

We still have tremendous potential for strides forward. The estimates we have before us are that the United States can cost-effectively reduce energy consumption by an additional 25 to 30 percent or more over the course of the next 20 to 25 years. That is a significant fact. That should be a significant part of our national energy policy. The kinds of things we need to do there are the kinds of things we need to be debating and voting on and incentivizing in the Senate.

The Alliance to Save Energy estimates that if the proper energy efficiency measures across the industrial, residential generation and transportation sectors were put into place, we could save \$312 billion a year. The savings in the residential sector alone total \$145 billion a year or \$500 for every citizen over a 10-year period. An example: The new fluorescent light bulbs use one-fifth the electricity of a conventional light bulb and can save \$50 apiece over the lifespan of just one light bulb. Other ways include greater appliance efficiency standards, smart grid technologies, as well as weatherization. Research and technology are key to this. In fact, one of the things we can do in our transportation sector to reduce our reliance on petroleum is to move to low-energy vehicles. Battery research is well underway, and we could move to plug-in hybrids or hydrogen fuel cell vehicles relatively soon, if this Congress would get engaged and incentivize and strengthen our commitment to that technology effort.

We already have implemented new CAFE standards, which was a proper and positive step forward. My point is this: One of the first things we need to do in our rational comprehensive energy policy is to engage in conservation and efficiencies. It is our fifth source of fuel and one of our most significant potential sources.

We also need to move into renewable and alternative energy sources. We have listed a sampling of them here: Hydropower, nuclear, biomass, solar, wind, geothermal, and tidal. Some of them are not at the stage where they can economically survive without support or incentives. Frankly, as a government, we need to be working in every one of those areas to do the research, the technology, and to provide incentive support for us to move aggressively into those areas.

Let me give a couple examples of what we could do. Nuclear power is the only reliable base load generation that emits no carbon or other air pollutants. To supply our growing electrical generation needs, the EIA estimates at least 60 new nuclear plants are needed in the next 25 years to supplant new fossil-fuel generation. But no new plant has been built in the last 30 years. The main reason for this is the facilities are expensive to site and to build. They require enormous amounts of capital for design and construction before any profits can be realized, and our current

regulatory process challenges this whole system and extends just the permitting process so long that it makes it hard financially to make it pan out. Congress could fix that. We need to be as aggressive as we possibly can to incentivize, strengthen, and expand our nuclear energy industry.

Geothermal: An MIT study concluded it would be affordable to generate over 100 gigawatts of geothermal electricity by 2050 in the United States alone for an investment of \$1 billion in research and development over 15 years. To give perspective, that would replace 100 coal plants.

Wind: Idaho is ranked 13th in the Nation for wind energy, and global wind power currently stands at 94 gigawatts per year. China has a plan to equal that itself by the year 2020.

Biofuels and ethanol: I support this diverse energy portfolio, and biomass and biofuels, conventional and cellulosic ethanol, as well as biodiesel, are one part of the solution. As concerns about the rising price of corn mount, the need for commercial cellulosic ethanol production becomes more apparent. It is estimated that 1.3 billion dry tons of biomass can be harvested annually from U.S. forests and agricultural land without negatively impacting food, feed or export demands. What that translates into is enough ethanol to replace 30 percent of the current U.S. petroleum consumption.

Hydropower produces 7 percent of the U.S. electricity supply and almost 70 percent in my part of the world. It also accounts for 80 percent of the Nation's total renewable electricity generation, making it the Nation's leading renewable energy source. Hydropower turbines are capable of converting 90 percent of the available energy into electricity, which makes them more efficient than any other form of generation.

The point is the United States can make great gains to, No. 1, become less dependent on petroleum and, No. 2, to generate much more energy supply, if we will get aggressive about focusing on renewable and alternative energy sources. I have gone through a few in this sampling.

Having said all that, that we can do what we need to, to effectively monitor and control and manage our futures markets, that we need to focus on renewable and alternative energy sources, that we need to have an aggressive efficiency and conservation effort, does that mean we can simply ignore the price of oil? The answer is no. Let's go to the next chart. Even if we were to agree today and the President were to sign into law all these new incentives and the many things we could be doing in terms of conservation, renewable and alternative fuels and the like, it still would take several decades to transition away from being a purely almost totally petroleum-based economy. During that transition time, we still need oil. Oil is going to be key to our energy future now and for years in

the future. While we transition away, we have to recognize that. But today, based on Energy Information Administration estimates, the United States is expected to spend \$570 billion on imported foreign oil in 2008.

If you have been watching the T. Boone Pickens ads and the information that comes on those, the estimates are even higher, as high as \$700 billion. That is \$500 to \$700 billion that flows right out of the U.S. economy to other nations. What does a transfer of that kind of wealth mean? Every year that we send \$500 to \$700 billion outside the United States for other countries to produce oil and sell it to us, we erode our national security through loss of physical control over our own resources. We certainly lose jobs. Imagine the number of jobs we could have in the United States if we were engaged in production of our own oil. We increase foreign holdings of U.S. dollars that are out of our control. We have increased foreign holdings of American debt. We have a loss of domestic investment in huge amounts. Overall, we have a weakened U.S. dollar. We are sending our wealth overseas because we are too dependent on foreign sources of petroleum.

Do we have the opportunity to change that? Can we do any different? Or are we in a situation where the United States does not have access to oil resources? The world is using more oil, but U.S. production has fallen to its lowest levels in 60 years. The IEA projects that global oil consumption is going to grow by 37 percent in 2030; whereas, annual oil production will need to be 13.5 billion barrels higher today to meet that increase in demand. What kind of potential do we have in the United States? Let's go to the next chart.

There are a number of things we can do. The United States must be recognized as one of the strongest and most energy-rich nations, when you think about oil in the world. There has been a lot of debate about the Outer Continental Shelf. The projected OCS resources would equal almost 50 years of imports from OPEC. Think about that. Let's go to the next chart. Our OCS is estimated to have over 100 billion barrels of oil. We yearly import a little over 2 billion from OPEC nations. Simply turning to the Outer Continental Shelf instead of sending all the money we now send to OPEC nations, we could generate that oil ourselves simply on the OCS in the United States.

We have Western shale oil resources. These are phenomenal. Proven American oil shale resources could provide our country with 800 billion barrels of oil, which is more than three times the reserves of Saudi Arabia. This chart shows some very interesting information. Over here is the world's proven oil reserves. I think that is 1.7 trillion barrels of oil. This is the Saudi Arabia proven portion of that. This is the U.S. proven oil shale reserve. Remember oil shale is not considered to be the same