

They also say that therapeutic cloning is necessary to develop medical treatments through embryonic stem cell research that will not be rejected by the body's auto-immune response system. But this is by no means certain.

I strongly support embryonic stem cell research. As both a supporter and a scientist, I can tell you that this field remains in its earliest stages of basic research. At a hearing on stem cell research this fall, Secretary Thompson noted that clinical applications are years away. It is simply not the case that a ban on human cloning, particularly the temporary moratorium we are discussing today, would in any way harm the progress of stem cell research.

Perhaps someday a credible case will be made on the need for "cloned" tissue. But that day, if it ever comes, will be far in the future.

The justifications to ban human cloning are strong. I have only touched on one of the reasons today, and we will have ample time in the coming months to further develop and explore these arguments, just as we will have ample time to see the clear difference between cloning and stem cell research and understand that promising stem cell research can, and will, go forward without human cloning.

But today's vote is even more simple than all of that. It is a vote to say "slow down," and let us as a Senate have time to adequately investigate and debate this issue. It is a vote to ensure that the science does not race ahead without the input of the public interest. I urge my colleagues to support the moratorium on human cloning. The moratorium will give us breathing space to study a complex and profoundly important matter. Additional time gives us the best chance of doing the right thing. In the meantime, we must take all possible steps to do no harm.

Mr. BAUCUS. Mr. President, I rise today to discuss the Lott amendment to the railroad retirement bill. In addition to other provisions, this amendment would enact a moratorium on a scientific process which holds the potential to save millions of human lives. I cannot support such a provision.

The final chapter of the Lott amendment deals with an issue that cuts to the core of our moral and ethical beliefs: human cloning.

I share the deep concerns that my colleagues and millions of Americans have with the prospect of cloning human beings. These concerns were born in 1997, when scientists in Great Britain announced that they had successfully cloned a sheep. They were stoked again last week, when a biotechnology company in Massachusetts announced that it had taken the first steps towards producing human embryos through cloning.

Let me be perfectly clear on this issue. I am adamantly opposed to any scientific project aimed at creating a

clone of a human being. The implications of human reproductive cloning are morally repugnant. I do not know of a single respected scientist, ethicist, or religious leader who disagrees with me on this point.

The Lott amendment would impose a 6-month moratorium on this type of reproductive cloning, and I am fully supportive of this effort.

Unfortunately, the Lott amendment would also place a moratorium on a scientific procedure called somatic cell nuclear transfer. This process is closely related to the subject of stem cell research, which we heard so much about this summer. As you know, stem cells have the unique potential to grow into any tissue or organ in the body. Because of this property, stem cells may finally offer scientists the tools they need to cure diseases that have plagued humankind for centuries.

I strongly support scientific research into stem cells. I was heartened this summer, when President Bush and a bipartisan group of senators joined me in this support.

But while stem cell research offers promising possibilities, it faces many obstacles. One of these obstacles is the problem of rejection. If the stem cells used to treat diseases contain genetic material that is different from the genetic material of the patient, they may be rejected by the patient's body—in much the same manner as organs that are transplanted from one human being to another are often rejected.

Somatic cell nuclear transfer is a technique that may allow scientists to bypass this obstacle. In this process, stem cells are created using genetic material from a patient's own body. Because these new stem cells are genetically identical to a patient's own body, they would not be rejected.

This technique promises to speed up research into the treatment of crippling diseases like juvenile diabetes, cancer, Alzheimer's and Parkinson's. I would venture to guess that all Americans have had friends or family who have struggled with these devastating diseases; and millions of Americans would benefit by medical research that might one day eradicate them.

But the Lott amendment would stop this research in its tracks. It would bring a halt to research aimed at promoting life and relieving unspeakable suffering. For this reason, I cannot support this legislation—no matter how well-intentioned it is.

A reasonable alternative to the Lott amendment would be to make the reproductive cloning of a human being a criminal offense, subject to severe penalties. Such a solution would prevent the cloning of human beings without standing in the way of promising research aimed at promoting human life.

ENERGY SECURITY

Mr. FEINGOLD. Mr. President, it is with extreme disappointment that I rise to oppose the amendment offered

by the Republican leader on behalf of the junior Senator from Alaska Mr. MURKOWSKI, and the senior Senator from Kansas, Mr. BROWNBACK. I urge my colleagues to oppose this amendment.

I am particularly troubled that this amendment was filed as work continues to have a bill drafted by the majority leader and brought to the floor. Those who have said we need urgency in this matter have succeeded. We are working on a bill. But that is not fast enough for some, apparently, and this amendment seek to shortcut the process even further.

Energy security is an important issue for America, and one which my Wisconsin constituents take very seriously. A national debate is unfolding about the role of domestic production of energy resources versus foreign imports, about the tradeoffs between the need for energy and the need to protect the quality of our environment, and about the need for additional domestic efforts to support improvements in our energy efficiency and the wisest use of our energy resources. The President joined that debate with the release of his National Energy Strategy earlier this Congress. The questions raised are serious, and differences in policy and approach are legitimate.

I join with the other Senators today that are raising concerns about this amendment. As other Senators have highlighted, the amendment of the Senator from Alaska's, Mr. MURKOWSKI, is not comprehensive energy legislation. It opens the refuge to oil drilling, subsidizes oil companies, and does little to address serious energy issues that have been raised in the last few weeks.

Though the Senator from Alaska will say that his amendment would only open up drilling on 2,000 acres of the refuge. That is simply not the case. The entire 1½ million acres of the coastal plain of the refuge will be open for oil and gas leasing and exploration. Exploration and production wells can be drilled anywhere on the coastal plain under this language.

The first lease sale, and, I stress for my colleagues that this refers only to the first sale, has to be at least 200,000 acres.

I am assuming that when the Senator means that only 2,000 acres will be drilled he is referring to the language in H.R. 4 which states, and I am paraphrasing,

the Secretary shall . . . 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 support of pipelines, does not exceed 2,000 acres on the coastal plain.

That limitation is not a clear cap on overall development, Mr. President. It does not cover seismic or other exploration activities, which have had significant impacts on the Arctic environment to the west of the coastal plain. Seismic activities are conducted with convoys of bulldozers and "thumper

trucks" over extensive areas of the tundra. Exploratory oil drilling involves large rigs and aircraft.

The language does not cover the many miles of pipelines snaking above the tundra, just the locations where the vertical posts that support the pipelines literally touch the ground. In addition, this "limitation" does not require that the 2,000 acres of production and support facilities be in one contiguous area. As with the oil fields to the west of the Arctic Refuge, development could and would be spread out over a very large area.

Indeed, according to the United States Geological survey, oil under the coastal plain is not concentrated in one large reservoir but is spread in numerous small deposits. To produce oil from this vast area, supporting infrastructure would stretch across the coastal plain. And even if this cap were a real development cap, Mr. President, what would this mean? Two thousand acres, is a sizable development area. The development would be even more troubling if they were located in areas that are adjacent to the 8 million acres of wilderness that Congress has already designated in the Arctic Refuge which share a boundary with the coastal plain.

This amendment is controversial. Make no mistake, it will generate lengthy debate. I oppose it because it cuts short both the legitimate debate about drilling for oil in the Arctic Refuge that this country needs and the legitimate energy debate this country needs. Should this amendment be adopted, it would force the national energy legislation to be decided in the conference on pension bill—not in debate on an actual energy bill.

I have also heard concerns from the constituents in my State who have paid dearly for large and significant jumps in gasoline prices. Drilling in the refuge does nothing to address the immediate need of the Federal Government to respond to fluctuations in gas prices and help expand refining capacity. My constituents experienced prices of between \$3 to as high as \$8 per gallon between September 11 and 12, 2001. The Department of Energy immediately assured me that energy supplies were adequate following the terrorist attacks. These increases are now being investigated as possible price gouging by the Department of Energy and the State of Wisconsin. With adequate energy resources, constituents need assurances that these unjustified jumped can be monitored and controlled.

And I, along with many other Senators, have constituents who are concerned about the environmental impacts of this amendment, and what it says about our stewardship of lands of wilderness quality.

I also oppose this amendment for what it lacks. In light of the tragic events of September 11, 2001, a key element of any new energy security policy should be to actually seek to secure our existing energy system—from pro-

duction to distribution—from the threat of future terrorist attack. Americans deserve to know that the Senate has protected the existing North Slope oil rigs and pipelines from attack. Americans deserve to know that the Senate has considered measures to reduce the vulnerability of above ground electric transmission and distribution by providing needed investments in siting of below ground direct current cables, in researching better transmission technologies, and in protecting transformers and switching stations. Americans want us to review thoroughly the security of our Nation's domestic nuclear power plant safety regimes to ensure that they continue to operate well. Finally, Americans living downstream from hydroelectric dams want to know that they are safe from terrorist initiated dam breaching. Until we can assure them that this existing infrastructure is secure, it seems hasty to add additional structures that we may not be able to protect.

The people of my State, and the people of this country, heard the President's address to Congress and they are willing to help when asked. We also need to have a comprehensive bill to be sure that our national energy conservation plans contemplate such contingencies as a future domestic need to reduce consumption of energy to help support our Armed Forces, if necessary.

These were issues that the House did not address on August 2, 2001, when it passed its bill, because the terrorist attacks of September 11, 2001, were unthinkable at that time. These are issues that the amendment of the Senator from Alaska doesn't address. But we are a changed country in response to these tragedies, and these are very real issues today, issues that must be addressed.

In addition, there have been other significant technological changes in the last few months which energy legislation should consider. On September 19, 2001, a model year 2002 General Motors Yukon which is able to run on either a blend of 85 percent ethanol and 15 percent conventional gasoline or conventional gasoline alone rolled off of the line in Janesville, WI. The 2002 model year Tahoes, Suburbans, and Denalis with 5.3 liter engines will be able to run on either fuel. But while my constituents could buy a vehicle which can run on a higher percentage of ethanol fuel, there isn't a place open today to buy that fuel in Wisconsin. We could go a long way to reducing dependence upon foreign oil by using domestic energy crops and biomass more wisely, and we should develop a bill to reflect our new technological capabilities.

According to the Congressional Research Service, today the only way to isolate the U.S. economy from supply disruptions abroad would be to forbid the exportation of domestic oil to foreign markets and to prohibit domestic oil companies from raising prices.

Since net oil imports have accounted for about 50 percent of U.S. consumption in recent years, such a policy, were it to be implemented, would lead to shortages unless domestic oil prices were allowed to rise much higher than at present. This is because oil extraction in the United States on a large enough scale to meet our energy needs is much too costly to compete with foreign producers. For this reason, energy independence in the long run would likely result in a price that may be less volatile, but certainly a price that is even higher than prices at their recent peak.

Even if the United States could implement such a drastic policy, manipulations of oil prices by other oil producing nations could still affect the U.S. economy.

Finally, I oppose this amendment because there is a lingering veil of concern that special corporate interests would benefit over our citizens by this amendment, and I am prepared to speak on that issue at length. I find it particularly troubling that at a time when we face the need to provide financial assistance to workers and to sectors of our economy severely impacted by September 11 events, we would even consider subsidizing the big oil companies. This amendment allows oil companies access to federal resources within a federal wildlife refuge. My constituents paid the high gasoline costs on September 11 and 12, and oil companies profited. Before they get more help from the federal government, I think we should be mindful of the help these industries are already getting.

If the Senate chooses to adopt this amendment behind the veil of tragedy, it will be an act that increases division in the country when we most need unity. The Murkowski amendment should be opposed.

Mr. BIDEN. Mr. President, I rise today in opposition to the pending amendment and pledge my continued support for the protection of the Arctic National Wildlife Refuge from oil drilling. As most of my fellow Senators will attest, preserving the Alaska wilderness was one of the highest priorities of my friend and former colleague from Delaware, Bill Roth, and I was proud to join him in this fight.

Alaska's coastal plain is one of our Nation's last areas of unspoiled wilderness and it must be protected from oil development and all the activity that comes with it. This practically untouched region is home to a wide variety of wildlife, such as polar bears, caribou, and hundreds of species of birds, and there is great concern that development of the area will threaten this fragile habitat. I urge my colleagues to understand the consequences of permanently altering such pristine landscape when at this point in time, the amount of oil that would be economically developed is speculative at best. I do not believe that we should risk potentially irreversible impact on this rich environment for the sake of uncertain oil recovery.

The most recent petroleum assessment report, conducted by the United States Geological Survey in 1998, estimated that there was between 3 billion and 16 billion barrels of oil in the area. But while the numbers alone are promising, the issue is how much oil is economically recoverable. At a market price of \$24 per barrel, the United States Geological Survey estimates a 95-percent chance that 2.0 billion barrels or more would be economically recoverable and a 5-percent chance that 9.4 billion barrels or more would be economically recoverable.

In addition, the best estimates are that if we authorized drilling today, oil from ANWR will not be available for at least 7 to 12 years. Leasing agreements, geologic characteristics and transportation constraints will most certainly affect development rates and production levels. Assuming the best case scenario—peak production of oil at an increased development rate—the most promising production rate is 750,000 barrels per day. To put this in perspective, the United States consumes about 19 million barrels of oil and refined petroleum products a day. In the first 9 months of 2001, the United States imported 1.77 million barrels of oil per day from Canada, 1.73 million barrels of oil per day from Saudi Arabia, 1.58 million barrels of oil per day from Venezuela and 1.37 million barrels a day from Mexico.

Despite the fact that I stand here today in opposition to drilling in ANWR, I do recognize the importance of our country moving forward with a thorough review of our energy policy and I look forward to our discussions in the early part of next year. Our energy policy should be comprehensive and balanced. In addition to examining our options for increasing production of fossil fuels and stabilizing our supplies, we need to explore viable conservation initiatives, make important investments into the research and development of renewable and alternative energy sources, and consider adapting our regulatory and tax structures to help achieve these goals. I know that we can modify our energy policies without undermining our longtime environmental objectives.

Ms. CANTWELL. Mr. President, I rise today to join my colleagues in opposition to the Murkowski-Lott-Brownback amendment, which would open up the Arctic National Wildlife Refuge—America's last untouched wildlife refuge—to oil development. It is both untimely to try to include such a controversial issue in an unrelated Railroad Retirement bill, and unwise to exploit this time of economic downturn and national security challenges to open up ANWR for the sake of narrow and divisive interests.

I believe there is no way to justify drilling in ANWR in the name of national security. Oil extracted from the refuge would not reach refineries for seven to ten years and would never satisfy more than two percent of our na-

tion's oil demands at any one time. Therefore, it would have no discernible short- or long-term impact on the price of fuel or our increasing dependence on OPEC imports. Put another way, the amount of economically recoverable oil would increase our domestic reserves by only one third of one percent, which would not even make a significant dent on our imports, much less influence world prices set by OPEC.

Drilling in the Arctic National Wildlife Refuge would also set a terrible precedent. In the past 35 years, ever since Congress passed the National Wildlife Refuge System Administration Act, the government has not approved a single oil or gas exploration lease on public refuge lands. My concern is that opening up ANWR in the name of a misleading and irresponsible national security argument will not only degrade one of America's national treasures, but will also expose other priceless public lands to new drilling.

Mr. President, rather than drilling in ANWR, we must focus on crafting a deliberative, comprehensive policy that will permanently strengthen our national security. We need a bill that endows America with a strong and independent 21st century energy system by recognizing fuel diversity, energy efficiency, distributed generation, and environmentally sound domestic production as the permanent solutions to our nation's enduring energy needs. The energy provisions included in the Murkowski-Lott amendment fail to meet these goals and would instead prolong our antiquated over-reliance on traditional fossil fuels.

The Energy and Natural Resources Committee on which I serve held a series of hearings earlier this year that highlighted particularly promising ways we can accomplish these crucial goals. For example, these hearings revealed a broad consensus on the need to streamline regulatory approval of a privately funded natural gas pipeline from Alaska's North Slope to the lower 48 states. There are at least 32 trillion cubic feet of natural gas in existing Alaskan fields and building a pipeline to the continental U.S. would create thousands of jobs, provide a huge opportunity for the steel industry, and help prevent our nation from becoming dependent on foreign natural gas, from many of the same Middle Eastern countries from which we import oil.

Adopting energy efficient technologies is another way to significantly advance our national and economic security. For example, are my colleagues aware that automakers commonly use low-friction tires on new cars to help them comply with fuel economy standards? Because there are no standards or efficiency labels for replacement tires, however, most consumers unwittingly purchase less efficient tires when their originals wear out, even though low-friction tires would only cost a few dollars more per tire and would save the average American driver \$100 worth of fuel over the

40,000-mile life of the tires. Fully phased in, better replacement tires would cut gasoline consumption of all U.S. vehicles by about three percent, saving our nation over five billion barrels of oil over the next 50 years. That's the same amount the United States Geological Survey says could be economically recovered from ANWR.

I believe that the only way to permanently ensure our nation's security is to look beyond policies that continue our country's century-old reliance on the extraction and combustion of fossil fuels. Now is the time to launch the transition to a new, 21st century system of distributed generation based on renewable energy sources and environmentally responsible fuel cells.

Imagine if today a significant portion of American homes and businesses produced their own electricity from solar panels on their roofs, and powered their cars with home-grown biofuels. Our country would no longer be at the mercy of OPEC, energy bills would be dramatically lower, our air would be cleaner, and our energy system could not be devastated by terrorist attacks on centralized power plants or transmission lines.

Mr. President, the American people know this is the direction our country must take. Just last month a Gallup Poll showed that 91 percent of Americans believe we should invest in new sources of energy such as solar, wind, and fuel cells. Ninety-one percent. How often do we see such universal support in our politically diverse country?

Mr. President, only these policies—which will be well represented in the energy bill Senators DASCHLE and BINGAMAN will bring to the floor early next year—will make our energy system truly secure and independent. I recognize, along with probably all of my colleagues, that inexpensive, reliable energy sources are the lifeblood of our economy and higher standard of living. Because our national, economic, and environmental security depend on the United States becoming less dependent on imported fossil fuels, we must act to develop more diverse and environmentally responsible supplies of domestic energy. Neither drilling in ANWR nor the rest of Murkowski-Lott energy provisions go far enough to accomplish these goals, and I encourage my colleagues to vote against invoking cloture on this amendment.

RAILROAD RETIREMENT

Mr. KERRY. Mr. President, I am proud to come to the floor today as a cosponsor of S. 697, the Railroad Retirement and Survivors Improvement Act. Senator BAUCUS and Senator HATCH have worked hard on this bill with railroad management and labor and have created a final product of which they should be proud. This bill will fundamentally improve the economic situation for more than 400,000 American railroad employees and their survivors, while reducing the tax burden on rail employees and railroads.