

Transcript

Red Cavaney: Caltech Executive Forum, Pasadena, Ca

"It's the Policy, Stupid: Meeting Energy Challenges in the 21st Century"

March 26, 2007

I am delighted to be with you this evening. It's great to be back in one of America's premier oil-producing states! How many Californians know that their state ranks third in oil production – and that, for well over a century, California has been a leader in the U.S. oil and natural gas industry? It's doubly nice to be back in Pasadena, having grown up in the neighboring community of Alhambra. I always enjoy returning home to Southern California.

The organizers of tonight's event asked me to give my talk a provocative title. Fittingly, I chose: "It's the Policy, Stupid: Meeting Energy Challenges in the 21st Century." It's a serious title, because we're at a critical time for making energy policy decisions. As I will explain, I take an optimistic view of our ability to ensure energy supplies for future generations of Americans.

For more than 100 years, our companies have been dedicated to the efficient and reliable production of energy for U.S. consumers. It is a role we'll continue to play for generations to come.

Energy has helped fuel our nation's tremendous economic strength. Today, energy demand is skyrocketing, both here at home and around the world. And, that is creating enormous competition for resources. With so much at stake, we all need to engage in an open, honest dialogue regarding our energy future. Let me share a couple of facts:

Here in the U.S., the Department of Energy estimates that we will consume 28 percent more oil and 19 percent more natural gas in 2030 than we did in 2005; and

The International Energy Agency projects that global energy demand will increase by more than 50 percent between now and 2030.

These demand pressures are both a challenge and a positive sign. Growth in energy demand is an indicator of economic growth and a measure of human progress. It's clear we need energy in all its forms. We need energy from renewables like ethanol, biodiesel, wind and solar power. We need energy from nuclear power, and from coal.

And, we need oil and natural gas. These resources are vital to our everyday lives -- and to the American way of life. Oil and natural gas provide the fuel for more than 97 percent of our nation's transportation needs and are key components in 96 percent of all manufactured goods

America's oil and natural gas companies recognize that we have a leadership role to play in delivering energy security for our country. But all of us have a role to play in meeting this challenge -- from leaders in business and government to the American people, themselves.

Back in Washington, our industry faces a full plate of energy policy issues. I would like to touch on several of them briefly.

The first is industry taxes. The last time punitive new taxes were imposed on our industry – in the form of the windfall profits tax in the 1980s – domestic energy production fell hugely, and our nation's reliance on imported oil rose dramatically. The Congressional Research Service (CRS) concluded that, between 1980 and 1986, this tax reduced domestic oil production by as much as one and a quarter billion barrels and caused oil imports to increase by as much as 13 percent. Before making tax changes, we need to examine why the provision in question was enacted in the first place – such as to increase domestic production – and we need to be sure that the proposed change will not be counterproductive.

The second area is climate change, which is a serious issue that oil and natural gas companies are taking steps to address. Our member companies are reducing emissions now, and investing in and developing technologies that will reduce emissions even more in the future. One way our companies achieve these reductions is through co-generation, the process of capturing waste heat from our operations and re-using it to produce electricity. Reusing steam will reduce carbon dioxide emissions by millions and millions of tons per year.

Moreover, the oil and gas industry is spending hundreds of millions of dollars on government and academic research on climate change, advanced energy technologies, new uses of clean-burning natural gas, and alternative energy. Our companies made a pledge to the federal government in 2002 to improve energy efficiency in their refineries by 10 percent over 10 years. We're on track to meet that goal and our operations are becoming cleaner and more efficient every single day. For example, energy savings at our refineries in 2004 were equivalent to taking more than 350,000 vehicles off the road, or the amount of electricity used in more than 710,000 homes.

Our companies address climate change in different ways, but there is a consensus on the benefits of voluntary efforts. However, API wants to be an active participant in discussions leading to development of national emission reduction, and we feel all policy options should be on the table at this stage of the debate. And, that debate should be transparent, deliberative and not begin with a pre-determined set of winners and losers.

The third issue is ethanol. Our industry supports ethanol, and our companies are its leading user and key players in increasing its use into the future. We believe there is an important role for ethanol and other biofuels in meeting the nation's transportation fuel needs. The industry has invested heavily to meet and exceed the federal requirement for ethanol-blended gasoline. In 2006, for example, we used 5.4 billion gallons of ethanol – 25 percent more than required. And, we will surely use a lot more in the future.

There is, however, a limit to how much corn-based ethanol use can be increased. The Administration's recent proposal would require technological breakthroughs in cellulosic ethanol to achieve the proposed levels of ethanol use, and to preclude additional pressure on corn prices. Market forces and consumer preferences should determine where and how ethanol is consumed. The interests of consumers and taxpayers will be best served if ethanol meets the test of the marketplace. Government policies should be performance-based and provide a level playing field for all alternative fuels, and not pick winners and losers.

Each of these three issues must be addressed in the context of our nation's future energy security. As we take steps to meet the energy needs of future generations, we must focus on three areas: efficiency, technology, and diversity.

First, America's energy companies must continue to improve our own energy efficiency, and encourage energy efficiency in other industries and by the American people;

Second, we must increase the use of advanced energy technologies that allow us to develop our resources cleanly and responsibly; and

Third, we must increase the diversity of our oil and natural gas supplies, both here at home and from around the world.

One of the first steps toward increasing our energy security is making the most of what we already have. We all need to become more energy efficient.

Our efforts go beyond just our operations. We know consumers are conscious about the products they use. That's why, last fall, our refineries began to deliver an impressive, new fuel that significantly reduces particulate emissions. It's called Ultra Low Sulfur Diesel and it's the cleanest diesel fuel supplied in the world today – with 97 percent less sulfur content.

In addition to energy efficiency, our industry has researched and developed breakthrough technologies to help us find, develop and deliver energy. For example, we now have 4-Dimensional Imaging, which helps us better locate oil underground. Imagine a geoscientist watching multiple data screens of 3D visuals revealing exactly what exists below the surface – like stepping into the earth and seeing specific rock strata: sandstone, limestone, and salt domes, along with oil. Time being the fourth dimension, we can take snapshots of those underground reservoirs over time and overlay the pictures to see in which direction the oil is moving. That's how we find oil today. It's non-invasive and more environmentally-compatible than ever.

We also use what's called multi-directional drilling. We can drill down at one site, then turn left or right and drill for more than five miles, and then go further down or back up – whatever is needed to encounter the oil. Advanced techniques like this have dramatically reduced our environmental footprint. Today it's possible to develop nearly 80 square miles of area below the surface from a single two-acre site on the surface.

These technological innovations are making a difference. And, we expect even more progress because, between 1992 and 2005, America's oil and natural gas companies reinvested more than \$1 trillion in long-term energy initiatives.

Just as we need to diversify the kinds of energy we use, we also need to acknowledge that a diversity of sources is the best way to ensure energy security and meet growing demand. Our country should be doing all it can to increase the amount of energy produced in the United States. We should encourage the development of alternative and renewable sources of energy, which are growing at a rate faster than traditional sources.

America's oil and natural gas companies have made significant investments in this area. Over the last five years in North America alone, we have invested \$12 billion in renewable, alternative and advanced non-hydrocarbon technologies. In fact, when you add up all of the various types of emerging energy technologies, our industry, over the five years, has invested almost \$100 billion -- that's more than two and half times as much as the federal government and all other U.S. companies combined.

However, it's important to place U.S. energy sources in the proper perspective. According to the Energy Information Administration (EIA), renewable energy presently accounts for about 6 percent of our nation's energy use. And, this EIA figure is projected to climb to 7 percent over the next 25 years. Concurrently, the Department of Energy estimates that oil, natural gas, and coal will continue to meet approximately 86 percent of U.S. energy demand for at least the next two decades.

We sometimes hear that world oil production is "peaking," and that we will face a steadily diminishing oil supply to fuel the global economy. These concerns have been expressed periodically over the years, but have always been at odds with energy and economic realities. Such is the case today.

Let's look at some history: In 1874, the chief geologist of Pennsylvania predicted we would run out of oil in four years – just using it for kerosene. Three decades ago, groups, such as the Club of Rome, predicted an end of oil well before the current day. These forecasts were wrong because, nearly every year, we have found more oil than we have used, and oil reserves have continued to grow. Since the commercial discovery of oil, companies have produced 1 trillion barrels of oil. Yet, double that amount remains in the ground. And, about twice as much more exists in the form of non-conventional resources -- like extra-heavy oil, oil sands, and oil shale.

The world consumes approximately 80 million barrels of oil a day. The International Energy Agency says there are sufficient oil resources to meet demand for at least the next 30 years. Moreover, a couple of years ago, energy analyst Daniel Yergin and his Cambridge Energy Research Associates completed a field-by-field global analysis that forecast a 20 percent oil production capacity increase between 2004 and 2010 based on projects already planned. Clearly, we are not "running out of oil" anytime soon.

The key factor here is technology – revolutionary advances in technology in recent years have dramatically increased the ability of companies to find and produce oil – and, of particular importance, recover more oil from existing reservoirs. Rather than production "peaking," existing fields are yielding more oil than in the past.

Moreover, the United States – and the world – cannot afford to leave the Age of Oil before realistic alternatives are fully in place. It is important to remember that man left the Stone Age not because he ran out of stones. And, we will someday leave the Age of Oil, but not because we will have run out of oil. Yes, someday oil will be replaced, but clearly not until practical alternatives are found – alternatives that are proven more reliable, more versatile, and more cost-competitive.

President Bush highlighted the importance of improving efficiency and investing in emerging technologies in his State of the Union address. We support the goal of improving energy efficiency throughout the American economy, and we welcome the President's call for more technology investments. At the same time, we believe market forces and consumer preferences, not federal mandates, are the best way to meet these goals.

The President also noted that we need to increase domestic production of oil and natural gas. It might surprise you to know that the United States has the 12th largest oil reserves and the sixth largest natural gas reserves in the world. We have abundant volumes of oil and natural gas resources beneath federal lands and coastal waters. However, did you know that more than 85 percent of U.S. coastal waters that are up to 200 miles from our shores are off-limits to oil and natural gas exploration? These areas, and 75 percent of the technically available U.S. onshore areas, are "off-limits" or accessible only with significant restrictions -- despite federal government estimates that there is enough oil in these areas to power more than 60 million cars for 60 years and heat more than 25 million homes for 60 years. And there is enough natural gas to heat an additional 60 million homes for another 60 years.

Recently, we've had some encouraging news. Last September in the Gulf of Mexico -- 175 miles off the coast of Louisiana – several of our companies made what may prove to be one of the largest domestic oil discoveries in a generation. And, in December, Congress took a small but important step in passing legislation that opens more than 8 million acres in the Gulf of Mexico for energy exploration. Both of these developments are positive steps, but we must encourage our lawmakers to build on this progress.

The attention-grabbing discovery in the Gulf of Mexico, at a total depth of 28,000 feet, would never have been possible without the regulatory and tax code changes that encouraged our companies to take on increased risk and invest more heavily in advanced technologies and high-risk exploration plays.

The questions before Congress are: Why reverse this trend? Why make it more expensive to develop domestic supplies? Why force greater reliance on foreign sources of natural gas and oil? The importance of increasing access to domestic sources of oil and natural gas could not be clearer.

Experience has shown that we cannot rely on any single source of energy, whether it's domestic or global. We should have as great a diversity of sources as possible, including sources from around the world. This message was brought home during Hurricanes Katrina and Rita. In the face of two Category 5 hurricanes, no significant offshore oil releases occurred, which meant our infrastructure and safety systems performed well.

However, supplies were disrupted when nearly all production in the Gulf of Mexico was temporarily shut down. Yet, we were able to meet our nation's fuel demand, because we were able to draw in product supplies from Canada, Europe, and other parts of the world.

We need policies that support our active participation in global energy markets – not policies that isolate us. It's understandable that some people want to believe in "energy independence." But consider this. In 1980, America imported 36 percent of its oil. Today, we import 60 percent. And, by 2030, even with aggressive efforts to improve energy efficiency and increased reliance on alternative energy sources, oil imports of 60 percent will still be needed, according to the Department of Energy. The United States must do everything it can to access a diversity of resources around the world. "Energy independence" would be at odds with this objective.

I can provide a little background here. "Energy independence" is a tricky catch-phrase created by President Nixon to dramatize and catalyze Americans on energy, much as President Kennedy committed the nation to putting a man on the moon. How do I know about this? I worked in the Nixon White House, and I know that there was never a full analysis nor an appreciation of energy independence and its implications.

However, every time we have faced a new energy problem, the response by political leaders always has had the common thread of energy independence – whether it was President Nixon with his "Project Independence," or President Carter addressing the nation in a cardigan sweater, or President George W. Bush decrying our "addiction to oil."

But energy independence is folly! In today's global economy, we are more interconnected than ever before. International trade is playing much more of a role, not less. The idea of the U.S. becoming fully energy independent, even if we could, is counter to decades of momentum toward closer global integration.

The world is totally different today from 30 years ago. We are in a new environment in which energy producers are hard-pressed to keep up with the progress of mankind. The world's emerging economies – particularly China and India – are drastically increasing their energy demand as they seek the prosperity and standard of living enjoyed by the developed nations of the West. Meeting this massive and growing demand for energy requires huge investments, economic stability, and government-industry cooperation.

We need to recognize the dramatic changes that have occurred in world energy markets. For the past several decades, following the oil embargo and other supply disruptions of the 1970s and the years that followed, a great number of foreign governments nationalized their oil industries, including their reserves. Forty years ago, world oil reserves were largely owned by public, investor-owned oil and natural gas companies, most based in the United States. Reserves are a critical measure of a company's ability to serve its future customers. Today, the worldwide total of proven oil reserves held by all investor-owned oil companies is just 6 percent. Almost 80 percent is exclusively controlled by the foreign government-owned, national oil companies. Think of this – the world's largest publicly owned

company, ExxonMobil, would rank 12th in size of reserves behind 11 foreign government-owned national oil companies.

Consequently, investor-owned oil and natural gas companies elected to scale up to compete within this new world by creating large-scale efficiencies, greater technological and project management prowess, and substantially broader competitive access to capital markets in order to meet the competition from these national oil companies, such as those of Saudi Arabia, Russia, Venezuela, and China. The value of this scaling up of investor-owned oil and gas companies was largely missed by most observers -- both in and out of government. Some observers, still in the dark on this necessary evolution, now view the industry in exaggerated, negative terms; as too large, too powerful, and not deserving of its earnings.

Obviously, reality is quite different. Would these critics have the investor-owned companies be small and sub-optimal in one of the world's truly global, commodity markets? Were such the case, would not national oil companies then rush to gain share our domestic market? Would our national and energy security be enhanced by such a development?

For nearly a century and a half, U.S. oil and natural gas companies have built the infrastructure, made the investments, and taken the risks to provide a stable and reliable supply of energy. More than 18 million Americans have currently invested their hard-earned savings with us. When we succeed, they realize a return, and we all benefit.

We are confident we can meet the challenge of energy security, just as our nation has met other great challenges in the past. We are confident America will succeed. However, we will succeed only by working together. And, as the title of my talk indicates, it's the policy decisions our nation makes that will largely shape our energy future.

I hope you will join us in this important effort. If you would like additional information about these matters -- and learn how you can become actively involved in shaping our nation's energy future -- please log on to our website at www.energytomorrow.com.

You can also forward us your email address to receive regular updates electronically.

The American people, our elected representatives in Washington and in state capitals, and America's oil and natural gas companies will achieve yet greater energy efficiency; discover yet more innovative technologies; and yet multiply further our diversity of sources. Together, we will ensure that we Deliver America's Energy Security.

Thank you again, for inviting me. It has been a genuine joy to be with you.