.

Conferees on the FY2003 Consolidated Appropriations Resolution (P.L. 108-7) included language in the joint explanatory statement stating that they "do not concur with the House proposal concerning funding for the energy and minerals program." This change from the House report language has been interpreted by some as potentially making available funds for preliminary work related to development in ANWR. However, as noted, the prohibition contained in ANILCA remains in effect, so the ability to use money in the bill for particular pre-leasing activities may not be clear.

FY2004 Reconciliation. During the 108th Congress, development proponents sought to move ANWR legislation through the FY2004 budget reconciliation process in order to avoid a possible Senate filibuster later in the session. (Reconciliation bills in the Senate are considered under special rules that do not permit filibusters. See CRS Report 98-814, *Budget Reconciliation Legislation: Development and Consideration* and CRS Report RL30862, *Budget Reconciliation Procedures: The Senate's 'Byrd Rule.'*) The House agreed to the FY2004 budget resolution (H.Con.Res. 95) on March 21 (yeas 215, nays 212, Roll Call No. 82). The resolution contained reconciliation instructions to the House Resources Committee for reductions, but did not specify the expected source of the savings. If the House language had been adopted, ANWR development language might have been considered as part of a reconciliation measure to achieve the savings. S.Con.Res. 23, as reported by the Senate Budget Committee, stated:

> The Senate Committee on Energy and Natural Resources shall report a reconciliation bill not later than May 1, 2003, that consists of changes in laws within its jurisdiction sufficient to decrease the total level of outlays by $2,150,000,000 for the period of fiscal years 2004 through 2013.

To meet this directive, the Committee would very likely have reported legislation to open ANWR to development. On March 19, 2003, Senator Boxer offered S.Amdt. 272 to delete this provision. Floor debate indicated that the Boxer amendment was clearly seen as a vote on developing ANWR. The amendment passed (Roll Call No. 59, yeas 52, nays 48). The amended Senate version of the resolution was ultimately accepted by both House and Senate. As a result, while the Committee on Energy and Natural Resources could still report

legislation to authorize opening the Refuge, such legislation would not be eligible for inclusion in a reconciliation bill. Without the procedural protections associated with reconciliation, a filibuster could be used to prevent a vote on a authorization bill. (See CRS Report RS20368 for an overview of the congressional budget process.)

In the end, the conferees on the budget resolution included no instructions to the House Resources and Senate Energy and Natural Resources Committees. As a result, reconciliation is less likely to be a vehicle for authorizing Refuge development.

Comprehensive Energy Legislation. The House passed H.R. 6, a comprehensive energy bill on April 11, 2003. Division C, Title IV would have opened the 1002 area to energy development. On April 10, the House passed the Wilson (NM) amendment to H.R. 6 to limit certain features of development to a total of 2,000 acres (Roll Call No. 134, yeas 226, nays 202). In addition, one bill (H.R. 39) has been introduced to open the 1002 area to development and two bills (H.R. 770 and S. 543) have been introduced to designate the 1002 area as wilderness.

The initial version of the Senate energy bill (S. 14) had no provision to open the Refuge, and Chairman Domenici stated that he did not plan to include one. After many weeks of debate in the Senate, as prospects of passage seemed to be dimming, Senators agreed to drop the bill they had been debating and to go back to the bill passed in the Democratic-controlled 107th Congress. On July 31, 2003, they substituted the language of that bill for that of the House-passed H.R. 6. There was widespread agreement that the unusual procedure was a means of getting the bill to conference. Members, including Chairman Domenici, indicated at the time their expectation that the bill that emerged from conference would likely be markedly different from the bill that had just been passed by the Senate. One of the key differences between the two bills was the presence of ANWR development language in the House version, and its absence in the Senate version. (See CRS Issue Brief IB10116.) Conference Chairman Domenici included the House title on ANWR in his working draft; but in the end the conference committee deleted ANWR development features in the conference report (H.Rept. 108-375); the conference report was agreed to by the House on November 18, 2003; the Senate considered the measure, but a cloture vote failed on November 21, 2003. The conference report may be taken up again in the Senate in the second session. The features of these bills and the issues most commonly arising in the current legislative debate are described below under *Major Legislative Issues in the 108th Congress.*

The Energy Resource

Parts of Alaska's North Slope (ANS) coastal plain have proved abundant in oil and gas reserves, and its geology holds promise for ANWR. The oil-bearing strata extend eastward from structures in the National Petroleum Reserve-Alaska past the Prudhoe Bay field, and may continue into and through ANWR's 1002 area.

Oil. Estimates of ANWR oil potential, both old and new, depend upon limited data and numerous assumptions about geology and economics. The most recent government study of oil and natural gas prospects in ANWR, completed in 1998 by the USGS,[1] found that there

[1] U.S. Dept. of the Interior, Geological Survey. *The Oil and Gas Potential of the Arctic National* (continued...)

is an excellent chance (95%) that at least 11.6 billion bbl of oil are present on federal lands in the 1002 area. There also is a small chance (5%) that 31.5 billion bbl or more are present. USGS estimates there is an excellent chance (95%) that 4.3 billion bbl or more are technically recoverable (costs not considered); and there is a small chance (5%) that 11.8 billion bbl or more are technically recoverable. But the amount that would be *economically* recoverable depends on the price of oil. The USGS estimated that, at $24/bbl (in 1996 dollars), there is a 95% chance that 2.0 billion bbl or more could be economically recovered and a 5% chance of 9.4 billion bbl or more. (Spot prices for crude oil essentially have fluctuated between $25 and $30 per barrel, about $23 to $28 per barrel in 1996 dollars, since late spring of 2002. The winter of 2003 saw a several-dollar spike related to reduced Venezuelan production and to Iraq War anticipation.) Roughly one-third more oil may be under adjacent state waters and Native lands.[2] However, these areas would be difficult to develop without access through federal land.

Oil prices, geologic characteristics such as permeability and porosity, cash flow, and any transportation constraints would be among the most important factors affecting the development rates and production levels that would be associated with given volumes of oil resources. The U.S. Energy Information Administration estimated that at a relatively fast development rate, production would peak 15-20 years after the start of development, with maximum daily production rates of roughly 0.00015 (0.015%) of the resource. Production associated with the slower rate would peak about 25 years after the start of development at a daily rate equal to about 0.000105 (0.0105%) of the resource. Peak production associated with a technically recoverable resource of 5.0 billion bbl at the faster development rate would be 750,000 bbl per day. U.S. petroleum consumption is about 19 million bbl per day. (For economic impacts of development, see CRS Report RS21030.)

Natural Gas. Large quantities of natural gas are estimated to be in the 1002 area. Being able to sell this gas probably would enhance the commercial prospects of the 1002 area and the rest of the ANS — oil as well as gas. However, as with the abundant natural gas discovered at Prudhoe Bay, there currently is no way to deliver the gas to market. Until recently, pipeline construction costs combined with relatively low natural gas prices precluded serious consideration of pipeline construction. Higher gas prices in the last few years raised interest in the construction of a pipeline to transport natural gas to North American markets — directly and/or via shipment in liquified form in tankers.

Advanced Technologies. As development has proceeded since the discovery of Prudhoe Bay, North Slope oil field operators have developed less environmentally intrusive ways to develop arctic oil, primarily through innovations in technology.

Field exploration has benefitted from new seismic technology. Advanced analytical methods generate high resolution images of geologic structures and hydrocarbon accumulations. And improved ice-based transportation infrastructure serves remote areas during exploration drilling on newly developed insulated ice pads. (However, for safety

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[1] (...continued)
Wildlife Refuge 1002 Area, Alaska. USGS Open File Report 98-34. (Washington, DC: 1999). Summary and Table EA4.

[2] Emil D. Attanasi and John D. Scheunemeyer, *Frontier Areas and Resource Assessment: the Case of the 1002 Area of the Alaska North Slope,*. USGS Open File Report 02-119 (March 2002).

reasons, use of ice roads and pads may be limited in the more hilly terrain of the 1002 area; gravel structures could be required for greater safety.) More powerful computers allow the manipulation of vastly more data, yielding more precise well locations and, consequently, reduce the number of wells needed to find hydrocarbon accumulations.

Recent advances in drilling also lessen the footprint of petroleum operations. New drilling bits and fluids and advanced forms of drilling — such as extended reach, horizontal and "designer" wells — permit drilling to reach laterally far beyond a drill platform, with the current record being seven miles at one site in China. Other advances reduce the space needed for a drilling rig, reduce equipment volume and weight, and lessen the generation of drilling waste. Modules that perform many functions also make production facilities more compact. Production drilling techniques using slim-hole technology such as coiled tubing and multilateral drilling also decrease the footprint, reduce waste, and increase recovery of hydrocarbons per well.

Proponents of opening ANWR note that these technologies would mitigate the environmental impact of petroleum operations, but not eliminate it. Opponents maintain that facilities of any size would still be industrial sites and would change the character of the Refuge, in part because the sites would be spread out in the 1002 area and connected by pipelines. They argue that whether environmental impacts would be minimized would depend in part on the wording of legislation, and that there still would be the need for gravel and the scarce water resources of the 1002 area; and that permanent roads, port facilities, and airstrips would follow the initial roadless construction. They further note that warming trends in the arctic have already shortened winter access across the tundra in developed areas, suggesting that ice technologies alone may be insufficient for exploration in the 1002 area if warming trends continue. They note that spills may occur, and that advanced technologies might not be mandated on Native lands.

A March 2003 report by the National Academy of Sciences (NAS) highlighted impacts of existing development at Prudhoe Bay on arctic ecosystems. Among the harmful environmental impacts noted were changes in bowhead whale migration, in distribution and reproduction of caribou, and in populations of predators and scavengers that prey on birds. NAS noted beneficial economic and social effects of oil development in northern Alaska and credited industry for its strides in decreasing or mitigating environmental impacts. It also said that some social and economic impacts have not been beneficial. The NAS report specifically avoided determining whether any beneficial effects (to Alaska residents, or to the economy, etc.) were outweighed by harmful effects (to other Alaska residents, subsistence resources, the environment, etc.).

The Biological Resources

The FLEIS rated the Refuge's biological resources highly: "The Arctic Refuge is the only conservation system unit that protects, in an undisturbed condition, a complete spectrum of the arctic ecosystems in North America" (p. 46). It also said "The 1002 area is the most biologically productive part of the Arctic Refuge for wildlife and is the center of wildlife activity" (p. 46). The biological value of the 1002 area rests on the intense productivity in the short arctic summer; many species arrive or awake from dormancy to take advantage of this richness, and leave or become dormant during the remainder of the year. Caribou have long been the center of the debate over the biological impacts of Refuge development, but

other species have also been at issue. Among the other species most frequently mentioned are polar bears, musk oxen, and the 135 species of migratory birds that breed or feed there.

The Porcupine Caribou Herd (PCH) calves in or near the 1002 area in most years, and winters south of the Brooks Range in Alaska or Canada; it is the subject of a 1987 executive Agreement Between the United States and Canada on the Conservation of the Porcupine Caribou Herd. The herd is currently estimated at 130,000, but caribou population numbers fluctuate markedly. In both countries, it is an important food source to Native people and others — especially since other meat is either expensive or unavailable.

Some scientists cite studies that show a reduction in density of cows with calves near roads and developed areas around Kuparuk (Nellemann and Cameron, 1998). They fear that development and production in the 1002 area could cause cows to calve in less desirable locations or prevent the herd's access to sites providing relief from voracious insects. Based on the Prudhoe Bay experience, it appears that individual animals, especially adult males, habituate to the disturbance, and sometimes seek out gravel pads and roads for insect relief. However, cows with young calves appear to be more sensitive, and avoid roads and other human disturbance for distances of a mile or more. The preferred calving area for the PCH is more confined than for the herd around Prudhoe Bay and vicinity, and nearby similar habitat may not be available.

When cows are slowed by late thaws or heavy snows, they may not reach the 1002 area before calving. In the narrow coastal plain of the 1002 area, displacement to the south puts calving in or near the Brooks Range, where bears, golden eagles, and wolves (all calf predators) are more abundant; it could also force newborn calves to attempt to ford swollen rivers. In 2000, heavy snowfall delayed cows in reaching the 1002 area, and certain calf survival statistics were the lowest ever recorded. The reduced calving highlighted the importance of the herds use of the area.

An updated assessment of an array of biological resources in the coastal plain was published in 2002 by the Biological Research Division of USGS.[3] The report analyzed new information about caribou, musk oxen, snow geese and other species in the Arctic Refuge, and concluded that development impacts would be significant. A follow-up memo by one of the authors to the director of USGS clarified that if development were restricted to the western portion of the refuge (an option that was being considered by the Administration), the PCH would not be affected during the early calving period, since the herd is not normally found in the area at that time.[4] Any impacts that might occur when the herd subsequently moves into the area were not discussed in the memo.

Effects on polar bear dens in the Refuge have also been an issue. Modern winter exploration technology, while an improvement over the environmental impacts of previous technologies in many respects, would be more likely to affect polar bears' winter dens, or conversely, the mitigation required to protect bear dens could increase the cost of exploration, development, and production. Polar bears are the subject of the international

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[3] U.S. Dept. of the Interior. Geological Survey. *Arctic Refuge Coastal Plain Terrestrial Wildlife Research Summaries*. Biological Science Report. USGS/BRD/BSR-2002-0001. 75 p.

[4] Griffith, Brad. Memorandum to Director, USGS. "Evaluation of additional potential development scenarios for the 1002 Area of the Arctic National Wildlife Refuge." April 4, 2002. 2 p.

Agreement on the Conservation of Polar Bears, to which the United States is a party. Musk oxen, snow geese, and other species have also been featured in the ANWR debate. (For more about these species, see CRS Report RL31278.)

For opponents of development, the central issue is whether the area should be maintained as an intact ecosystem — off limits to development — not whether development can be accomplished in an environmentally sound manner. In terms that emphasize deeply held values, supporters of wilderness designation argue that few places as untrammeled as the 1002 area remain on the planet, and fewer still on the same magnificent scale. Any but the most transitory intrusions (e.g., visits for recreation, hunting, fishing, subsistence use, research) would, in their view, damage the "sense of wonder" they see the area as instilling. The mere knowledge that a pristine place exists, whether one ever visits it, can be important to those who view the debate in this light.

Major Legislative Issues in the 108th Congress

Some of the issues that have been raised most frequently in the current ANWR debate are described briefly below. In addition to the issue of whether development should be permitted at all, key aspects of the current debate include restrictions that might be specified in legislation, including the physical size, or footprint, of development; the activities that might be permitted on Native lands; the disposition of revenues; labor issues; oil export restrictions; compliance with the National Environmental Policy Act, and other matters. (References below to the "Secretary" refer to the Secretary of the Interior, unless stated otherwise.) The analysis below describes features of H.R. 6 as passed by the House. The Senate version of H.R. 6 had no provision to develop the 1002 area, but any provisions corresponding to issues below are also described.

Environmental Direction. If Congress authorizes development, it could choose to leave environmental matters to administrative agencies under existing laws. Alternatively, Congress could impose a higher standard of environmental protection because the 1002 area is in a national wildlife refuge or because of the fragility of the arctic environment, or it could legislate a lower standard to facilitate development. The choice of administering agency and the degree of discretion given to it could also affect the approaches to environmental protection. For example, Congress could make either FWS or BLM the lead agency. It could include provisions requiring use of "the best available technology" or "the best commercially available technology" or some other general standards. Congress could also limit judicial review of environmental standards. Other issues could include regulating the use of gravel and water resources essential for oil exploration and development; limitations on miles of roads or other surface occupancy; the adequacy of existing pollution standards; prevention and treatment of spills; the adequacy of current environmental requirements; and aircraft overflights.

The House bill did not name a lead agency, but since §30403(a) stated that the program would be administered under the Mineral Leasing Act, BLM seemed likely to lead. The House bill (§30407(a)) required the Secretary to administer the leasing program so as to "result in no significant adverse effect on fish and wildlife, their habitat, and the environment, [and to require] the application of the best commercially available technology ...." The House bill (§30403(a)(2)) also required that this program be done "in a manner that ensures the receipt of fair market value by the public for the mineral resources to be leased."

It is unclear how the two goals of environmental protection and of fair market value were to relate to each other (e.g., if environmental restrictions might make some fields uneconomic). The House bill (§30406(a)(3), and (5)) required lessees to be responsible and liable for reclamation of lands within the Coastal Plain (unless the Secretary approves other arrangements), and the lands must support pre-leasing uses or a higher use approved by the Secretary. There were requirements for mitigation, development of regulations and other measures to protect the environment. These included prohibitions on public access to service roads and other transportation restrictions. Other provisions might also have affected environmental protection. (See *Judicial Review* below.) H.R. 770 and S. 543 would designate the area as wilderness, as discussed below.

The Size of the Footprint. Newer technologies permit greater consolidation of leasing operations; among other things, consolidation would tend to reduce environmental impacts of development. On this issue, the debate in Congress has focused on the size of the footprint in the development and production phases of energy leasing. The term *footprint* does not have a universally accepted definition, and therefore the types of structures falling under a "footprint restriction" are arguable (e.g., whether to include roads, gravel mines, and port facilities). (See CRS Report RL32108, *North Slope Infrastructure and the ANWR Debate*, for a description of development features on the North Slope.) In addition, it has been unclear whether structures on Native lands would be included under any provision limiting footprint size. Development advocates have emphasized the total acreage of surface disturbance, while opponents have emphasized the dispersal of not only the structures themselves but also their impacts over the 1.5 million acres of the 1002 area. One single compact facility of 2,000 acres (3.1 square miles, a limit currently supported by some development advocates) would not permit full development of the 1002 area: the current record for lateral drilling technology is 7 miles from the wellhead. Even if that record could be matched on all sides of a single pad, at most about 11% of the Coastal Plain could be developed. Instead, full development of the 1002 area would require that facilities, even if limited to 2,000 acres total, be dispersed around the Coastal Plain.

The House bill (§30407(d)(9)) provided for consolidation of leasing operations; among other things, consolidation tends to reduce environmental impacts of development. The House bill (§30407(a)(3)) would further have required, "consistent with the provisions of section 30403" (which include ensuring receipt of fair market value), that the Secretary administer the leasing program to "ensure that the maximum amount of surface acreage covered by production and support facilities, including airstrips and any areas covered by gravel berms or piers for the support of pipelines, does not exceed 2,000 acres on the Coastal Plain." A floor amendment by Representative Wilson (NM) to the House bill with this limit was passed on April 10, 2003 (yeas 226, nays 202; Roll Call No. 134). The terms used were not defined in the bill (nor discussed in the committee report), and therefore the range of structures covered by the restriction was arguable (*e.g.*, whether roads, gravel mines, causeways, and water treatment plants would be included under this provision). Floor debate focused on the extent to which the facilities would be widely distributed around the Refuge. In addition, Native lands might not have been limited by this provision. (See "Native Lands," below.)

Native Lands. ANCSA resolved aboriginal claims against the United States by (among other things) creating Village Corporations that could select lands to which they could hold the surface estate, and Regional Corporations that could select surface and

subsurface rights as well. The surface lands (originally approximately three townships) selected by Kaktovik Inupiat Village (KIC) are along the coastal plain of ANWR, but were administratively excluded from being considered as within the "1002 Coastal Plain." These lands and a fourth township that is within the defined Coastal Plain (these four totaling approximately 92,000 acres) are all within the Refuge and subject to its regulations. The Arctic Slope Regional Corporation (ASRC) obtained subsurface rights beneath the KIC lands pursuant to a 1983 land exchange agreement. In addition, there are currently more than 10,000 acres of conveyed and individually owned Native allotments in the 1002 area that are not subject to its regulations. Were oil and gas development authorized for the federal lands in the Refuge, development would be allowed on the more than 100,000 acres of Native lands, arguably free of any acreage limitation applying to development on the federal lands. The extent to which the Native lands could be regulated to protect the environment is uncertain, given the status of allotments and some of the language in the 1983 Agreement with ASRC. The House bill would have repealed the ANILCA prohibition on oil and gas development.

Revenue Disposition. Another issue that has arisen during debates over leasing in ANWR is that of disposition of possible revenues — whether Congress may validly provide for a disposition of revenues formula other than the 90% -10% split mentioned in the Alaska Statehood Act. A court in *Alaska v. United States* (35 Fed. Cl. 685, 701 (1996)) has indicated that the language in the Statehood Act means that Alaska is to be treated like other states for federal leasing conducted under the Mineral Leasing Act (MLA), which contains (basically) a 90 - 10 split. However, Congress can establish a non-MLA leasing regimen — for example, the separate leasing arrangements that govern the National Petroleum Reserve-Alaska, where the revenue sharing formula is 50/50.

In the past, a number of ANWR bills have specified the disposition of the federal portion of the revenues. Among the spending purposes have been federal land acquisition, energy research, and federal assistance to local governments in Alaska for impact of energy development. Amounts have been either permanently or annually appropriated. In the latter case, there would be little practical distinction between annually appropriating funds based on ANWR revenues and annually appropriating funds from the General Treasury. If there is no particular purpose specified for leasing revenues, the resulting revenues would be deposited in the Treasury where they would be available for any general government use.

Several sections of the House bill related to revenues. Section 30409 would have provided that 50% of adjusted revenues be paid to Alaska, and the balance be deposited in the U.S. Treasury as miscellaneous receipts, except for a portion (not to exceed $11 million in an unspent balance, with $5 million available for annual appropriation). The fund was to assist Alaska communities in addressing local impacts of energy development under §30412. However, under §30403(a), the Secretary was to establish and implement a leasing program *under the Mineral Leasing Act*, yet §30412 directed a revenue sharing program different from that in the MLA. Establishing a leasing program under the MLA, yet providing for a different revenue disposition may raise validity questions. If the alternative disposition were struck down and the revenue provisions were determined to be severable, it is possible that Alaska could have received 90% of ANWR revenues.

Natural Gas Pipeline. Construction of a pipeline to transport natural gas from Alaska to North American markets entails risk and a decision on the route. The Senate's

H.R. 6 addressed the former by a $10 billion loan guarantee for private sector parties that undertake the project, a tax credit mechanism that would guarantee a minimum price for Alaskan natural gas, and accelerated depreciation allowances on natural gas gathering and distribution lines. The House's H.R. 6 had no provision for a tax credit or other economic incentive. Regarding the route, both chambers' bills prohibited the licensing of a route that enters Canada north of 68º latitude. The conference report provides for a loan guarantee not to exceed 80% of the total capital cost of the project, nor to exceed $18 billion, but contains no minimum price mechanism or other financial benefit. The report contains the pipeline route prohibition of the House and Senate bills. Canadian energy interests oppose a production tax credit for Alaskan gas producers, which would tend to give a price advantage over Canadian producers. They also object to the prohibition of a northern route through Canada because a southern route would bypass gas reserves in far northwest Canada. In fact, Canadian interests are moving to build a pipeline from that area.

Project Labor Agreements. A recurring issue in federal and federally-funded projects is whether project owners or contractors should be required, by "agreement," to use union workers. Project labor agreements (PLAs) are agreements between a project owner or main contractor and the union(s) representing the craft workers for a particular project that establish the terms and conditions of work that will apply for the particular project. The agreement may also specify a source (such as a union hiring hall) to supply the craft workers. Typically, the agreement is binding on all project contractors and subcontractors, and specifies wage rates and benefits, discusses procedures for resolving labor and jurisdictional disputes, and includes a no-strike clause. Proponents argue that PLAs ensure a reliable, efficient labor source and help keep costs down. Opponents say that PLAs inflate costs and reduce competition. Construction and other unions and their supporters strongly favor PLAs because they believe that PLAs help ensure access for union members to federal and federally funded projects. Nonunion firms and supporters believe that PLAs unfairly restrict their access to those projects. There is little independent information to sort out the conflicting assertions and show whether PLAs contribute to lower or higher project costs.

The House's H.R. 6 directed the Secretary to require lessees in the 1002 area to "negotiate to obtain a project labor agreement" – "recognizing the Government's proprietary interest in labor stability and the ability of construction labor and management to meet the particular needs and conditions of projects to be developed ...." The gas pipeline provisions in the House and Senate bills and in the conference report simply urge the sponsors of the pipeline project "to negotiate a project labor agreement to expedite construction of the pipeline."

Oil Export Restrictions. Export of North Slope oil in general, and any ANWR oil in particular, has been an issue, beginning at least with the authorization of the Trans Alaska Pipeline System (TAPS) and continuing into the current ANWR debate. Much of the pipeline's route is on federal lands and the Mineral Leasing Act of 1920 prohibits export of oil transported through pipelines granted rights-of-way over federal lands (16 U.S.C. 185(u)). The Trans-Alaska Pipeline Authorization Act (P.L. 93-153, 43 U.S.C. 1651 *et seq*.) specified that oil shipped through it could be exported but only under restrictive conditions. Subsequent legislation strengthened the TAPS export restrictions further.[5] Oil began to be

[5] Energy Policy and Conservation Act of 1975 (P.L. 94-163), the 1977 amendments to the Export (continued...)

shipped through the pipeline in increasing amounts as North Slope oilfield development grew through the late 1980s. With exports effectively banned, much of North Slope oil went to West Coast destinations; the rest was shipped to the Gulf Coast via the Panama Canal or overland across the isthmus.

However, market forces eventually created pressure to change the law. In the early and mid-1990s, the combination of California and federal offshore production, North Slope oil, and imports resulted in such large quantities relative to demand that crude oil prices in California fell below those elsewhere in the United States, eliciting complaints from Californian and North Slope producers. By 1995, three or four years of low world oil prices and relative calm in the Mideast had reduced concern about petroleum.

On November 28, 1995, P.L. 104-58 (109 Stat. 557) was enacted; its Title II amended the Mineral Leasing Act to provide that oil transported through the Pipeline may be exported unless the President finds, after considering stated criteria, that it is *not* in the national interest. The President may impose terms and conditions; and authority to export may be modified or revoked. Beginning with 36,000 bbl/day in 1996, ANS exports rose to a peak of 74,000 bbl/day in 1999, representing 7% of North Slope production. ANS oil exports ceased voluntarily in May 2000.

If Congress wished to limit export of any oil from the 1002 area, it might apply the restriction to oil transported through TAPS. However, if current warming trends in the Arctic continue, oil shipment via tanker could become practical. If crude oil prices provided sufficient incentive for such shipments, an export ban that applies only to oil transported through TAPS might not be sufficient to prevent export of any ANWR oil. The House bill (§30406(a)(8)) would have required the prohibition on the export of oil produced in the 1002 area as a condition of a lease.

NEPA Compliance. The National Environmental Policy Act (NEPA) requires the preparation of an environmental impact statement (EIS) to examine the effects of major federal actions on the environment, and to provide public involvement in agency decisions. The last full EIS examining the effects of leasing development in ANWR was completed in 1987, and some observers assert that a new EIS is needed to support development now. Generally, an EIS analyzes several alternatives, including a "no action" alternative. Some development supporters would like to see the process truncated, in light of past analyses and to hasten production. Opponents of energy development argue that a 15-year gap since the last analysis would necessitate a thorough update and stress the flaws they found in the 1987 EIS.

Section 30403(c) of the House bill would have deemed the 1987 EIS to satisfy the requirements of NEPA with respect to actions by the Secretary to develop and promulgate leasing regulations, yet required the Secretary to prepare an EIS with respect to other actions, some of which might usually require only a (shorter) "environmental assessment." Consideration of alternatives was to be limited to two choices, a preferred option and a "single leasing alternative." (Generally, an EIS analyzes several alternatives, including a "no action" alternative.)

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[5] (...continued)
Administration Act (P.L. 95-52; P.L. 95-223), and Export Administration Act of 1979 (P.L. 96-72).

Compatibility with Refuge Purposes. Under current law for the management of national wildlife refuges (16 U.S.C. §668dd), an activity may be allowed in a refuge only if it is compatible with the purposes of the particular Refuge and with those of the Refuge System as a whole. Section 30403(c) of the House bill stated that the oil and gas leasing program and activities in the coastal plain are deemed to be compatible with the purposes for which the ANWR was established and that no further findings or decisions are required to implement this determination. This language appears to answer the compatibility question and to eliminate the usual compatibility determination processes. The extent of leasing "activities" that might be included as compatible is debatable and arguably might encompass necessary support activities, such as construction and operation of port facilities, staging areas, and personnel centers.

Judicial Review. Leasing proponents urge that any ANWR leasing program be put in place promptly; expediting judicial review may be one means to that goal. Judicial review can be expedited through procedural changes such as reducing the time limits within which suits must be filed, by avoiding some level of review, by curtailing the scope of the review, or by increasing the burden imposed on challengers. In the past, bills before Congress have combined various elements. The House bill (§30408) required that any complaints seeking judicial review be filed within 90 days. Sections 30408(a)(1) and (a)(2) appeared to contradict each other as to where suits were to be filed and it is possible part of a sentence may have been omitted. The House bill (§30408(a)(3)) would also have limited the scope of review by stating that review of a Secretarial decision, including environmental analyses, would be limited to whether the Secretary complied with the terms of the ANWR Title, be based on the administrative record, and that the Secretary's analysis of environmental effects is "presumed to be correct unless shown otherwise by clear and convincing evidence to the contrary." This standard is unclear, but in this context arguably would have made overturning a decision more difficult.

Special Areas. Some have raised the possibility of setting aside certain special areas described in the FLEIS for their ecological or cultural values. This could be done either by designating the areas specifically in legislation, or by authorizing the Secretary to set aside areas to be selected after enactment. Development of such areas could be forbidden and/or surface occupancy could be limited. The House bill (§30403(e)) would have allowed the Secretary to set aside up to 45,000 acres (and named one specific special area) in which leases, if permitted, would forbid surface occupancy. The FLEIS identified four special areas which together total more than 52,000 acres, so the Secretary would have been required to select among these areas or any others that may seem significant. Section 30403(f) also stated that the closure authority in the ANWR title was to be the Secretary's sole authority, which might limit possible secretarial actions under the Endangered Species Act. H.R. 770 and S. 543 would designate the entire 1002 area as wilderness.

Non-Development Options. Several options are available to Congress that would either postpone or forbid development, unless Congress were to change the law. These options include allowing exploration only, designating the 1002 area as wilderness, and taking no action. Some have argued that the 1002 area should be opened to exploration first, before a decision is made on whether to proceed to leasing. Those with this view hold that with greater certainty about energy resources, a better decision could be made about opening the 1002 area for leasing. This idea has had little support over the years. (See CRS Report RL31278 for a discussion of the pros and cons of this approach.) Various advocates see

insufficient gain from such a proposal. While an exploration bill has been mentioned in the past, none has been introduced in the 108th Congress.

Energy development is not permitted in wilderness areas, unless there are pre-existing rights or unless Congress specifically allows it or later reverses the designation. Development of the surface and subsurface holdings of Native corporations is precluded as long as oil and gas development is not allowed on the federal lands in the Refuge. Wilderness designation would tend to preserve existing recreational opportunities and jobs, as well as the existing level of protection of subsistence resources, including the Porcupine Caribou Herd. H.R. 770 and S. 543 would designate the 1002 area as wilderness. Because current law prohibits development unless Congress acts, this option also prevents energy development. Those supporting delay often argue that not enough is known about either the probability of discoveries or about the environmental impact if development is permitted. Others argue that oil deposits should be saved for an unspecified "right time."

LEGISLATION

H.R. 6 (Tauzin)

Title IV of Division C repeals current prohibition against development in ANWR, creates an energy leasing program, and provides for distribution of revenues. Introduced April 7, 2003; referred to eight committees, including Committee on Resources. Passed House April 11, 2003 (yeas 247, nays 175: Roll no. 145). Passed Senate (amended, lacking ANWR development provisions) July 31, 2003 (yeas 84, nays 15: Roll no. 317). Conference report (H.Rept. 108-375) filed November 18, 2003. Conference report agreed to in House November 18, 2003 (yeas 246, nays 180: Roll No. 630). Cloture motion failed in Senate November 21, 2003 (yeas 57-40, Roll no. 456).

H.R. 39 (D. Young)

Repeals current prohibition against development in ANWR; and for other purposes. Introduced January 7, 2003; referred to Committee on Resources.

H.R. 770 (Markey)

Designates the 1002 area of ANWR as wilderness. Introduced February 13, 2003; referred to Committee on Resources.

S. 543 (Lieberman)

Designates the 1002 area of ANWR as wilderness. Introduced March 5, 2003; referred to Committee on Environment and Public Works.

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CRS Report RL31317. *Natural Gas Markets: Overview and Outlook.*