Order Code IB10136

Arctic National Wildlife Refuge (ANWR): Controversies for the 109th Congress

Updated March 11, 2005

M. Lynne Corn and Bernard A. Gelb
Resources, Science, and Industry Division

Pamela Baldwin
American Law Division

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SUMMARY

One major element of the energy debate in the 109th 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, along with its recreational and subsistence values. 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 increases again in 2004-2005, have renewed the ANWR debate; however, its development has been debated for more than 40 years. Few onshore U.S. locations stir as much industry interest as the northern area of ANWR. At the same time, few areas are considered more worthy of protection in the eyes of conservation and some Native groups. Current law forbids energy leasing in the Refuge.

On March 9, 2005, the House Budget Committee ordered the FY2006 budget resolution (number not yet available) to be reported; the measure did not contain assumptions regarding ANWR revenues. A day later, the Senate Budget Committee ordered S.Con.Res. 18 to be reported. Its version of the resolution contained instructions to the Committee on Energy and Natural Resources that assumed revenues from the sale of ANWR leases.

In the 108th Congress, legislation to open ANWR to development passed the House. The need to overcome a likely filibuster in the Senate led development proponents to attempt to tie ANWR development legislation to the budget process and reconciliation, where Senate rules do not permit a filibuster. On March 19, 2003, a key amendment by Senator Boxer to the budget resolution passed (52 yeas, 48 nays), preventing development supporters from pursuing a strategy of later attaching ANWR legislation to a reconciliation bill. To avoid a threatened filibuster, most observers believe that tying ANWR legislation to the budget process will again be a key strategy in the 109th Congress.

Development advocates argue that ANWR oil would reduce U.S. energy markets' exposure to crises in the Middle East; boost North Slope oil production; lower oil prices; 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 footprints of development could be limited to a total of 2,000 acres.

Opponents argue that intrusion on this ecosystem cannot be justified on any terms; that economically recoverable oil found (if any) would provide little energy security and could be replaced by cost-effective alternatives, including conservation; and that job claims are overstated. They also maintain that development's footprints, being scattered in many parcels across the landscape, would have a greater impact than is implied by any limit on total acreage. They also argue that past proposals to limit any footprints have not been worded so as to apply to the extensive Native lands in the Refuge, which could be developed if the Arctic Refuge were opened.

MOST RECENT DEVELOPMENTS

On March 9, 2005, the House Budget Committee ordered the FY2006 budget resolution (number not yet available) to be reported; the measure did not contain assumptions regarding ANWR revenues. A day later, the Senate Budget Committee ordered S.Con.Res. 18 to be reported; its version of the resolution contained instructions to the Committee on Energy and Natural Resources that assumed revenues from the sale of ANWR leases. S.Con.Res. 18 is expected to come to the Senate floor, possibly during the week of March 14. An amendment to strike these instructions is expected, as is a close vote. A markup of an omnibus energy bill, presumably containing an ANWR title, in the House Resources Committee on February 9, 2005, was postponed to an unspecified spring date, despite majority hopes to bring an energy bill to the House floor before the President's Day recess. A bill may be brought up in committee in March.

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), the mean estimate of *technically* recoverable oil is 7.7 billion barrels (billion bbl), but there is a small chance that, taken together, the fields on this federal land could hold 10.5 billion bbl of *economically* recoverable oil (at an oil price of about $35 in 2004 dollars). That level would be nearly as much 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 almost 14 billion bbl of economically recoverable oil. (See "Oil," below, for further discussion.)

The Refuge, especially the nearly undisturbed coastal plain, also is home to a wide variety of plants and animals. The presence of caribou, polar bears, grizzly bears, wolves, migratory birds, and other species in a de facto wilderness 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 interest in development, then the philosophical, biological, and environmental quality factors that have generated 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 energy development or should the area's ecosystem continue to be protected from development, perhaps permanently? 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 shown 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.canadianembassy.org/environment/], [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, these 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 the Range as the Arctic National Wildlife Refuge, and expanded the Refuge, mostly south and west, to include another 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 five years and nine 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 later 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. For specific actions, including key votes, from the 104th to the 108th Congresses, see archived CRS Issue Briefs IB95071 and IB10111, available from the authors.)

The Energy Resource

Parts of Alaska's North Slope reserves, and its geology holds promise for ANWR. The oil-bearing strata extend eastward from structures in the National Petroleum Reserve-Alaska through 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. Recent interest has centered especially on parts of the 1002 area west and north of the Marsh Creek anticline, an area which comprises roughly a third of the 1002 area. (See **Figure 5** in CRS Report RL31278.) The most recent government study of oil and natural gas prospects in ANWR, completed in 1998 by the USGS,[1] found 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 a small chance (5%) that 11.8 billion bbl or more are technically recoverable. (For comparison, annual U.S. oil consumption from all sources is about 7.5 billion bbl.)

But the amount that would be *economically* recoverable depends on the price of oil. The USGS estimated that, at $30/bbl in 1996 dollars (about $35 in 2004 dollars), there is a 95% chance that 3.0 billion bbl or more could be economically recovered and a 5% chance of 10.5 billion bbl or more. Roughly one-third more oil may be under adjacent state waters and Native lands; these areas would be difficult to develop without access through federal land. Crude oil prices have been climbing, and in early March 2005, spot prices ranged from $50 to $55 per barrel, or about $45 in 1996 dollars. However, the Department of Energy projects the price of crude oil to decline by about $10 in constant dollars between 2004 and 2010.[2]

Oil prices, geologic characteristics, cash flow, and any transportation constraints would be among the most important factors affecting the development rates and production levels 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 0.015% of the resource. Production associated with a slower rate would peak about 25 years after the start of development, at a daily rate equal to about 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, roughly 4% of current U.S. petroleum consumption (about 20.5 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

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[1] U.S. Dept. of the Interior, Geological Survey, *The Oil and Gas Potential of the Arctic National Wildlife Refuge 1002 Area, Alaska*, USGS Open File Report 98-34 (Washington, 1999). Summary and Table EA4.

[2] U.S. Dept. of Energy, Energy Information Administration, "Annual Energy Outlook 2005 (Early Release) — Overview," viewed Dec. 16, 2004, at [http://www.eia.doe.gov/oiaf/aeo/prices.html].

and the rest of the North Slope — 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 increased 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, and Congress acted to facilitate such a pipeline. (See also "Natural Gas Pipeline," below.)

Advanced Technologies. As North Slope development has proceeded since the discovery of Prudhoe Bay, 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. 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.

Advances in drilling also lessen the footprints 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 footprints, reduce waste, and increase recovery of hydrocarbons per well.

Improved ice-based transportation infrastructure serves remote areas during exploratory drilling on newly developed insulated ice pads. However, for safety 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. Also, warming trends in arctic latitudes have already shortened winter access across the tundra and led to changes in the standards for use of ice roads; if these trends continue, heavy reliance on ice technology could be infeasible. Alternatively, rigid adherence to ice technology (instead of gravel construction) might put some marginal fields out of reach due to the high cost of exploration, development, or operation. And fields that begin with few roads may expand as the field expands.

Because it is held as a model of modern development, the history of the Alpine field, along the border of the National Petroleum Reserve-Alaska (NPRA), is relevant. This field is run by ConocoPhillips and located west of Prudhoe Bay. It is considered a model of "roadless" development, because of the short road connecting the two initial pads, and the lack of connection with the remainder of North Slope development, except in winter via ice road. However, with the recent approval of an additional 5 pads, the expansion of the field

will add roughly 27.5 miles of gravel roads to the existing 3 miles of roads, and create 1,845 acres of disturbed soils, including 316 acres of gravel mines or gravel structures.[3]

Approximately 150 miles of roads would be constructed if the field were fully developed. If a similar pattern follows in ANWR development, it is unclear whether energy development could be held indefinitely to a stringent limit on road or other gravel construction and still allow producers to have access to otherwise economic fields.

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 coastal plain, in part because the sites would be spread out in the 1002 area and connected by pipelines and (probably) roads. They argue that whether environmental impacts would be minimized would depend in part on the wording of legislation; 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 spills may occur, and that advanced technologies might not be implemented 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 the migration of bowhead whales, 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 certain Alaska residents, or local or national 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.

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[3] See Figure 2.4.6-1, Alternative F, Preferred Alternative, in Alpine Satellite Development Plan Environmental Impact Statement, Appendix 3, and p. S-8, S-19, and S-30 of Summary, available at [http://www.alpine-satellites-eis.com/alpeis.nsf/?Open], visited on Dec. 13, 2004. Figures given here do not represent full development of the field over the next 20 years.

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 Porcupine Caribou Management Board estimated the herd at 123,000 in 2001 (the most recent year available), 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.

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 success highlighted the importance of the herd's use of the 1002 area.

Some scientists cite studies that show a reduction in density of cows with calves near roads and developed areas around Kuparuk (e.g., 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. 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 to PCH cows.

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. As a result, the presence (or absence) of roads, gravel mines, drill pads, pipelines and other footprints of development could limit the caribou cows' access to portions of a preferred calving area or insect relief areas during this early phase of calf development. If the gravel road network follows the Alpine scenario and becomes more extensive over time, due to terrain, scattered discoveries, need for economical access, or changing climate conditions, then displacement could increase, forcing cow/calf pairs to less favorable areas.

An updated assessment of the array of biological resources in the coastal plain was published in 2002 by the Biological Research Division of USGS.[4] 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.[5] Any impacts that might occur when the herd subsequently moves into the area were not discussed in the memo.

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[4] 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.

[5] 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.

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 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.)

In a larger context, many opponents of development see the central issue as 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 in the area. The mere knowledge that a pristine place exists, regardless of whether one ever visits it, can be important to those who view the debate in this light.

Major Legislative Issues in the 109th 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 footprints, of development; the regulation of activities 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 recent congressional debate on ANWR development that seem likely to recur in the 109th Congress.

Environmental Direction. If Congress authorizes development, it could address environmental matters in several ways. 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 standard. Congress could also limit judicial review of some or all of a development program, including standards and implementation.

Regulations, Stipulations, and Other Issues. Congress could also leave environmental protection largely up to the administering agency — to be accomplished through regulations, or through lease stipulations. The former require public notice and comment, while the latter do not involve public participation, and may provide fewer public enforcement options. 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 Size of Footprints. Newer technologies permit greater consolidation of leasing operations, which tends to reduce the environmental impacts of development. On this issue, the debate in Congress has focused on the size of the footprints 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, port facilities, etc.). (See CRS Report RL32108, *North Slope Infrastructure and the ANWR Debate*, for a description of development features on the North Slope.) In addition, it is unclear whether structures on Native lands would be included under any provision limiting footprints.

Development advocates have emphasized the acreage of surface disturbance, while opponents have emphasized the dispersal of not only the structures themselves but also their impacts over much of the 1.5 million acres of the 1002 area. One single facility of 2,000 acres (3.1 square miles, a limit supported by some development advocates) would not permit full development of the 1002 area. Instead, full development of the 1002 area would require that facilities, even if limited to 2,000 acres in total surface area, be widely dispersed. Dispersal is necessary due to the limits of lateral (or extended reach) drilling: the current North Slope record for this technology is 4 miles. If that record were matched on all sides of a single pad, at most about 4% of the Coastal Plain could be developed from that pad. Even if the current world record (7 miles) were matched, only about 11% of the 1002 could be accessed from a single compact 2,000-acre facility.

In the 107th and 108th Congresses, identical floor amendments on this subject were offered in House floor consideration of ANWR development titles. (See archived CRS Issue Brief IB10111, available from the authors, for other details of the bills.) The House bills (see §30407(a)(3) in H.R. 6 of the 108th Congress) would have required, "consistent with the provisions of section 30403" (which included 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." 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). Nor was there clarification on potential conflicts between requiring receipt of fair market value and the acreage limitation. The latter could be a significant issue, since marginal energy resources might not be developed if an acreage limitation were inclusively defined in regulation or tightly enforced. Floor debate focused on the extent to which the facilities would be widely distributed around the Refuge. In addition, Native lands did not appear to be 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 then be allowed or become feasible 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. (See also CRS Report RL31115, *Legal Issues Related to Proposed Drilling for Oil and Gas in the Arctic National Wildlife Refuge*.)

Revenue Disposition. Another issue that has arisen during debates over leasing in ANWR is disposition of possible revenues — whether Congress may validly provide for a disposition of revenues formula other than the 90% federal - 10% state 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. Past bills have not always been clear on this issue.

A number of previous 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 to mitigate the impact of energy development. Amounts would 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.

Natural Gas Pipeline. Construction of a natural gas pipeline from Alaska to other North American markets entails a routing decision and risk. Congressional debate during the past few years concerned both. In P.L. 108-324, Division C (part of an appropriations bill for Military Construction), Congress facilitated construction of the pipeline and specified that the route chosen must not traverse the Beaufort Sea nor enter Canada above 68 degrees north latitude — a route that bypasses gas reserves in far northwest Canada. As for risk, both the House and the Senate energy bills provided a loan guarantee not to exceed 80% of the total capital cost of the project, nor to exceed $18 billion indexed for inflation, whereas only the Senate bill had a tax credit mechanism that effectively would guarantee a minimum price for natural gas transported through the pipeline. The final legislation, included a loan guarantee, but not a tax credit. Canadian energy interests opposed a production tax credit, which would likely have given Alaskan producers a price advantage over Canadian producers. Canadian interests are moving to build a pipeline from the area bypassed by the congressionally-mandated route.

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. 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. Opponents say that PLAs inflate costs and reduce competition. There is little independent information to sort out the conflicting assertions and show whether PLAs contribute to lower or higher project costs.

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.[6] Oil shipments through the pipeline increased as North Slope development grew through the late 1980s. With exports effectively banned, much of this oil went to the West Coast; the rest was shipped to the Gulf Coast through Panama.

In the early to mid-1990s, California and federal offshore production, North Slope oil, and imports combined to produce large crude oil supplies relative to demand. California prices fell below those in other states, causing complaints from California 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. These factors created pressure to change the law. On November 28, 1995, P.L. 104-58 (109 Stat. 557) was enacted; 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 exports are *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, North Slope exports rose to a peak of 74,000 bbl/day in 1999, representing 7% of North Slope production. North Slope oil exports ceased voluntarily in May 2000. Any exports since then have been minimal.

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

[6] Energy Policy and Conservation Act of 1975 (P.L. 94-163), 1977 amendments to the Export Administration Act (P.L. 95-52; P.L. 95-223), and Export Administration Act of 1979 (P.L. 96-72).

sufficient incentive for such shipments, an export ban that applies only to oil transported through TAPS would not be sufficient to prevent export of any ANWR oil.

NEPA Compliance. The National Environmental Policy Act of 1969 (NEPA, P.L. 91-190; 43 U.S.C. §§4321-4347) requires the preparation of an environmental impact statement (EIS) to examine major federal actions with significant effects 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. NEPA requires an EIS to analyze an array of 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 the 18-year gap since the last analysis necessitates a thorough update, and stress the flaws they found in the 1987 FLEIS.

Compatibility with Refuge Purposes. Under current law for the management of national wildlife refuges (16 U.S.C.§668dd), and under 43 C.F.R. §3101.5-3 for Alaskan refuges specifically, 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. Several earlier bills "deemed" that the oil and gas leasing program and activities in the coastal plain are compatible with the purposes for which the ANWR was established and that no further findings or decisions were required to implement this determination. Such language appeared 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 and argue that expediting, curtailing, or prohibiting judicial review may be desirable to achieve 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.

Special Areas. Some have supported setting aside certain areas in the coastal plain for protection of their ecological or cultural values. This could be done by designating the areas specifically in legislation, or by authorizing the Secretary to set aside areas to be selected after enactment. The FLEIS identified four special areas which together total more than 52,000 acres. The Secretary could be required to restrict or prevent development in these areas or any others that may seem significant, or to select among areas if an acreage limitation on such set-asides is imposed.

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 any energy resources in the area, a better decision could be made about opening some or all of the 1002 area for leasing. This idea has had little support over

the years because various interests see insufficient gain from such a proposal. (CRS Report RL31278 discusses the pros and cons of this approach.)

Another option is wilderness designation. Energy development is not permitted in wilderness areas, unless there are pre-existing rights or unless Congress specifically allows it or reverses the designation. Wilderness designation would tend to preserve existing recreational opportunities and related jobs, as well as the existing level of protection of subsistence resources, including the Porcupine Caribou Herd. Under ANILCA and the 1983 Agreement, development of the surface and subsurface holdings of Native corporations in the Refuge is precluded as long as oil and gas development is not allowed on the federal lands in the Refuge. Because current law prohibits development unless Congress acts, the no action 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. 39 (D. Young)

Repeals current prohibition against ANWR leasing; directs Secretary to establish competitive oil and gas leasing program; specifies that the 1987 FLEIS is sufficient for compliance with the national Environmental Policy Act; authorizes set-asides up to 45,000 acres of Special Areas that restrict surface occupancy; sets minimum for royalty payments and for tract sizes; and for other purposes. Introduced Jan. 4, 2005; referred to Committee on Resources.

H.R. 567 (Markey)

Designates Arctic coastal plain of ANWR as wilderness. Introduced Feb. 2, 2005; referred to Committee on Resources.

S.Con.Res. 18 (Gregg)

FY2006 Budget Resolution; includes spending targets for Committee on Energy and Natural Resources. Original measure ordered to be reported Mar. 10, 2005.

S. 261 (Lieberman)

Designates Arctic coastal plain of ANWR as wilderness. Introduced Feb. 2, 2005; referred to Committee on Environment and Public Works.

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