Policy Outlook
May 2005
George C. Marshall Institute

# Remarks by William O'Keefe, CEO, George Marshall Institute,

**Before the "Climate Change and National Security - Connections and Concerns" Town Hall Meeting of the World Affairs Council of Washington, D.C.**

**May 3, 2005**

I am pleased to participate in this Town Hall meeting and to have the opportunity to discuss climate change and national security with you and my fellow panelists.

After reading some of their views, I am certain that this will not be a boring or "me too" discussion. We may agree on a set of facts but not on inferences drawn from them or actions that they justify.

I am going to begin with my point of view and then explain the basis for it. I will focus on policy planning and advocacy. My remarks are critical of policy driven by fear and hidden agendas instead of objective realities.

My views on political advocacy reflect the insight and wisdom of two well known Americans—the late historian Daniel Boorstin and the 20th century political journalist H.L. Mencken.

Boorstin in his book, *The Image: A Guide to Pseudo Events in America*, documented how a gap between what an informed citizen needs to know and what he can know is increasingly filled with synthetic truths and images. And, Mencken made the often quoted observation that the "whole aim of practical politics is to keep the populace alarmed by menacing it with an endless series of hobgoblins, most of which are imaginary".

The energy security and climate crises are examples of what Boorstin and Mencken had in mind. They have become a Trojan horse for special interests.

Economists have long noted the role of self interests in promoting government action which always produces winners and losers. Political entrepreneurs willingly invest heavily to profit from regulation. Losers, on the other hand, are generally too diverse to cost-effectively to protect their interests.

It is obvious that I intend to be blunt, provocative, and not politically correct. I want to be absolutely clear, however, that both issues are important and deserve serious treatment.

Action is appropriate. But, it should be are based on facts, objective analysis, and the reality that actions have consequences, often unintended ones.

The climate change and energy security debate has been shaped, in large measure, by the advocacy of fear. The public is told that we face a climate catastrophe and that we are prisoners of oil producers who wish us ill. We are told repeatedly that solutions are readily available at a reasonable price.

Predictions of climate doom are the result of computer driven speculation while proposals for energy independence defy economic reality. It is well known that problems poorly defined are problems poorly solved. And, these are two problems that have not been properly defined.

Let me begin with climate change. It is often asserted that there is a clear scientific consensus that human activities, primarily burning fossil fuels to heat our homes,

The Marshall Institute Policy Outlook series will periodically examine important issues affecting science and public policy. Particularly focused on the use of scientific information in formulating policy decisions, Policy Outlooks will aim to provide clarity and objectivity to policy-relevant discussions.

fuel our cars, and power industry are causing an unprecedented change in our climate and a warming that is greater than any time in a thousand years. We are told that unless we take immediate action to reduce and stabilize greenhouse gas concentrations in the atmosphere, we will face a catastrophe later this century.

The Kyoto Protocol is promoted as the first step on a journey to reduce emissions 60% below 1990 levels by 2050. What you are not told is that this journey requires the phase out of fossil fuel use over several decades. We are told that such emission reductions can be accomplished without sacrificing economic growth or harming the economic aspirations of developing countries. This is nonsense. The fact that so many people hold this view validates a Boorstin observation that images have become a substitute for reality.

What does science tell us about climate change? We know that greenhouse gas emissions have been increasing since the start of the industrial revolution. We know that global temperatures have increased about 1 degree Fahrenheit since the end of the Little Ice Age. We know that the pattern of warming over the past 100+ years is not consistent with greenhouse gas emission increases over that same period. We know that the difference between warming at the surface and the lower atmosphere is not consistent with the global warming theory. We also know that human activities have changed the chemical composition of the atmosphere and contributed to the warming that has occurred.

Beyond those few well documented facts, we still know very little about important factors that influence a complex and chaotic climate system. These include natural variability, solar and lunar influences, water vapor, cloud formation, aerosols, and ocean currents.

Most of what is claimed to be "known" about these factors are, in fact, hypotheses. They may turn out to be valid. But, until there is a stronger case based on measurement and validation, we should not casually embrace policies that curtail energy use and cause economic harm.

I want to be absolutely clear that uncertainty is not an argument for in action. It is an argument for action tempered by our state of knowledge, the limits of knowledge, and that is consistent with our economic aspirations.

Advocates of energy constraining actions like the Kyoto Protocol dismiss the importance of uncertainties because they see environmental apocalypse and believe that the costs of rapidly moving away from fossil energy is low. Daniel Boorstin also observed that our greatest danger was not ignorance but the presumption of knowledge. That describes the bulk of climate advocacy.

Projections of catastrophe come from complex computer models developed as research tools but forced into service as policy tools. No climate model can replicate or "backcast" past temperature without calibrating adjustments. Indeed, in its last assessment report, the Intergovernmental Panel on Climate Change concluded that "…the range of surface temperature response across the group of climate models run with a given scenario is comparable to the range obtained from a single model run with the different …scenarios."

In other words, uncertainty due to the different model assumptions is as large as uncertainty due to differences in emission scenarios.

Models can help us to improve our state of knowledge, but using them to predict temperature and climate impacts 50 to 100 years hence is an exercise in futility. It cannot be done. e do not understand the climate system well enough and cannot know the drivers of future emissions—population and economic growth rates, changes in technology, and changes in our energy mix.

Those that market these predictions of doom are engaging in deception or are victims of fear mongering.

This does not mean that we should not

hedge against potential adversity. It does mean that we need realistic policy options that can be adjusted as we acquire new knowledge.

James Schlesinger, the former secretary of energy and defense, once published an article that applies to the climate policy planning. He described two approaches to planning—Cook's tour and Lewis and Clark.

Cook's tour planning, named after the travel company, applies to situations where there is relatively little uncertainty, such as vacation planning. It is possible to plan a long trip in great detail because we have abundant information on flight schedules, hotels, tour options and the like.

On the other hand, Lewis and Clark planning, named after our great explorers of the western territory, applies to situations where information is scarce and uncertainty about what lies ahead is great. Lewis and Clark undertook their mission knowing only their ultimate destination but without a lot of knowledge of how to get there. They put heavy emphasis on acquiring and assessing information, and then proceeding short distances before repeating that process.

The Kyoto advocates are Cook's tour planners. What we need is Lewis and Clark planning.

In November 2002, a group of prominent scientists published an article in Science assessing the potential for stabilizing greenhouse gas concentrations. They concluded that existing energy technologies are inadequate to achieve that goal. They called for expanded R&D to produce a whole new suite of lower carbon technologies. The also observed that the fossil fuel greenhouse effect is an energy problem that cannot be regulated away. This article contains a powerful message that deserves serious consideration.

While the Bush Administration is regularly criticized for rejecting the Kyoto Protocol, it has made a major commitment—more than $5 billion annually—to climate science and technology. It has engaged other nations in bi-lateral agreements to promote energy efficiency and reduce the growth of greenhouse gases. And, it also has obtained emission reduction and energy intensity commitments from domestic industries. Rhetoric aside, our nation is doing at least as much, and most likely more, than those that claim to be taking the climate risk more seriously.

And, more is being proposed. Senator Chuck Hagel of Nebraska has introduced three pieces of legislation to advance climate technology and reduce the growth of emissions here and in developing countries. One bill would focus on bringing almost commercial technologies to market faster. The second would focus tax credits on stimulating new lower carbon technologies. The third, and in my judgment the most important, would promote the transfer of technology to developing countries since they are becoming the largest source of emissions. An analysis by Charles River Associates concluded that if China and India could reduce their energy intensity to our level, emissions avoided by around 2017 would be comparable to the total reductions under the Kyoto Protocol if all signatories met their obligations, which they will not. The potential and broader benefits of greater emphasis on developing countries should be beyond question.

Let me now turn to the issue of energy / national security issue. This issue has recently become linked to climate change because of high energy prices and the world's reliance, not just ours, on Middle East oil. The claim is made that reducing our dependence on Middle East oil and rapidly moving away from using oil, will make us more secure and reduce carbon dioxide ($CO_2$) emissions. This alleged double dividend is another image that has superficial appeal but does not square with reality.

Energy is an economic input and import dependence is not the right metric for judging security. The right metric is economic security— the ability to continue our way of life without serious disruption and interference. Defining the objective correctly is the first,

and most important step, to developing the correct policy.

Since the oil embargo in 1973, there have been repeated calls for energy independence and reduced reliance on oil as a major energy source which have been accompanied by regulations and billions of federal dollars for R&D and technology demonstration projects. The fact that these calls have not changed the world's energy mix or ours demonstrates that it is easier said than done. Rhetoric may capture the attention of the media and public but it is a poor substitute for rigorous policy planning.

We import twice as much as we did at the time of the oil embargo and will be importing more in 2020 than we do today. That is a reflection of the high cost of alternatives, economic realities, and the slow turn over of our capital stock.

Near term advances in technology and tax and energy policy could slow the growth of imports but not eliminate them. Import dependence is not unique to us, nor are the consequences of a disruption.

According to the Energy Information Administration (EIA), fossil fuels provide 85% of our energy needs, nuclear 8% and so called renewables the remainder. When hydropower is omitted, renewables provide only 3%. The EIA and the International Energy Agency project that in 2020, the world's energy mix will not be much different. The reason is quite simple. In spite of today's high energy prices, fossil fuels—coal, oil, and gas—are abundant, versatile and more cost-effective than the alternatives. So, as much as we might like to move off of fossil energy sources, it simply is not going to happen any time soon.

Our nation has invested hundreds of billions of dollars in the search for alternatives to fossil energy. This includes setting up the Synthetic Fuels Corporation which managed to spend about $80 billion without producing a commercially viable alternative.

If the alternatives to petroleum are as mature and market ready as advocate's claim, why is more government intervention required? The government already spends several hundred million dollars annually on renewable energy, alternative fuels, and related automotive technologies. Many new proposals to achieve independence are aimed at stimulating consumer demand, not innovation. This should raise some level of skepticism because historical experience suggests that such mechanisms will not work.

In spite of this futile search, we have made a great deal of progress in how we use energy. The energy required to produce $1 of Gross Domestic Product (GDP) has been reduced by half over the past 30 years. That is one of the reasons why today's high prices have not had a larger impact on our economy.

Energy is a cost, and businesses and consumers, have real incentives to reduce costs where it makes sense to do so. Today's prices are almost certainly stimulating further improvements in energy efficiency and impacting changes in our capital stock. But, those improvements take time to become evident.

The biggest gains in energy efficiency have come from the industrial sector and those gains have resulted in curtailing industrial growth in $CO_2$. Increases in energy use have been greatest in the commercial, residential and transportation sectors. These reflect population growth, geographic distribution and the demand for larger homes and cars. These are a reflection of prosperity.

Make no mistake about it, when advocates make their case for reducing energy use or moving away from oil, they are really talking about affecting how citizens live.

We are in the midst of a long term trend of reduced energy intensity. That trend will continue. But, it is an immutable fact that a growing population and a growing economy require more energy, not less. Energy fuels economic growth. No matter how efficient we become, we can not have economic growth and negative energy use.

As a nation, we could be less dependent on

Middle East oil by producing more at home. But, we have chosen not to do so. We still have large reserves of oil and gas but we lack the political will to produce them.

We can slow the growth in imports. We can improve our balance of trade and put downward pressure on prices. But, we cannot become independent.

While increased domestic oil and gas production is essential, it is not sufficient. We need to expand the production of all forms of energy that can be produced cost-competitively to meet the needs of a growing economy. According to the Energy Information Administration, the world will need about 40% more energy in 2020 than is consumed today and fossil fuels will remain the primary sources of energy. There is simply no economic way to radically change this mix in the foreseeable future.

Since the predominant use of oil is transportation and off-road uses like agriculture, calls to end imports are calls to restrict mobility and consumer choice.

High mileage gasoline powered vehicles are readily available today, but the demand for them is small.

Hybrids and cleaner diesels which achieve higher miles per gallon are available today but at a higher price, typically $3000-5000 more than similar gasoline models. Inspite of the recent surge in demand for hybrids, they still only represent one-half of one percent of the vehicles sold in 2004.

In my opinion, hybrids are the most promising near term alternative to conventionally powered vehicles. Even with increased fleet penetration, it will take decades to replace the current fleet. And even then, gasoline will still be the fuel of choice for a long time to come.

Policies that would force people into smaller or higher priced vehicles can affect safety, where people live, how they live, and the taxes imposed on them. The fact that government action would be needed to induce or seduce people to purchase something that they have chosen not to is telling. It tells us that objective of moving from a freer economy and a more politically directed one is the issue masquerading as energy security.

Since the embargo of 1973, energy policy has been driven by political entrepreneurship and crisis instead of vision, reality, and political will. In 2001, the President proposed a comprehensive energy policy calling for increased oil and gas production, improvements in the electric grid, increased power generation and more R&D. What we got was a blackout, grid lock and higher prices. Electricity demand continues to grow and yet we remain unwilling to breathe life into nuclear energy. Just last week, he once again called for prompt Congressional action. I am not holding my breathe.

Congress may pass energy legislation this year, but if it does, I doubt that it will reflect energy realities. No matter what Congress does, there is one thing that I am sure of. The search for energy independence will continue to be elusive and wasteful.

If we did not import one drop of oil, we would be impacted by a major disruption in oil production in the Middle East. We are part of a global economy that is connected by vigorous trade and economic relationships. Those relationships are important for us and for increased global security. The world is going to rely on oil for decades to come and a disruption that affects our trading partners will affect us. Diversifying sources of oil, maintaining a healthy strategic reserve, promoting democratic institutions in producing countries, promoting free and open trade and committing to a vigorous, science driven energy R&D program are the best ways to reduce the risks of disruptions and promote economic security.

Let me summarize. The climate challenge is real and potentially serious. The problems associated with increasing dependence on Middle East oil also are real and serious. The solutions to these challenges will not come from wishful thinking or restricting mobility

and consumer choice. Instead, they will come from tempering our expectations with realism and accepting the fact that abundant, competitively priced energy is essential for a robust economy. And, a robust economy is essential for the R&D needed to bring forward new and more secure sources of energy. The energy history of the past 30 years should have taught us that we simply cannot wish away economic and energy realities.