

Energy Security for America
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There is a lot of discussion today about energy independence. The concept of “energy independence” was first introduced by Richard Nixon in 1973. Three weeks after the Arab oil embargo, Nixon introduced “Project Independence” and pledged that the U.S. would “meet our own energy needs without depending on any foreign energy source” within seven years. He deliberately modeled his Project Independence on John F. Kennedy’s Apollo goal of getting a man on the moon within a decade.

It proved much easier to get a man on the moon than to make a nation energy independent. Since the mid 1970’s, the U.S. has gone from importing a third of its oil to importing 60%. Thought needs to be given to what energy independence means and what can be achieved.

In the end, if energy independence is presented as self-sufficiency the way that Richard Nixon defined it 37 years ago, then the prospects of achieving the goal of energy independence is very small. Such a goal will bring disappointment that will undermine the longer-term commitments that are required for a sound energy future. Cutting ourselves off from global energy markets is not realistic.

However, if the goal of energy independence is understood differently, then it is much more useful. We should define energy independence to be energy security i.e., more energy resiliency, robustness, and reduced vulnerability. This definition recognizes that trade itself is not bad.

So, let’s discuss global energy supply and demand. There is one indisputable fact that not only impacts our nation but the world as a whole: quite simply it is that global demand for energy will continue to increase dramatically, driven in large part by the desire of developing countries to achieve economic prosperity. Secure, affordable, accessible, and ample supplies of energy are essential to both economic growth and a reasonable standard of living.

Let’s put some numbers around this. The International Energy Agency projects that global energy demand will increase 50% between 2007 and 2030. About 70% of the increase is going to be in developing countries, and those countries just happen to rely primarily on lower cost fossil fuels. This projected 50% growth is not unconstrained. It actually assumes significant efficiency improvements and a reduction in energy intensity. Without these assumed efficiency gains, demand would almost double by 2030.

To meet this demand growth, we are going to need substantial increases in the supplies of all forms of energy. Let’s take a look at current and future demand by the various energy sources.

Today, fossil fuels comprise 80% of global energy usage: oil and natural gas comprise 60%; coal 20%; and all other forms of energy comprise the remaining 20%.

As you would expect, there will need to be more dramatic growth in non-fossil fuel energy sources than has been seen historically. Sources such as nuclear power, renewable fuels, biofuels, hydro, geothermal, wind, and solar energy are all important parts of the equation. Yet, the fastest growing energy sources are going to be fossil fuels – oil, natural gas, and coal.

The bottom line is by 2030, despite all the rhetoric to the contrary, the International Energy Agency projects that fossil fuels will still comprise about 80% of the world's energy usage.

So, within this context, the question is: how does the U.S. and the world as a whole secure access to sufficient quantities of reliable, affordable energy and do so in an environmentally responsible manner.

If our nation is to achieve energy security, and very importantly, maintain economic competitiveness and not let our standard of living slip, we can no longer tolerate the misleading and often inaccurate rhetoric and quick fixes. We need a well-reasoned, fact-based comprehensive energy strategy that is fully integrated and consistent with U.S. foreign policy.

Let me briefly outline what I believe the three major components of this strategy should be.

First, the cheapest and most plentiful form of new energy is energy efficiency and conservation. Reasonable progress has been made in the past. In fact, if you look back, the U.S. economy has doubled since the 1970's, while our energy use has only increased about 25%. To give a sense of the potential impact, a 6% reduction in energy use would effectively reduce U.S. crude oil imports by a third.

The second key component of an energy security strategy, in my opinion, is diversity of supplies.

Diversity comes in two forms: geographic diversity in terms of where we source our oil and natural gas from, and the second part is diversity in terms of the alternative forms of energy we use.

A couple of points regarding oil and natural gas. First, oil and natural gas will remain the most critical and strategic component of the global energy mix for a very long period of time due in large part to significant cost and infrastructure advantages. Second, despite what peak oil theorists may say, there is more than ample oil and natural gas resources available in the world to meet this demand.

Right here in North America, the Bakken Shale in the Williston Basin of North Dakota, South Dakota, and Montana along with the Canadian oil sands in Alberta hold great potential for the future. Even here in Kansas, smaller discoveries continue to increase oil and natural gas

output in our state. Putting together long-term solutions to economically produce the multi-billion barrel, long-life reserves of the Bakken Shale in the Williston Basin and the Canadian oil sands in Alberta along with smaller discoveries like those here in Kansas is how we will help meet American energy demand.

Nonetheless, as we look around the globe, access to other oil and natural resources by U.S. companies is becoming increasingly difficult and costly due to increased competition from foreign companies. There is an intense wave of nationalism by those countries that control 80% of the world's proven oil and natural gas reserves.

It may surprise you, but the largest U.S. oil and natural gas companies, often referred to in a negative manner as "big oil", are really quite small when compared to global competitors. U.S. oil companies only hold about 6-8% of the world's proven oil and natural gas reserves.

So it is critical for us to recognize that our nation is in a tough global competition for new supplies of oil and natural gas. It simply makes no sense to further hinder our ability to compete by restricting access to new areas, unfair taxation, regulation, or other restrictive policies.

The other aspect of diversity is really encouraging development of alternative sources of energy. I believe solar and wind energy have important roles to play and will grow in use in those specific areas where they are abundantly available.

Nuclear energy is not exactly a new energy source either, but improved and/or new technologies need to be developed to overcome the challenges of cost and waste disposal.

To wrap up on alternative energy sources, none of these options alone will meet our needs. Today alternative sources meet just over 4% of our energy needs with wind accounting for 52% of total alternative energy supplies. Alternative energy sources are projected to increase to 8% by 2035. However, each will have its own niche and in total, are capable of increasing the supply and diversity of energy sources.

The third key component of a U.S. energy security strategy is technology.

Technology is vitally important in increasing the supply of energy, in moderating demand, and in protecting the environment.

Technological developments like 3D seismic, horizontal drilling, and multi-stage fracs are helping pave the way for finding and developing new oil and natural gas reserves here in Kansas and around the world.

As I indicated earlier, fossil fuels are going to continue to be the dominant sources of energy for the U.S. and the world for a long time. So, technologies to capture and sequester a large portion of the CO₂ produced by burning these fossil fuels have become a high priority. While most technologies for carbon capture and sequestration (CCS) are essentially available, much remains to be done in improving the capture stage, demonstrating feasibility on a large scale, and lowering the cost.

There are several major CCS projects underway around the world today including one right here in Kansas near Wellington that hopefully will point the way forward on this critical technology.

I have been in the oil and natural gas industry for over 25 years. I've seen a lot of change in the business. But at no time in my career have I experienced a time of more dramatic and rapid change than what's happening today.

I don't know a lot of things about the future, but I do know the pace and complexity of change is only going to increase.

But dramatic change in the oil and natural gas industry is touching all of us because our country's economic prosperity and competitiveness are in large part dependent upon access to ample supplies of affordable, reliable energy.

That being the case, we need balanced solutions that include slowing the rate of growth in energy demand, providing increased supplies of energy from diverse sources, all the while minimizing the impact on our environment.