

Even though this language contemplated moving forward in Europe, this is what we did regarding the United States. For quite a number of years, we planned to deploy 44 interceptor missiles—most in Alaska and a number in California. We talked about what to do about the Iranian threat, to provide redundant coverage for those missiles coming over from the east. We agreed that we would seek the agreement of Poland and the Czech Republic to base assets there. Fifty-four interceptors were to be deployed, 10 at the European site and 44 on the West Coast of the United States. What happened in this year's budget was that the 44 to be deployed in Alaska and California have been cut to 30.

The next technological advance to our missile defense system, the MEV—multikill vehicle—would be the warhead which could take out multiple incoming missiles with one missile. We think that was very capable technology that would be developed. That was zeroed out.

We had an additional system of a smaller but very high-speed interceptor, called a kinetic energy interceptor, KEI, that has been on the drawing board for a number of years and is showing a great deal of promise. That was zeroed out after years of funding.

We had plans and were working on the airborne laser, ABL, an amazing technology that our Defense Department believes will work—and we will test it this year. The airborne laser can knock down missiles, particularly in their ascent phase from an airplane. That missile system, after this year, will be zeroed out.

The 10 missiles we intended to base in Central Europe have been eliminated, it appears. At least that has been the President's recommendation and decision that we heard about today.

So I would say this: We believe, looking carefully at the numbers and putting in some extra loose change, for \$1 billion, we could fully deploy the full system—with the full compliment of 44 missiles in the United States and 10 in Europe. We have spent over \$20 billion to get to this point. So it is unthinkable to me that we would eliminate any future advancements in the system. I think, from a cost point of view, it is an unwise decision.

I am concluding that money is not the problem. I can only conclude that the Obama administration has decided that they agree with the naysayers who opposed President Reagan when he said this could ever be a successful system. They opposed it, and it looks like a political decision to me. Some sort of judgment decision to cancel this is involved here more than a dollars-and-cents issue because in the scheme of a \$500 billion-plus defense budget, \$1 billion over several years to complete the system as planned is not the kind of budget-breaking number that should cause us to change our policy.

Senator LIEBERMAN and I had offered this sense of the Senate amendment,

and it passed the Senate just a few weeks ago. I believe it is the right policy. I think the administration is trying to do some, perhaps, good things. They think maybe they are attempting to placate or somehow reach out to Russia and gain some strategic advantage from that—although the Secretary of Defense, I understand, today said it didn't have anything to do with the Russian foreign policy, and I am not sure the administration acknowledges that either. "The Czech premier, Jan Fischer, said Thursday"—this is in an Associated Press article—"that President Barack Obama told him Washington had decided to scrap the plan that had deeply angered Russia." It seems to me that is a part of it.

Let's go to the core of this Russian objection. As I have said on the floor, Russia knows this system poses no threat to their massive arsenal. They know that. Their objection to this system has been, in my view, a political objection, a foreign policy bluster and gambit to try to create a problem with the United States and extract something from us. They consistently oppose it.

Let's note the Reuters news article today by Michael Stott, which is an analysis of this. The headline of the article is "Demise of U.S. shield may embolden Russia hawks." In other words, this weakness, this retreat, this backing down may well encourage them to believe that if they are more confrontational on other matters, they may gain more than by being nice to this administration.

The lead paragraph said:

Washington hopes that by backing away from an anti-missile system in east Europe, it will get Russian cooperation on everything from nuclear weapons cuts to efforts to curb Iranian and North Korean nuclear ambitions.

But will Moscow keep its side of the bargain?

That is a good question.

Mr. Stott goes on in his perceptive article to say:

With the shield now on the back burner, both sides believe a deal cutting long-range nuclear arsenals can be inked this year and Russia has already agreed to allow U.S. military cargos to transit across its territory en route to Afghanistan.

That is something we have been asking them for some time, and they have dangled it out there. Apparently, a valuable but not critical ability to transport cargo may have been gained from this.

The author says:

Russian diplomacy is largely a zero-sum game and relies on projecting hard power to forced gains, as in last year's war with Georgia over the rebel regions of Abkhazia and South Ossetia or the gas dispute with Ukraine at the start of the year.

Western concepts of "win-win" deals and Obama's drive for 21st century global partnerships are not part of its vocabulary.

The Western idea that if you cut a deal, both sides will benefit—that is not the way the Russians think.

Continuing:

Diplomats here say Moscow hardliners could read the shield backdown as a sign of Washington's weakness. Far from doing the bidding of the United States, they may instead press for further gain to shore up Russian power in the former Soviet bloc.

That is the Czech Republic, Ukraine, Georgia, Poland, the Baltics, Latvia, Estonia, Lithuania, and Hungary.

The author goes on to say:

Ukraine, Georgia, and other Kremlin foes in the ex-Soviet Union may be the first to feel the consequences.

Poland and the Czech Republic are also nervous. In Warsaw, the timing of the U.S. move is particularly delicate as it coincides with the 70th anniversary of the Soviet invasion of eastern Poland.

Analysts are particularly concerned about Ukraine, which faces a presidential election next January. Most of Russia's vast gas exports flow through its territory and the country reluctantly hosts a large Russian naval base.

I don't know what the geopolitical goals are here. I think it is a mistake not to deploy this system we committed to deploying. I believe we are not going to be able to rely on the good faith of the Russians, and I think they may misread what we have done. Instead of leading to further accommodation, it may lead to emboldening them to go forward with further demands against the United States.

I thank the Chair and yield the floor.
The PRESIDING OFFICER. The Senator from California is recognized.

MORNING BUSINESS

Mrs. FEINSTEIN. Madam President, I ask unanimous consent that the Senate proceed to a period of morning business, with Senators permitted to speak therein for up to 10 minutes each.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mrs. FEINSTEIN. Madam President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. ALEXANDER. Madam President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

ENERGY SPRAWL AND THE GREEN ECONOMY

Mr. ALEXANDER. Madam President, Secretary of the Interior Ken Salazar recently announced plans to cover 1,000 square miles of land in Nevada, Arizona, California, Colorado, New Mexico, and Utah with solar collectors to generate electricity. He is also talking about generating 20 percent of our electricity from wind. This would require building about 186,000 50-story wind turbines that would cover an area the size of West Virginia, not to mention 19,000 new miles of high-voltage transmission lines.

Is the Federal Government showing any concern about this massive intrusion into the natural landscape? Not at

all. I fear we are going to destroy the environment in the name of saving the environment.

The House of Representatives has passed climate legislation that started out as an attempt to reduce carbon emissions. It has morphed into an engine for raising revenues by selling carbon dioxide emission allowances and promoting renewable energy.

The bill requires electric utilities to get 20 percent of their power mostly from wind and solar by 2020. These renewable energy sources are receiving huge subsidies all to supposedly create jobs and hurry us down the road to an America running on wind and sunshine, as described in President Obama's inaugural address.

Yet all this assumes renewable energy is a free lunch, a benign so-called sustainable way of running the country with minimal impact on the environment. That assumption experienced a rude awakening on August 26 when the Nature Conservancy published a paper entitled "Energy Sprawl or Energy Efficiency: Climate Policy Impacts on Natural Habitat for the United States of America."

The report by this venerable environmental organization posed a simple question: How much land is required for the different energy sources that power the country? The answers deserve far greater public attention.

By far, nuclear energy is the least land intensive. It requires only 1 square mile for one reactor, that is to produce 1 million megawatt hours per year, enough electricity for about 90,000 homes. Geothermal energy, which taps the natural heat of the Earth, requires 3 square miles. The most landscape consuming are the biofuels ethanol and biodiesel, which require up to 500 square miles to produce the same amount of energy. Coal, on the other hand, requires 4 square miles, mainly for mining and extraction. Solar thermal heating, a fluid with large arrays of mirrors and using it to power a turbine takes 6 square miles. Natural gas needs 8 and petroleum needs 18. Wind farms require over 30 square miles.

This sprawl has been missing from our energy discussions. In my home State of Tennessee, we just celebrated the 75th anniversary of the Great Smoky Mountains National Park, America's most visited national park. Yet there are serious proposals by energy developers to cover mountains all along the Appalachian chain from Georgia through the foothills of the Smoky Mountains through the Blue Ridge Mountains of Virginia, all the way up to the White Mountains of New Hampshire with 50-story wind turbines because the wind blows strongest across mountaintops. I can tell from the Presiding Officer's smile that she is thinking of the strong winds on the White Mountains which are among the strongest in the entire United States of America.

Let's put this into perspective. We could line 300 miles of mountaintops

from Chattanooga, TN, to Bristol, VA, with wind turbines and still only produce one-quarter of the electricity we get from one reactor on 1 square mile at the Tennessee Valley Authority's Watts Bar nuclear plant.

The 1,000-square mile solar project proposed by Mr. Salazar would generate on a continuous basis 35,000 megawatts of electricity. You could get the same output from 30 new nuclear reactors that would fit comfortably on existing nuclear sites. And this does not count the thousands of miles of transmission lines that will be needed to carry the newly generated solar power through and to population centers.

There is one more consideration. Solar collectors must be washed down once a month or they collect too much dirt to be effective. They also need to be cooled by water. Where amid the desert and the scrubland will we find all that water? No wonder the Wildlife Conservancy and other environmentalists are already opposing solar projects on some western lands.

Renewable energy is not a free lunch. It is an unprecedented assault on the American landscape. Before we find ourselves engulfed in energy sprawl, it is imperative we take a closer look at the advantages of nuclear power.

Madam President, I ask unanimous consent to have printed in the RECORD a summary of the Nature Conservancy paper entitled "Energy Sprawl or Energy Efficiency," which was published on August 26.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

ABSTRACT

Concern over climate change has led the U.S. to consider a cap-and-trade system to regulate emissions. Here we illustrate the land-use impact to U.S. habitat types of new energy development resulting from different U.S. energy policies. We estimated the total new land area needed by 2030 to produce energy, under current law and under various cap-and-trade policies, and then partitioned the area impacted among habitat types with geospatial data on the feasibility of production. The land-use intensity of different energy production techniques varies over three orders of magnitude, from 1.9–2.8 km²/TW hr/yr for nuclear power to 788–1000 km²/TW hr/yr for biodiesel from soy. In all scenarios, temperate deciduous forests and temperate grasslands will be most impacted by future energy development, although the magnitude of impact by wind, biomass, and coal to different habitat types is policy-specific. Regardless of the existence or structure of a cap-and-trade bill, at least 206,000 km² will be impacted without substantial increases in energy efficiency, which saves at least 7.6 km² per TW hr of electricity conserved annually and 27.5 km² per TW hr of liquid fuels conserved annually. Climate policy that reduces carbon dioxide emissions may increase the areal impact of energy, although the magnitude of this potential side effect may be substantially mitigated by increases in energy efficiency. The possibility of widespread energy sprawl increases the need for energy conservation, appropriate siting, sustainable production practices, and compensatory mitigation offsets.

INTRODUCTION

Climate change is now acknowledged as a potential threat to biodiversity and human well-being, and many countries are seeking to reduce their emissions by shifting from fossil fuels to other energy sources. One potential side effect with this switch is the increase in area required by some renewable energy production techniques. Energy production techniques vary in the spatial extent in which production activities occur, which we refer to as their energy sprawl, defined as the product of the total quantity of energy produced annually (e.g., TW lu/yr) and the land-use intensity of production (e.g. km² of habitat per TW hr/yr). While many studies have quantified the likely effect of climate change on the Earth's biodiversity due to climate-driven habitat loss, concluding that a large proportion of species could be driven extinct, relatively few studies have evaluated the habitat impact of future energy sprawl. It is important to understand the potential habitat effects of energy sprawl, especially in reference to the loss of specific habitat types, since habitats vary markedly in the species and ecosystem processes they support.

Within the United States, the world's largest cumulative polluter of greenhouse gases, concern over climate change has led to the consideration of a cap-and-trade system to regulate emissions, such as the previously proposed Lieberman-Warner Climate Security Act (S. 2191) and the Low Carbon Economy Act (S. 1766). Major points of contention in structuring a cap-and-trade system are the feasibility and desirability of carbon capture and storage (CCS) at coal plants, the creation of new nuclear plants, and whether to allow international offset programs that permit U.S. companies to meet obligations abroad. The rules of a cap-and-trade system, as well as technological advances in energy production and changes in the price of fossil fuels, will affect how the U.S. generates energy. In this study we take scenarios of a cap-and-trade system's effect on United States energy production and evaluate each scenario's impact on habitat due to energy sprawl. Our scenarios are based on the Energy Information Administration (EIA) forecast of energy production in 2030 under current law (the "Reference Scenario"), including the renewable fuel standard of the Energy Independence and Security Act of 2007, and under three cap-and-trade scenarios: the "Core Cap-and-Trade Scenario", where the full Lieberman-Warner Climate Change Act is implemented; the "Few Options Scenario", where international offsets are not allowed and where new nuclear production and coal production with CCS are not possible; and the "CCS Scenario", where Congress enacts the Low Carbon Economy Act, a cap-and-trade system more favorable to coal with CCS.

Under each scenario, we first estimate the total new land area in the U.S. needed to produce energy for each production technique as a function of the amount of energy needed and the land-use intensity of production. We examine the effect of U.S. climate policy on future energy sprawl using energy scenarios based on proposed legislation, building on a body of literature on this topic. Note that our analysis focuses only on U.S. land-use implications, ignoring other, potentially significant international land-use implications of U.S. climate policy. Second, we use available information on where new energy production facilities would be located to partition this area among major habitat types. We calculate the new area directly impacted by energy development within each major habitat type, but do not attempt to predict where within each major habitat

type energy development will take place, nor possible indirect effects on land-use regionally or globally due to altered land markets. Our analysis provides a broad overview of what change in the energy sector will mean for area impacted in different natural habitat types, recognizing that such a broad analysis will inevitably have to simplify parts of a complex world.

Mr. ALEXANDER. Madam President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. ENSIGN. Mr. President, I ask unanimous consent the order for the quorum call be rescinded.

The PRESIDING OFFICER (Mr. BEGICH). Without objection, it is so ordered.

Mr. ENSIGN. I ask unanimous consent to speak as in morning business.

The PRESIDING OFFICER. Without objection, it is so ordered.

FIX HOUSING FIRST

Mr. ENSIGN. Mr. President, my home State of Nevada has seen devastating effects from this recession. The foreclosure crisis has turned neighborhoods across my State literally almost into ghost towns. I have long argued the crash of the housing market has been at the root of our economic crisis. We have to focus on fixing the housing problem in this country if we want the economy to turn around.

In February, I offered a bill called the Fix Housing First Act. This would have fixed the housing problem; it would have turned the housing market around in this country. I believe it would have created jobs all across this country, including in my home State of Nevada.

My Fix Housing First Act would have let American home owners refinance their mortgages at around a 4-percent interest rate in a 30-year fixed mortgage. This would have meant an average of around \$300 to \$400 savings per month for the average homeowner in the United States and back in my home State of Nevada.

Additionally, my bill included a provision, produced by Senator JOHNNY ISAKSON from Georgia, that was a \$15,000 home buyer tax credit to incentivize home ownership. The tax credit would have been a stepping stone for our country to begin to come out of the housing crisis. While my bill was defeated along party lines, we were able to pass an \$8,000 first-time home buyer tax credit, sponsored by myself and Senator BEN CARDIN, from Maryland.

Today I join my colleagues in a bipartisan manner to extend this \$8,000 first time home buyer tax credit for another 6 months, until June of next year. Unless Congress acts, this \$8,000 is set to expire at the end of November. There is evidence that is showing the tax credit is working. If we do not extend this tax credit, homes will not be saved, and they will likely go into foreclosure.

We in the Senate need to act in a bipartisan fashion to extend the first-time home buyer tax credit of \$8,000. It is the right thing to do to get housing back on the track, especially in States such as Nevada, Florida, California, and Arizona. These states are still suffering when it comes to the housing industry. Housing is at the root of a lot of the economic problems we have in this country.

I encourage this body to act. Chairman Bernanke said the other day the recession is over. At 9.7 percent unemployment rate in this country, I don't think the recession looks to be over to those people still out of a job. My State of Nevada has over a 12-percent unemployment rate. Clark County, where Las Vegas is, has over a 13-percent unemployment rate. I don't think folks living there think the recession is over.

We need to continue to work to fix this economy, and this first-time home buyer tax credit is a good place to start.

I yield the floor.

100TH ANNIVERSARY OF CRAGIN & PIKE INSURANCE COMPANY

Mr. REID. Mr. President, Cragin & Pike Insurance began on a hot, dusty day in August of 1909 when Peter Buol proudly opened his "Real Estate and Insurance Office" on what is now Main Street in Las Vegas. Buol eventually sold his business to Ernie Cragin and William Pike, whose names combined to brand the new company.

Ernie Cragin served as Las Vegas's mayor for 25 years and was instrumental in establishing Helldorado Days and bringing in the Army's Aerial Gunnery School, now known as Nellis Air Force Base. William Pike saw to the legalization of gambling and the construction of the Hoover Dam. Their combined efforts have contributed to the political, economic, and environmental history of the southern Nevada community.

After Pike passed away, Cragin brought in Paul McDermott as a partner, and following the unexpected passing of Cragin, McDermott partnered with Frank Kerestesi. McDermott and Kerestesi carried on the Cragin & Pike Insurance name and became well known throughout the valley with their catchy jingle that played on local radio stations. Both men were active in the community, especially with the establishment and growth of the University of Nevada, Las Vegas, UNLV.

Cragin & Pike are celebrating their 100th anniversary of continuous business in southern Nevada this year. Their dedicated, professional staff continues to offer Las Vegas businesses the very best in personal service and attention. On behalf of all Nevadans, I am pleased to extend my best wishes to Cragin & Pike for another 100 years of success in Nevada.

RECOGNIZING STEEL DAY 2009

Mr. DURBIN. Mr. President, I rise today to recognize the critical role of structural steel in our nation's infrastructure and industrial economy.

On September 18, 2009, Steel Day will be celebrated through events hosted nationwide. These events recognize the many employment opportunities the structural steel industry has provided to American workers and the contribution structural steel has made to our construction industry as a safe, strong and effective building material.

The structural steel industry is a major employer in Illinois and other States across the country. Today, the United States has three major steel mills and more than 2,600 steel fabricators, which together employ over 250,000 Americans.

Roughly 98 percent of structured steel in a building can be recovered and recycled and 93 percent of all columns and beams produced at U.S. steel mills are composed of recycled materials. In fact, interest in domestic steel as a building material has been bolstered by its desirable status in LEED certification, a rating system developed by the US Green Building Council.

Improvements in the technology used to create and erect steel projects have lowered construction costs and improved onsite safety, resulting in increased demand worldwide. In light of these economic, environmental, and safety factors, it is no surprise that there is currently a three-to-one preference for using structural steel in the construction of multistory residential and nonresidential buildings.

I congratulate the structural steel industry on Steel Day. Steel has featured prominently in America's past and present and will undoubtedly play an important role in our Nation's future.

REMEMBERING SENATOR EDWARD M. KENNEDY

Mr. SPECTER. Mr. President, I have sought recognition to pay respect to the life and character of our dear friend Ted Kennedy. A man as much a part of this institution as the very walls of the Capitol, Ted has earned his place in the world's history books and will never be forgotten.

I consider myself privileged to have worked with Ted on several important issues, ranging from hate crimes legislation, to our time together on the Judiciary Committee. Ted was responsible for the Matthew Shepard Hate Crimes Act, an important piece of legislation providing protection for vulnerable Americans that I was proud to cosponsor. He was instrumental in the passage of SCHIP, a program that now insures the health of millions of children across the country. The impact Ted Kennedy had on civil rights legislation throughout his career is simply immeasurable. Countless programs now serving the American people could not