THE FUTURE OF RENEWABLE FUELS AND FLEX-FUEL VEHICLES

HEARING

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that Ford and VeraSun will be working together to create the Nation's first "Ethanol Corridor" across Missouri and Illinois. Station sites are now being selected in locations that will allow an FFV driver to travel from Kansas City, Missouri to Chicago, Illinois using only E–85. We are very excited about this project and our efforts to make E–85 more readily available to FFV owners who choose to fill their vehicles with a fuel that enables the U.S. to reduce its dependence on imported oil. Ford and VeraSun are simply planting the seeds of a much broader ethanol supply system that will grow as more and more stakeholders step up to the plate and help to nurture a pathway to energy independence. But much more needs to be done to dramatically increase E–85 availability.

We believe that in order to meet the challenges of rapidly increasing our use of renewable fuels, we must engage in an integrated approach—a partnership of stakeholders. It should include the automotive and fuel industries, government, consumers, and other sectors. That's the best way to address the issue with a full range of solutions including advanced vehicle technologies, alternative fuels, infrastructure development, and government incentives. Domestic auto manufacturers are committed to doing their share, but effective and efficient solutions require a wider commitment from other players.

We have called upon the oil industry to join us in our effort to diversify America's energy sources. We obviously need key partners like the oil industry to invest in developing and marketing renewable fuels like E–85—and we need it to do so now and rapidly. We fully support government incentives to encourage the industry and others to accelerate this investment.

On the government side, Federal, State, and local incentives to accelerate the introduction of advanced technology vehicles and the alternative fuel infrastructure to fuel them will ensure the success of the Nation's energy diversity initiatives. With government actions, infrastructure expansion will support price competition and drive the success of renewable fuels.

To put this all in perspective, there are about 170,000 retail gasoline stations in the U.S., but only about 600 have ethanol pumps. It will take significant growth in the number of stations to effectively fuel existing FFVs, and even more as the number of FFVs rises in the future. Growing the infrastructure will be a challenge for stakeholders, but must be done.

For the future, we need national research efforts to pursue the production of ethanol from more energy-efficient cellulosic materials like rice straw, corn stover, switch grass, wood chips or forest residue. Ethanol derived from these sources will make ethanol even more available by broadening the feedstock sources, and will also further reduce greenhouse gas emissions.

Over the next year, we will have an enormous opportunity to strengthen our use of renewable fuels through the reauthorization of the Federal farm bill. As the farm bill process begins, we must focus efforts on supporting the Nation's energy independence though funding of programs that will support wider use of renewable fuels like ethanol. We encourage Congress to provide an emphasis on energy security as it considers the Bill in 2007.

Consistent implementation of an integrated approach across all sectors will allow us to achieve much more in a shorter timeframe and at a significantly lower cost than if each stakeholder were to pursue solutions independently. Energy independence is too important to the Nation to proceed any other way.

The challenges are considerable but not insurmountable, and there is an enormous amount we can achieve if we act together. We have to ensure that our business is sustainable by making vehicles that continue to meet the changing needs of the 21st century. That's a responsibility we owe to our customers, shareholders and our employees. But at another level, all of us have the opportunity to do something about energy independence—and that's a responsibility we owe future generations.

Thank you again for the opportunity to address the Committee.

STATEMENT OF THOMAS C. DORR

Mr. Chairman, it is a distinct pleasure for me to appear before you today to discuss the future of renewable fuels in the United States. That future is bright.

To be sure, in the short run we are being challenged—as is every other country in the world—by high oil and natural gas prices. This is a global issue. Each of us feels the impact every time we fill up the car or pay a heating bill—as do our friends in London or Tokyo, Nairobi or Istanbul. Nobody is immune.

But at the same time, as President Bush has emphasized again and again, the American free market system has an unmatched capacity to innovate, to create new

technologies and markets, and to turn challenges into opportunities. That is what we are doing today. This has been since 2001, and is still today, a core commitment of this Administration.

President Bush made a comprehensive energy strategy a first priority immediately upon taking office in 2001. He worked for 4 years to get it passed in Congress. He followed up that success by proposing an Advanced Energy Initiative focused on transportation fuels and better ways to power our homes and businesses, and he recently proposed additional measures in response to the current increase in oil prices.

Most of these initiatives, however, long predated the current price increases. President Bush has been far in front of this issue, and he has been consistent. The strategy is straightforward. The United States will, in the long run, deal from strength, not weakness. We do have a costly addiction to imported oil. But we can kick that addiction if we make up our minds to do so. The President is determined to do just that.

The President's energy initiatives—from his initial National Energy Policy recommendations in 2001 to the Energy Policy Act of 2005 and the Advanced Energy Initiative—are comprehensive.

The United States has extensive supplies of clean, safe energy. These include significant reserves of conventional oil, natural gas, and coal. We have the technology to recover these resources in an environmentally safe manner, and we should do so.

We have the technology today to build low emissions coal plants as well as safe, highly efficient nuclear plants. We should do so. We are also developing the technology for near-zero atmospheric emissions coal plants and a new generation of nuclear energy technologies.

We are significantly accelerating research on wind and solar power, on hydrogen and fuel cells, on battery technology for hybrid and plug-in hybrid vehicles. Past research on these technologies, along with tax incentives and other policy tools to promote deployment, has helped some of these technologies penetrate the market. At USDA Rural Development alone, we have helped finance 130 wind systems since 2001. More research is needed to further reduce costs of these technologies.

Last but certainly not least, biofuels are an important component of our plan to reduce our dependence on energy imports. U.S. consumption of ethanol last year reached 4 billion gallons, more than doubling the level of 2000. To ensure that this growth stays on pace, the energy bill established a Renewable Fuels Standard of 7.5 billion gallons per year by 2012.

The President and Congress have also extended the ethanol tax incentive, doubled the size limitation for the small producer tax credit, and provided a tax credit of up to $30,000 for the installation of clean fuel infrastructure, such as storage tanks and pumps.

Looking a bit further down the road, President Bush has proposed $150 million in 2007—a 65 percent increase—in Department of Energy (DOE) research funding on ways to produce ethanol cost effectively from cellulosic feedstocks like corn stalks, forestry byproducts, and switchgrass. The 2007 Budget also provides a funding increase for DOE's basic science research on biomass as part of the President's Advanced Energy Initiative.

Process costs for cellulosic ethanol are still relatively high, but the technical experts seem confident that they can be substantially reduced. When this happens, the potential feedstock base for ethanol production will be multiplied many times over. This is one of the most promising mid-term possibilities for displacing a large fraction of our imported oil, and it is therefore a research agenda to which the Administration is fully committed.

The "other biofuel"—biodiesel—is in fact an old idea just now coming into its own. At the turn of the last century, Rudolph Diesel himself originally used peanut oil to power his engines—just as Henry Ford powered his first car with ethanol—but cheap oil shelved that idea until now.

Today, however, a new price environment has changed the equation. From just 2 million gallons in 2000, biodiesel usage in the United States soared to 28 million gallons in 2004 and 91 million gallons in 2005 and is on track to double again in 2006.

Like ethanol, biodiesel is a domestic, value-added agricultural product offering exciting opportunities for investment and wealth creation in rural America. The Energy Policy Act of 2005 provided Federal tax credits for biodiesel production. USDA Rural Development supports the development of biodiesel plants, typically at the feasibility study stage, through our Business and Cooperative programs.

To be sure, biofuels are not the only potential replacement for conventional oil; tar sands, oil shale, coal liquefaction are other possibilities. Hydrogen produced from

multiple domestically available energy sources—including biomass—is a long-term option. Competitive markets will ultimately sort out the winners.

In the near- to mid-term, however, ethanol and biodiesel can have the greatest impact on reducing demand for oil. And our competitive investments at USDA Rural Development are supporting these and other technologies toward this end. Since 2001, we have invested over $350 million in loans and grants for 650 renewable energy and energy conservation projects ranging from wind and solar to methane gas recovery to conservation. In this highly competitive arena, biofuels—ethanol and biodiesel—have won the largest funding share, accounting for 147 projects in all. The Federal investment of approximately $107 million in these projects leveraged an additional $624 million in private funding.

These biofuels totals are ahead of wind, anaerobic digesters, and energy efficiency projects, which are the top three runners-up. In addition, private equity investors are funding a rapidly increasing number of biofuels projects without direct Federal support, which is the truest measure of success for a Federal technology development program. Clearly, biofuels are already breaking out, moving beyond the research and development stage, and going mainstream.

To sum up, rising oil and natural gas prices—painful as they are for American consumers—are opening the door to a wide range of energy technologies that are now competitive. It is clear that a new energy economy is being born. It is also clear that, in the near- to mid-term and perhaps longer, renewable fuels and flex-fuel vehicles will play a key role in this evolution.

Let me conclude with three brief observations. First, the developments we are discussing today are fundamentally market driven. Oil exploration has plateaued while new discoveries of oil tend to be smaller, less accessible, and more expensive to develop. In fact, some experts believe that global conventional oil production is peaking and will soon begin an inexorable decline. That's the supply side.

At the same time—on the demand side—since the fall of the Berlin Wall in 1989, between 2 and 3 billion people have joined the world market system. China and India are achieving strong growth rates and have emerged as major oil importers. The world is a much more productive, prosperous—and competitive—place than it was 20 or even 10 years ago. The rising price of oil reflects these new realities. This seems unlikely to change.

Secondly, it is useful to remember that since the beginning of the industrial age, America's energy economy has not been static. From the mid–19th through the late 20th century, for example, earlier generations of Americans transitioned from animal, wind, wood, and water power to coal, oil, natural gas, and nuclear. The challenges we are facing today are neither unique—the rest of the world faces them as well—nor unprecedented. We have managed such transitions before, and we will do so again.

Finally, from the vantage point of USDA Rural Development, the emergence of a viable biofuels market represents an historic opportunity for job and wealth creation in rural America. Ethanol and biodiesel are distributed resources. Small and mid-sized producers are able to compete. We are acutely interested, therefore, in the development of investment and business models that encourage a high degree of local ownership and control.

It is indeed a privilege for us at USDA Rural Development to contribute to these initiatives. The 2002 farm bill contained—for the first time ever in a farm bill—an energy title providing for a much expanded role for USDA in biofuels, biomass, and renewable energy research, development, and commercialization.

Today, USDA is supporting the development of renewable energy technologies to reduce dependence on foreign oil and create economic opportunity in rural America. In this effort, we coordinate very closely with DOE, the Environmental Protection Agency and a number of other agencies. I frankly cannot recall this much communication and cooperation on any prior initiative. This is government at its best serving the needs of our citizens, and it reflects the commitment, leadership, and vision of President Bush on this vital issue.

The success of this effort is important for our Nation's national security and economic competitiveness. It is important to the future of the auto industry and the American way of life. And it is, as I noted earlier, an unprecedented opportunity for creating ownership, wealth, and economic opportunity in rural America.

Thank you. That concludes my prepared statement. I will be happy to address any questions you may have.

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