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**UPDATE ON  
FEDERAL ENERGY POLICY**

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## **INTRODUCTION**

For nearly the last three decades, an update on “federal energy policy” usually amounted to nothing more than a status report on any pending federal legislation and significant rulemakings. There was never much to discuss with respect to the major domestic and global forces influencing our national energy policy because, for the most part, those forces remained constant.

Since Ronald Reagan was elected President in 1980, our federal objectives and philosophies with respect to energy have been to:

- maximize supplies;
- keep it cheap for consumers; and
- minimize government intervention in the production and consumption of energy.

Fortunately, in the last 18 months, the situation has changed dramatically. The major forces driving U.S. energy policy these days are national energy security and climate change.

This is fortunate for the American people and our economy. And, it is fortunate for you, the audience, since you will not be subjected to another tiresome report on the status of federal legislation and agency rulemakings.

Instead, I thought I would share some thoughts on how climate change and national security are radically changing U.S. energy policy. I will then talk about what that means for Alaska. Finally, if you insist, I can provide a short report on current activity, or the lack thereof, on energy legislation in the Congress.

## **THE NEW ENERGY PARADIGM – IT’S ALL ABOUT CARBON**

High gasoline costs, global political instability, deadly natural disasters, and the plight of the polar bear have landed climate change and national energy security near the top of the list of voter concerns.

There is an ever growing consensus in the public and on behalf of both political parties that we need to get serious about addressing climate change and reducing our dependence on fossil fuels, particularly imported crude oil.

It is this consensus that has brought about the demise of the three traditional pillars of energy policy referenced above.

You cannot address the problems of climate change and national energy security by maximizing supply and keeping the price low, while also keeping the government out of the market place.

It does not work.

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For instance, rather than maximizing supply, the focus in the future will be on reducing consumption through conservation and efficiency. The less energy one uses, the fewer the greenhouse gas emissions and the fewer barrels of imported crude.

While consumers and politicians will complain about the costs associated with a transition from traditional energy resources, the days of “cheap” energy are over. Reducing carbon emissions, improving energy efficiency, and developing domestic alternatives to imported crude oil will be expensive and the cost of energy to the consumers will reflect this transition.

And, there will be substantial government intervention – both directly and indirectly -- in the production and consumption of energy.

There will be direct intervention through mandatory:

- efficiency requirements, such as the Corporate Average Fuel Economy standards for automobiles;
- minimum requirements for the use of renewable sources to generate electricity, such as wind; and
- transportation fuel mix requirements, such as the 36 billion gallon Renewable Fuels Standard.

Indirect intervention will occur in a variety of forms but most significantly through the imposition of a limit on the amount of greenhouse gas emissions. Indeed, an economy-wide cap and trade program for greenhouse gas emissions will have a greater impact on the ways Americans produce and consume energy than any other action – direct or indirect -- the federal government could take.

An overstatement? Perhaps. But let’s take a look at the details of proposed climate change legislation and then decide.

## **THE SCOPE OF CLIMATE CHANGE REGULATION**

On November 1, the Subcommittee on Private Sector and Consumer Solutions to Global Warming and Wildlife Protection of the Senate Environment and Public Works Committee voted to report S.2191, “America’s Climate Security Act of 2007”. This bill, introduced by Senator Joe Lieberman (I-CT) and Senator John Warner (R-VA), establishes an economy-wide cap and trade regulatory program for the emission of greenhouse gases.

The goal of S.2191 is to reduce total U.S. emissions of greenhouse gases to a level that is 70% below 1990 levels by the year 2050. Very simply, it seeks to achieve this goal by putting a price on the use of carbon.

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Under this bill, any electric power generation facility or any industrial or manufacturing facility that emits more than 10,000 tons of carbon dioxide (or carbon dioxide equivalents) annually will be required to reduce their emissions by an ever increasing amount each year.

While this provision will directly regulate the emissions from approximately 3% of generating and industrial facilities nationwide, it will capture nearly 85% of the greenhouse gas emissions from these sectors.

In addition, any entity that produces or imports petroleum-based or coal-based transportation fuels or non-fuel chemicals, the use of which will emit more than 10,000 tons of carbon dioxide (or carbon dioxide equivalents) annually, will also be required to demonstrate reductions in those emissions by an ever increasing amount.

Finally, the bill directs the Administrator of the Environmental Protection Agency to establish a program that will cap and reduce the emissions for greenhouse gases resulting from the residential and commercial uses of natural gas.

The effect of these provisions will be to control the vast majority of the greenhouse gas emissions from the –

- entire transportation fleet through the obligation on transportation fuel producers and importers;
- normal use of fertilizers and other chemical products on farms, golf courses, and lawns and in homes, hospitals and office buildings; and
- use of natural gas to heat our homes, schools and offices.

### **IMPACT ON ENERGY PRODUCTION AND USE**

I am not an economist, but what I recall from Econ 101 is that the cap and trade program of S.2191 will “internalize” the costs of controlling greenhouse gas emissions to the price of energy.

In theory then, the price that consumers must pay for energy would reflect the cost to control and reduce greenhouse gas emissions.

And just how much will this cost the average consumer? No one knows for sure and the estimates are widely divergent. However, using a crude “back of the envelope” calculation, it is possible to get a basic idea.

Under S.2191, total emission allowances for the year 2012 will be 5.2 billion tons. Assuming an average of \$40 per ton in control costs yields a total cost to the economy of \$208 billion dollars per year. This number translates into roughly \$700 for every man, woman and child in America.

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Such costs are likely to have a significant influence on the types and amounts of energy that are produced and consumed.

### **WILL CLIMATE CHANGE LEGISLATION BE ENACTED?**

Given the potential unprecedented impact of climate change legislation, one may reasonably ask, “will it ever be enacted?”

I believe the answer to that is “eventually.” My money is on 2010.

There are several reasons for this prediction.

First, the voters are demanding that the Congress act on climate change. Poll after poll consistently demonstrates that large majorities of the public support a federal regulatory program to address climate change. Every Democratic candidate for President has a comprehensive climate change / energy proposal that is among the top three issues they address on a regular basis.

Second, the Democrats are in charge of the Congress and will remain so for the foreseeable future. It is conceivable that they could achieve a filibuster proof majority in the Senate. And, most current polls predict that the next occupant of the White House will be a Democrat.

Third, there is a host of new players involved in the debate who have never before engaged in energy or environmental issues on the Hill.

The opportunity to create a new commodity market through the buying, selling and trading of emission allowances and credits for emission reductions from offset projects has attracted some very powerful constituencies to the Congressional debate on climate change. Investment banks, commodity traders and international project developers are bringing their political and policy expertise to bear on this debate. Why? Money, of course. A mandatory greenhouse gas cap and trade program could prove very lucrative for well-positioned parties.

Last, but certainly not least, for many policy makers, there is a moral and social imperative to address the problems of climate change.

### **BETWEEN A ROCK AND A HARD PLACE**

These reasons do not mean that enactment of an economy-wide cap and trade program will be easy. In practical terms, the Congress has never dealt with legislation this complex, complicated and broad in scope. The analysis and drafting required to produce a sensible and workable program will be monumental.

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Moreover, because every sector of the economy will be affected, there will be multiple competing advocates seeking to protect their interests and to “put the burden on the other guy;” thereby further complicating an already complex process.

Eventually, however, legislation will be enacted and a mandatory program will be put into place.

But this does not mean that reality will conform to the regulatory ideal. The success of an economy-wide greenhouse gas regulatory program depends heavily on timely technological developments.

Many prefer to see mandatory climate change regulation as a “technology forcing” exercise. The demands of the regulatory program will create the incentives to fund the research, development and commercialization of the new technologies needed to control and reduce greenhouse gas emissions.

On the other hand, there is no guarantee that the needed technologies will be developed. If that is the case, the regulated community is in the proverbial situation of being “between a rock and a hard place.”

Nothing better illustrates this potential situation than the electric power generation sector.

Even with powerful incentives to conserve and use energy more efficiently, the demand for electricity in the U.S. will continue to grow at a steady pace because it has become a necessity in our digital, wired lives.

As the electric power sector seeks to meet this growth demand in a carbon constrained economy, they will be confronted with the following realities:

Coal is the most abundant domestic fuel source for electric power generation and historically has had the most stable prices. However, the combustion of coal to produce electricity is by far the largest source of greenhouse gas emissions in the U.S.

Under a climate change regulatory program, the only practical way to use coal will be to capture and sequester the CO<sub>2</sub> emissions.

However, the technology necessary to capture, transport and ensure long-term stable sequestration of billions of tons of CO<sub>2</sub> has not been proven to any reliable degree. Most experts predict that we will not know if CO<sub>2</sub> sequestration on a massive scale will work, let alone be commercially viable, for at least 15 years.

Given this uncertainty, an electric utility with an obligation to meet consumers’ increasing needs for electricity may be hesitant to invest hundreds of millions of dollars in a coal-fired generation plant.

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But what are the other options?

*Renewables?* While the use of renewable generation technologies will dramatically increase in the future, the technological, geographical and commercial limitations on these technologies most likely will prevent them from becoming reliable substitutes for significant amounts of baseload generation.

*Nuclear?* Despite extremely generous taxpayer subsidies, the prohibitive cost, public perception, and waste disposal problems of nuclear power make construction of a new nuclear plant any time in the next decade highly unlikely.

*Natural gas?* Because combustion of natural gas produces far less CO<sub>2</sub> emissions than coal and because construction of a gas-fired generation facility can be accomplished relatively easily and at a reasonable cost, there will be a huge temptation to meet electricity demand growth over the next decade with natural gas-fired generation. The downside to natural gas is the price and the volatility of the price. Utilities and their regulators may be highly reluctant to imposing that downside on consumers.

As you can see, there are no easy answers for a utility Board of Directors faced with the decision of committing hundreds of millions of dollars to meet demand growth. Unfortunately, this extraordinary lack of certainty will continue to frustrate investment decisions for many years.

## **WHAT DOES IT ALL MEAN FOR ALASKA ENERGY?**

From the perspective of the Alaskan energy consumer, climate change regulation has the potential to yield positive results, particularly for rural Alaskans. Substantially increased funding for research, development and commercialization of alternative and renewable energy sources could yield technological and cost advancements that will significantly improve the ability to provide reasonably priced reliable energy in rural Alaska.

From the perspective of Alaska as an energy producer, the outlook is decidedly more mixed.

The necessity to sequester CO<sub>2</sub> from coal combustion simply adds one more obstacle in the path of eventual commercial development of Alaska's vast coal reserves. It may not render those coal reserves unmarketable, but it most likely extends the timeframe for their ultimate development.

Climate change regulation probably means the end of the road for ANWR development for the foreseeable future, despite \$100 crude oil. With the Democrats in control of a Congress focused on reducing the use of fossil fuels, not even the most die-hard believers in ANWR will be able to muster much, if any, support.

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On the other hand, the combination of climate change regulation and a focus on domestic energy security holds some intriguing possibilities for an Alaska natural gas pipeline.

The uncertainty associated with using coal and nuclear to meet growth in electricity demand may well result in natural gas-fired generation being the least risky alternative with a consequent significant increase in demand for natural gas. Sustained growth in biomass-based transportation fuels production will also increase demand for natural gas.

Where is that needed gas going to come from? Is the recent boom in lower-48 unconventional gas development sufficient to offset rapidly declining conventional reserves and meet the increased demand as well?

Will we rely on imported LNG in contravention of our goals for greater domestic energy security?

Or, should we look to the largest source of proven reserves of natural gas in North America to satisfy that demand?

Under this scenario, the need for an Alaska natural gas pipeline seems undeniable, if not inevitable. Perhaps the Alaska North Slope producers will soon see it the same way.

## **CONCLUSION**

The forces influencing U.S. federal energy policy have changed dramatically over the last 18 months.

The federal government's response to those forces has evolved and will continue to evolve over the next several years.

Energy policy will be subsumed into climate change policy.

Climate change regulation will affect every aspect of the production, transportation, consumption and regulation of energy in the United States.

Thank you.