
South Dakota's Leadership in Production and Adoption of Agricultural Biofuels

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In South Dakota we are doing all that we can to support biofuels technology and to commercialize and promote their use. Since 2002, ethanol production has tripled within our state and we have no intention of stopping there. South Dakota is ranked first in the nation in farmer-owned ethanol plants, which is important because it means that the profits stay in the local area.

RAPID EXPANSIONS

We are first in the percentage of corn used and fourth in total ethanol production in the United States. South Dakota's ethanol plants produced more than 550 million gallons of fuel in 2006, a new record for our state. In 2007, South Dakota is expected to develop the capacity to produce 843 million gallons. Altogether, with state incentives, federal incentives and private hard work, we will boost ethanol production from 165 million gallons in 2002 to over a billion gallons by the end of 2008, including facilities operating now, those under construction and those that have been announced or are on the drawing board.

To encourage people to use ethanol, we have reduced state taxes on ethanol-blended gasoline at the pump since 1979. We provide a \$0.02 per gallon tax break for the 10% blend and a \$0.12 per gallon tax break for E85. In the past 27 years, \$75 million in taxes were not collected from gasoline users. Since 1989 we've provided production incentives to ethanol plants. In 17 years those payments have totaled over \$43 million. But we've done more than that because we've also supported opportunities to transport the ethanol. We've put together over \$6 million in rail-line work and in loans for improvements for ethanol plants in the eastern part of the state. Last November I implemented a new flex-fuel-vehicle (FFV) purchase policy for our state fleet. We now buy FFVs for all models on which the option is currently available. That was about 82% of the state's order of new vehicles in 2006, bringing the FFV total in the state fleet to 562 units or about 17%. Within the next 2 years, 57% of our fleet will comprise FFVs. It will be hard to go much

higher than that until the industry produces three-quarter-ton and larger trucks with flex-fuel engines. But when they make them, we will buy them. Our state transportation shops, where you would normally find a state employee filling up a vehicle, don't carry E85. In order to generate an interest in the private sector in putting in E85 pumps, we make our state employees purchase E85 fuel from convenience stores and other private-sector pumps. It's a little more expensive, but we're moving in the right direction with our policy of utilizing products from within our state. I have had only a handful of complaints from taxpayers recognizing that the dollars are staying locally for the purchase of gasoline, even if it costs a little more than buying in bulk at our state shops.

I've proposed and won approval of a state excise-tax exemption to promote ethanol-plant expansion. We used to have an exemption for new construction, but discovered that plants can become more efficient with expansion in an existing location.

CENTERS OF EXCELLENCE

I am pleased to relate that, in 2006, university researchers and industry partners in South Dakota and throughout the nation collaborated to develop South Dakota's fifth 2010 research center. The term "2010" denotes a long-term plan for economic development for educational purposes and for promoting a knowledge-based economy within our state. This fifth center is for bioprocessing R&D. It will focus on research that leads to new technologies for processing crop-derived materials in an effort to reduce the nation's dependence on foreign oil.

During our 2007 legislative session, we won approval for our sixth 2010 research center: the Center of Excellence for Drought-Tolerance Technology, at South Dakota State University. The primary focus will be to identify genes associated with resistance of drought, extreme temperatures and disease, and improved crop quality. It will emphasize research that leads to emerging technologies and drought-tolerant crops and partnerships with the private sector so that we will have crops and feedstocks for our animals and energy production in the future. Climate change may mean less rainfall within our state along with the rest of the Great Plains, and we want to have available the types of crops to continue to be the breadbasket for America.

SUN GRANT INITIATIVE

South Dakota State University, a leader in the \$192 million Sun Grant Initiative to develop the bioeconomy, hosts the North Central Sun Grant Center for Indiana, Illinois, Iowa, Minnesota, Montana, Nebraska, North Dakota, Wisconsin and Wyoming as well as South Dakota. The Sun Grant Initiative was established by Congress for the purposes of researching and developing sustainable and environmentally friendly biobased energy alternatives in cooperation with the Departments of Transportation, Energy and Agriculture.

In the private sector, South Dakota-based ethanol-industry leaders POET and Vera-Sun, are at the forefront in research and the building of integrated biorefinery facilities to produce starch and cellulosic ethanol and other biobased products. Because of all of these efforts, South Dakota is now the first state to produce more ethanol than gasoline consumed; in 2006, our citizens purchased 438 million gallons of unleaded vehicle fuel

and in November of that year our state recorded over 440 million gallons of ethanol production. Therefore, for private passenger vehicles, South Dakota has become virtually energy-independent. For biodiesel, I've issued an executive order directing the use of a minimum of 2% biodiesel in all state diesel vehicles whenever it is available. We've changed our laws to provide incentives for the expansion of plants producing ethanol and other alternatives from a variety of biomass products such as wood chips, corn stalks, corncobs, wheat straw, and, I hope, switchgrass. We will produce ethanol from as many different sources of biomass as possible; we must diversify if we are to meet the goals that most people in America would like to see.

ACHIEVING GOALS

More research is needed. I'm proud that South Dakota and NABC are playing key roles in our nation's efforts to replace 25% of our petroleum needs with renewable energy resources by the year 2025¹. The goal is to have America's farms, ranches and forests provide 25% of the total energy consumed in the United States while continuing to provide safe, abundant and affordable food, feed and fiber.

It's one thing to make a goal, it's another thing to do the planning and then the hard work that makes the goal become a reality. As a member of the Midwest Governors Association, I'm proud that we've adopted the 25×'25 goal along with over 500 other organizations and businesses. States like South Dakota must continue their individual efforts to promote production and encourage use of alternative fuels and alternative energy so that we can become truly energy independent as a country. The national government has a very significant role to play as well. In addition to the Midwest Governors Association, South Dakota is also a member of Western Governors Association and that organization has also made energy independence a top priority. Three years ago, we asked a distinguished and diverse group of more than 250 high-level stakeholders from throughout the west to craft a series of policy recommendations to develop an additional 30,000 megawatts of clean energy by 2015; to achieve a 20% increase in energy efficiency by 2020; and to create incentives for a reliable and secure transmission grid for the next 25 years. To meet these and the 25×'25 goal, we must have some long-term federal commitments to creating alternative energy and energy independence. In a nutshell, for any of us to significantly move forward we need long-term extensions of the federal tax credits that did so much to start the current alternative energy revolution. We need:

- a 10-year extension of the existing production tax credit for renewable electricity technologies, a 10-year extension of the investment tax credit for solar technologies,
- a 10-year extension of tax incentives for all innovative energy-efficient technologies,
- a significant increase in the current integrated gasification combined cycle (IGCC) tax credit, and
- need significant extension and increase of the cap on clean energy bonding authority for public power and for the tribes.

¹See pages 43–46.

Those are the key points that our western governors and lobbyists are making to the Senate Finance and House Ways and Means committee members this week. We cannot continue with 2- and 3-year extensions of these important tax credits. We need long-term extensions so that many of the commercial projects that will come from research can be built and produce more homegrown American energy.

NATIONAL PRIORITIES

Another way that we can work together with our Congressional delegations is to make sure that they truly understand the importance of biofuels and renewable energy in their writing of the new 2007 Farm Bill. A national commitment to renewable energy was initiated 5 years ago with the 2002 Farm Bill; the energy title focused on renewable energy, energy efficiency and biobased products, creating several excellent programs that need to be continued, such as the Renewable Energy and Energy Efficiency Improvements Program and the Biomass Research and Development Program, the Energy Audit and Renewable Energy Program, the Biorefinery Development Grants Program, the Cellulosic Bioenergy Program, the Conservation Biomass Pilot Project, the Bioenergy and Products Research Initiative and the Forest Wood to Energy Program.

A few years ago electric outages were in the headlines. Today it's high gas prices. Both electrical generation and transportation fuels are critically important to the future of the United States. Of the 20 million barrels of oil consumed each day in the United States, 68% is used in the transportation sector; however, currently, biofuels produce only 2% to 3% of those transportation fuels. It's imperative that we develop long-term uninterrupted flows of transportation fuels and that means developing alternative replacement fuels including ethanol and biodiesel. As we get smiles from people throughout our state every time we say it, I'd much rather be doing business with a farmer in South Dakota, Nebraska or Iowa than a sheik in the Middle East. It doesn't mean that we don't have friends there, but I'd much rather have the dollars staying locally.

Using new alternative fuels will require the development of adequate infrastructure including vehicle systems, vehicle-refueling facilities, distribution and storage facilities, refineries and conversion facilities. Domestically produced biofuels give us both immediate and potentially long-term and long-lasting solutions to national security, economic competitiveness and price and supply problems that plague us today. Domestically produced biofuels obviously also create jobs, keep dollars in the United States and lessen adverse environmental impacts. This is so important to western governors that we have created a regional taskforce to develop a policy roadmap for alternative fuels. The roadmap will describe the potential resources, technologies and capabilities in the western states and create possible scenarios for sustainable feedstock development, conversion technologies and environmental impacts that can be influenced by public policy.

ENERGY-SOURCE INTEGRATION

Huge supplies of renewable energy will not become available overnight, nor will they totally replace petroleum in the foreseeable future. Our national goals are to increase domestic energy production and trade with energy producers who are our friends. We must

start using more Canadian crude oil. TransCanada is building a pipeline from Hardisty, Alberta, through the Dakotas down to Oklahoma then east to Illinois that will carry 435,000 barrels/day of tar-sands crude to US refineries. That's 435,000 barrels that we won't need to get from the Middle East or Venezuela. There's talk of other new pipelines to bring more, needed tar-sands crude to the United States.

The same is true of coal that is right here in the United States. Again, ways of generating electricity without fossil fuels will not happen overnight. We will continue to need coal and new coal technologies for cost-effective energy production, stable energy production, and a transition to a future that will continue to include both alternative energy and cleaner burning coal. Promoters of biofuels, coal and oil should not become mutual enemies. We will need all three plus natural gas, solar and other new technologies. No single solution exists for our energy problems. There are many solutions and the providers of those solutions should not waste their time and resources in conflict with each other.

RURAL REVITALIZATION AND RESOURCE PRESERVATION

Much of what will happen in the future and on the bridge to the future will be market-driven. Most of the users of electricity and fuels—and that's all of us—are not going to pay more for fuel just so that we can be politically correct. Our choices will be determined by price, quality and reliability, as with any other product in the marketplace. And all who do the research to create biofuels production processes will play roles in determining price, quality and reliability; the energy future of America is truly in your hands. Today, many millions of rural Americans have a dream of new energy independence and new prosperity. They are beginning to see that dream come true, which is where hard work comes into play. Each of us has a role in the creation of cost-effective energy alternatives for the future.

One of the great things about the future is that it's not determined yet. We are not the victims of destiny. We are the creators of our own destiny. We create the future for ourselves, our children and all of the future generations with every decision that we make. That's why conferences like this are so important. A farmer once told me that all real wealth comes from the land. He was right. The oxygen we breathe, the food we eat and almost all of the fuel that we use to run our machines and create the electricity that we use come from the land. Our task is to make sure that we use that land wisely for those human purposes so that it will always be there for the generations that come after us.



MIKE ROUNDS was sworn in as South Dakota's thirty-first governor in 2003. From 1990 to 2000, he served five terms in the state senate, representing District 24, including Pierre and the surrounding areas. In 1994, he was chosen by his peers to serve as senate majority leader, a post he held for six years.

The oldest of eleven children, he was born in Huron, SD, and is a lifelong resident of Pierre. He earned a BS in political science from South Dakota State University. He is part owner of Fischer, Rounds & Associates Inc., an insurance and real estate agency with offices in Pierre, Mitchell, Rapid City and Brandon. He previously served as board president of the Oahe YMCA and vice president of the Home and School Association of St. Joseph School. He is married with four children.

Governor Rounds has proposed a plan to create a coalition of ethanol-producing states to ensure a sound national ethanol policy in order to maximize promotion of renewable fuels. Ethanol-producing states sometimes compete with their neighbors in the marketplace. In addition, potentially huge ethanol markets (*e.g.* California) have not been tapped due to perceived obstacles. A coalition can address issues such as reliability of supply during drought years and transportation costs.