



UNIVERSITY OF TULSA SCHOOL OF LAW
CHESAPEAKE LECTURE
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As a recovering politician I admit that it has been some time since I have been on the speaker's circuit. In that respect I have undoubtedly gotten pretty rusty. I am only asking that you give me the same generous thought as Mark Twain reportedly did when he was asked his opinion of Wagner's music. He replied, "It's better than it sounds."

It is truly a privilege to be a participant in the Chesapeake Energy Lecture Series sponsored by the University of Tulsa School of Law in partnership with Chesapeake Energy Corporation. For providing this forum, I would like to recognize TU's visionary leader, President Steadman Upham, and the dynamic dean of the School of Law, Janet Levit. It is a testament to the importance of this University, its corporate partnerships, and the subjects of this lecture series to have such distinguished community and state leaders in this audience including Mayor Kathy Taylor, George Kaiser, Kaiser Family Foundation executive director Ken Levit and Trustees Fred Dorwart, Phil Lakin, and Phil Frohlich and of course the outstanding students of TU!

I am the second speaker in this lecture program. It was inaugurated last year by Aubrey McClendon, the co-founder and CEO of Chesapeake Energy Corporation. His presence and his message set a very high bar for those to follow. His company almost single-handedly has changed America's natural gas energy future – a cleaner, domestically produced fuel to provide energy, drive our vehicles, and heat our homes.

This was accomplished because he had the guts to risk using cutting-edge technology to open up the vast reserves of shale gas that are literally at America's front door step. It wasn't a government program but the incentives and rewards of the free market that drove him to succeed.

My late mother wrote a book about the history of the oil industry called The Greatest Gamblers. It is a story that chronicles the lives of the fiercely independent, colorful, hard driving, hard living, risk takers extraordinaire who made America the greatest oil producing nation at a time when Tulsa correctly described itself as the oil capitol of the world. Were she writing it today, Aubrey McClendon would no doubt have warranted his own chapter in that book.

Within the University of Tulsa School of Law is a long established program called the National Energy-Environment Law and Policy Institute, NELPI. Now this may get a little confusing. As you heard in the introduction, I am with NEPI, the National Energy Policy Institute funded by the George Kaiser Family Foundation. Now I realize that I am just one letter away from a serious trademark violation lawsuit from Dean Levit, so I will be very careful to differentiate between the two organizations. However, we at NEPI certainly endorse, and are partners in supporting, the mission of NELPI – to promote training in the fields of energy, environment, and natural resources law and to produce scholarship, research, and communication that will lead to more enlightened national and international laws and policies in these fields.

And do we ever need more enlightened national laws and policies. Whatever we have learned about energy in the roller coaster, chaotic last 24 months – one thing is for sure – we have no national energy policy. In the words of one astute observer, what we have is the sum of all lobbies not the sum of our best wisdom. Self-serving political rhetoric notwithstanding, absent such a policy the increasingly alarming fact of life is our nation’s growing addiction to imported oil and more polluted skies.

As we stumble into a new century with no common energy purpose, what price do we pay as a nation for continuing this short-sighted foolishness?

George Kaiser pondered this question. He came to a clear conclusion on the cost and consequences of this reality. In his own words, “Our addiction to foreign oil has hijacked our foreign policy, our economy, and our environment.” In the last decade the oil dependence of America and Europe, and more recently India and China, has created the greatest transfer of wealth in human history to, far too often, oil rich dictators hostile to our national security.

At the same time the exponential increase in greenhouse gas emissions has set into motion climate change that will radically alter our way of life and change the world we live in. According to recommendations presented by the National Security Council of the former administration and repeated by President Obama, this poses no less a threat to our national security than the enrichment of our global enemies.

As a patriot, a husband and father, and a businessman George Kaiser took up the responsibility of public service to help in some way to change our nation’s energy direction. Not surprisingly, and some would say characteristically, the changes likely to be recommended could well work directly against his personal financial interests.

It is already well recognized in this community and nationally that he has generously initiated leading edge early childhood learning and health programs. He passionately believes that sound investments in today’s children provide multigenerational benefits.

He likewise believes that exposing the costs and consequences of our mistaken direction of energy policy and providing better least cost alternatives will stimulate our policy makers to make better decisions. In short, the free market economy will make the changes that are needed, if it is given the right signals.

Regrettably, the dynamics of the current marketplace are misguided in three principal ways that create an artificially low price for the status quo. One, the cost of empowering nations hostile to our interests when we buy their oil is not reflected in the price at the pump. Two, energy prices do not adequately reflect that fossil fuel resources are non-renewable. Three, the cost of global climate change is not reflected in the cost of barrels of oil or tons of coal.

To realign the market to act rationally we need to recognize these externalities and quantify the “real” cost of various options to accomplish our national goals of energy independence and sustainability. That is exactly what the Kaiser methodology is designed to do. Let me explain.

What if we said that to have a responsible energy policy there are two objectives we need to achieve? One, reduce the amount of imported oil and two, reduce the amount of greenhouse gas emissions.

What if we then analyzed the most promising energy strategies by metrics that would compare the costs of each of the many ways the two objectives just mentioned can be achieved? This means we would determine the cost per barrel to reduce the demand for foreign oil and the cost per ton to reduce greenhouse gas emissions.

What if we then determined the proportional energy contribution of each strategy to arrive at a total cost of each specific policy? This would show the scale of how much of the solution each strategy could contribute.

What if we then scored and ranked each strategy or policy by these costs?

And what if we acknowledged that there is no one silver bullet – no bottle of magic elixir - that will solve the problem, but, rather, a broad portfolio of policies is needed?

What if policy makers were provided this analysis? Wouldn't they decide upon a bundle of least cost strategies that would become the framework of a more rational national energy policy?

This is the Kaiser methodology. This is what George Kaiser envisioned and what he put into motion when he created the National Energy Policy Institute 16 months ago.

Let's walk through a couple of examples of how the methodology works. Transportation, for instance, consumes 70% of our oil demand and is the largest source of greenhouse gas emissions. Therefore, a logical strategy to examine would be the cost and effectiveness of subsidizing electric automobiles. Let's make the assumption there is a \$10k tax credit for consumers to purchase an electric car. Economic modeling will forecast how many electric cars this will sell (and can be produced within a certain time) and determine the total public cost of the strategy.

The total dollar amount of the tax credit is then divided by the number of barrels of oil saved over the lifetime of the electric cars sold to determine the cost per barrel of imported oil reduced. We believe it will score very well. Now this particular strategy is also a twofer. It will also probably rank high on the cost per ton of greenhouse gas emissions reduced. So far so good.

But then it gets a little trickier. Where will these all-electric cars get the additional electricity they need to charge their batteries? How does the energy source that produces this new supply of electricity rank in terms of greenhouse gas emissions and what then is the net carbon emissions value of the electric car? What new efficiencies in “smart metering” can use the market mechanism to reduce the use of electricity? For example, recharging batteries at non-peak hours at night is more cost effective than during peak daytime hours. And so on. What you see is a very straightforward methodology but not very simple answers.

Developing viable strategies also requires analyses to go beyond the specific goals of reduction of imported oil and greenhouse gases and speak to specific political, technological, economic, and social costs and issues unique to each strategy. These factors do not lend themselves to the rigorous quantifiable metrics of cost per barrel or cost per ton. However subjective the analysis, they must be brought forward in a valid assessment of their impact in order for the final ranking to have merit. For instance, in quantifying the emission reductions of nuclear energy there must also be recognition of the political and social issues of plant siting and the technological challenges and costs of disposition of nuclear waste. Wind, hydroelectric, and biofuels also each have their own costs and limitations that must be recognized.

Let’s look at another example of the Kaiser methodology using natural gas. Let’s assume that all of the new Chesapeake shale gas will be dedicated to use for transportation in addition to increased electric generation. Good idea. Aubrey McClendon and Boone Pickens will vouch for that. It would certainly provide benefits by the reduction of imported oil, since at least for the foreseeable future gas will be primarily produced domestically. Natural gas also has about one-half of the carbon emissions of oil.

Direct use of natural gas for transportation is one of the strategies our study is examining. But there are several questions. Is it more efficient to use electric cars and generate the electricity with natural gas instead of burning it directly in the automobiles? What is the extra cost of infrastructure to support natural gas cars as compared to electric plugs which are everywhere? What is the value to consumers of the longer mileage between fill-ups of a CNG car than current batteries?

The answer to these questions comes from a disciplined and rigorous cost to cost comparison. This is the goal of the Kaiser methodology.

To implement this methodology in a comprehensive study, NEPI has engaged the nationally recognized Washington D.C. think tank, Resources for the Future, to be a managing partner. In addition to formulating the methodology and the modeling system, they will contract with the best available national experts, including, for instance, TU's Gary Allison, the Vice-Dean of the Law School, to author technical reports. We anticipate the first phase of the project to be completed by this fall.

In a nutshell the Kaiser energy initiative will lay out its case on the energy threat to our national security and climate change. Next will be a description of the metrics and the modeling system used. Technical papers regarding general strategies such as carbon taxation or cap and trade will follow that. Then there will be a series of technical papers involving analysis of what are generally considered the most productive strategies beginning with transportation, renewables, conservation and efficiencies. Finally there will be wrap-up of targeting overall goals, costs and portfolio options.

It is agreed by all that have been involved in this project that it is a unique approach. There has never been a comparative comprehensive analysis of strategies using rigorous common metrics and modeling to establish an actual cost of change in energy use and generation.

We are not yet claiming victory as we are taking a midcourse project evaluation with the authors and modeling consultants in the next few days and will have a much better feel for its effectiveness. With a fall projection for the first phase completion, we are hopeful it can help make a difference. Then the task of educating and persuading policy makers will begin.

George's commitment to moving toward a more rational national energy policy is not a one-dimensional approach. The other major commitment of NEPI was announced and presented today by President Upham and George Kaiser with the formal recognition of an expanded academic and foundation partnership dedicated to new energy businesses and good job creation. Begun some six months ago, this initiative is directly in synchronization with today's most important national priority – growing our country's economy.

It is an established fact that the synergy between the intellectual, physical, and financial capital of higher education, private enterprise, and public investment can create successful new economic clusters. From the Raleigh-Durham triangle to Silicon Valley we have seen how combining research, development, and technology in a targeted free market environment opens the doors to new chapters of progress and prosperity.

Who will be the 21st century's energy inventors and entrepreneurs? There is a good chance they will be a product of the components and synergy described in this vision articulated in today's signed agreement. Who will be the next Aubrey McClendon? I don't know the name, but she could easily come from a Tulsa, no longer described as the oil capital of the world but rather as a 21st century energy center.

We can reach out to other centers of higher education. The Oklahoma State University School of Engineering with expertise in distributive geothermal energy and the Oklahoma University Sarkey Energy Center would add to the breadth, strength, and success of the effort. And we should embrace this change as an incredible opportunity to write a new chapter of America's history as a world leader in innovation, prosperity, and democracy.

Let me first explain what I mean by new energy making us a leader in global innovation and prosperity. I think Pulitzer Prize winning author Tom Friedman expressed it best in his book Hot, Flat, and Crowded. He talked about a trip to China where he addressed a large group of Chinese auto executives. He told them how young Chinese have told him that America got to grow dirty for 150 years, saying "you got to have your industrial revolution based on coal and oil – now it's our turn." His response to them was "Well on behalf of all Americans, I am here today to tell you that you are right. Please, take your time, grow as dirty as you like for as long as you like. Take your time! Please! Because I think my country needs only five years to invent all the clean power and energy efficiency tools that you, China, will need to avoid choking on pollution, and then we are going to come over and sell them all to you. We will get at least a five-year jump on you in the next great global industry: clean power and energy efficiency."

Friedman's point was, and the auto executives got it, that clean power is going to be the global standard and clean power tools are going to be the next great global industry. He went on to say that "the countries that make more of them and sell more of them will have a competitive advantage. Those countries will have the cleanest air and the fastest growing businesses. Not a bad combination."

That's the future for a 21st century energy center – at the leading edge of the next great global economy.

As for being a leader in democracy, we all know a democracy, as described in our Declaration of Independence, is a place for all citizens to have life, liberty, and the pursuit of happiness. I agree with those who say that available, affordable, and sustainable energy – new energy - in this new century is not just a resource but a fundamental value. It is the democracy ticket that allows people, all people, the opportunity to realize their potential through education, jobs, healthcare, a clean environment, and a growing economy. Without this energy, the gap between reality and the pent-up demand for these attainable goals will increase in an ever-widening chasm. It will define the difference between the haves and the have-nots. Whatever we can do to erase that difference will lead to a better America and more peaceful world. New energy will truly empower the vast majority of humanity that today lives on the brink of starvation, disease, and survival.

Given the perilous nature of today's economy, some may say that we have neither the time nor the money to put into developing new energy options. They say these are hard times for many people, and our first obligation is to get America back to work. They would characterize ideas like wind and solar power or electric cars as part of an elitist environmental agenda.

This reminds me of when the Muppets' Kermit the Frog would balefully sing to his audience, "It's not easy being green." You know today it seems that everyone's getting some shade of green. Looking around us through a green energy prism also paints everything red white, and blue for national security - and green too as a growing economy based on new energy means more jobs, more businesses and more "green" money. What better time to make the systemic changes that we need for the future that can put people to work today?

As we all think of the hard times many are experiencing now, I recently read a book that tells the stories of another time regarding the land and people of Western Oklahoma and its neighbors. Written by the Pulitzer Prize winning author Timothy Egan, The Worst Hard Time is about those who survived the Great American Dust Bowl. It is a story of life and death, endurance and heroism, and the revenge of a land literally destroyed by shortsighted government policies and misguided business practices.

Living through the tales of dusters, dust pneumonia, abject poverty in a place and time when almost nothing would grow or survive is a tough story. But the region survived, and the people came out of it a little wiser and better. Today we find three million acres of national grasslands holding the soil together, soil conservation districts, and the wind, not just a vehicle for delivering the horrors of a duster but for harnessing its power into the newest type of farms - wind farms. The fact that wind farms today produce over 500 MW of electricity, enough to power 150,000 homes, gives great hope for the future.

And there are some cynics who say what makes you think we can change and they point to a historical record to prove it. It's true we vowed for energy independence in the 1970's. A President declared the fight for energy independence was the moral equivalent of war. And, yet, since that time, with no unified policy, will or purpose, our use of oil has increased 25% and our dependence on foreign oil has increased more than 100%.

But I believe today is a different time. We have better technology. We have a genuine sense of national purpose and a profound understanding for our responsibility for the next generations. That is why George Kaiser, Steadman Upham and everyone in this room can say we are not naïve - we can bring real change in what we do and how we do it. Knowledge can trump special interests. Science and technology can override politics as usual. National purpose can prevail over individual agendas. And we are on the right path to prove it.