

TITLE IX

ENERGY

SUMMARY OF SUPPORT OF RENEWABLE ENERGY PRODUCTION IN RURAL AMERICA

Recommendation In Brief

Expand Federal research focused on renewable fuels and bioenergy and reauthorize, revise, and expand programs that provide valuable tools for the advancement of renewable energy production and commercialization.

Problem

In fiscal year 2005, U.S. ethanol and biodiesel production made from all sources was nearly 4 billion gallons and 91 million gallons, respectively. Comparatively, 140 billion gallons of gasoline and over 60 billion gallons of diesel fuel were consumed in the U.S. in 2005.

Even with the success of corn and soybean biofuels, to substantially reduce America's dependence on imported oil, biofuels will need to be made from cellulosic processes that use feedstocks such as specialty crop biomass, switch grass, corn stover, straw, and other woody biomass. Some cellulosic conversion processes have been scientifically demonstrated to be capable of producing biofuels and other energy.

Limited government support, in partnership with the private sector, will help to advance commercial application of these innovations. Government support of cellulosic energy is needed because the scale of investment required is very large, the industry is new and thus faces uncertain risks, and there is an urgent need to diversify energy sources for economic and security reasons.

In addition to reducing our nation's dependence on oil, renewable energy is reinvigorating rural America. The agricultural implications of renewable energy were highlighted repeatedly during USDA Farm Bill Forums. For example, John from Illinois said, "Producing cellulosic biomass for base-load renewable energy and other uses will provide farmers and ranchers with a new crop and many rural communities with new processing businesses and allied agricultural services opportunities." Jeffrey of Vermont said, "USDA is uniquely suited to help propel a major renaissance of agricultural economic prosperity through strong action to increase the production of farm based renewable energy of all types."

Developing this technology in a way that enables commercialization depends on quality, highly-focused research. Yet, bioenergy research and development totals only two percent of USDA's entire research and development portfolio. This level of support is inconsistent with our nation's energy supply and security priorities. USDA was repeatedly encouraged to strengthen investment in renewable energy by people like Richard, of Nebraska, who said, "We believe the 2007 farm bill should include a focal point on renewable energy. The energy title should be strengthened." Chad, of Washington State suggested in his written comments, "Now we have the opportunity to

help provide energy to offset oil imports. We need to fund the development of renewable energy sources.”

Recommended Solution

Funding basic and applied research, as well as sharing the risk through loan and loan guarantee programs, helps to improve the economic, technical, and commercial viability of new, high capacity renewable energy processes. Once a process is recognized as having achieved commercial viability, the Federal government should refocus support on other less developed, yet promising processes. To carry out this approach, the Administration recommends the following:

1. Initiate a new, temporary program to provide \$100 million in direct support to producers of cellulosic ethanol. (see proposal entitled “Cellulosic Bioenergy Program” on pages 145 - 146).
2. Reauthorize the BioPreferred program, revise provisions to improve its effectiveness, and invest \$18 million over 10 years to expand and improve the program. (see proposal entitled “Expansion of Biobased Products Market” on page 147).
3. Reauthorize the Renewable Energy Systems and Energy Efficiency Improvements loan guarantee program. The Administration proposes a loan guarantee program funding level of \$210 million, which would support \$2.17 billion of guaranteed loans over 10 years. The loan cap for funding cellulosic ethanol projects would increase to \$100 million per project, and these cellulosic projects would be exempt from the cap on loan guarantee fees. Further, the Administration recommends incorporating these programs into the Business and Industry Loan and Loan Guarantee Program. Prioritize funding for the construction of biorefinery projects in the Business and Industry loan guarantee program. (see proposal entitled “Streamline Rural Development Programs” on pages 122 - 123).
4. Reauthorize the Renewable Energy Systems and Energy Efficiency Improvements grant program. The grant program would be funded at \$500 million over 10 years. This program will continue to support smaller alternative energy and energy efficiency projects that directly help farmers, ranchers, and rural small businesses. The goals would be consistent with those contained in the Biorefinery Development Grants program, which include providing diversified markets for agricultural and forestry products, increasing the country’s energy independence, and enhancing rural development opportunities. (see proposal entitled “Streamline Rural Development Programs” on pages 122 - 123).
5. Enhance the Conservation Reserve Program (CRP) by adding a biomass reserve program to give priority for whole-field enrollment of lands producing biomass for energy production (see proposal entitled “Conservation Reserve Program” on pages 51 - 52).
6. Revise the Biomass Research and Development Act of 2000 to increase the annual competitive grant funding for biomass research, focusing on cellulosic ethanol, with \$150 million in mandatory funding over 10 years. (see proposal entitled “Streamline Rural Development Programs” on pages 122 - 123).
7. Expand USDA and university research by authorizing \$500 million in mandatory funding over 10 years for the creation of a Bioenergy and Bioproducts Research Initiative to increase the cost-effectiveness of bioenergy by facilitating collaboration

between Federal and university scientific experts. The initiative would link USDA Rural Development bioenergy activities to hasten technology transfer (see proposal entitled “Agricultural Bioenergy and Biobased Products Research Initiative” on pages 129 - 130).

8. Accelerate the development of new technologies to better utilize low-value woody biomass by authorizing \$150 million in 10 year mandatory funding for Forest Service research (see proposal entitled “Forest Wood to Energy” on pages 139 - 140).

CELLULOSIC BIOENERGY PROGRAM

Recommendation In Brief

Initiate a new, temporary program to provide \$100 million in direct support to producers of cellulosic ethanol.

Problem

Ethanol produced from corn is growing rapidly, contributing to diversification of the nation's transportation fuel supply and increasing economic opportunity for farmers and rural areas. However, the need for greater production of renewable energy is enormous, but the ability of corn-based ethanol to supply that need is limited. Efficiently producing ethanol from cellulosic feedstocks such as switchgrass, corn stover, wood, waste, and other biomass materials would provide large, new sources of raw materials for the production of renewable fuel. Economically feasible cellulosic ethanol production would enable ethanol to displace much more imported crude oil than relying on corn-based ethanol alone. In addition, production of the biomass for cellulosic ethanol production would create economic opportunities for many farmers in diverse geographic regions across the United States.

Cellulosic ethanol is not commercially produced in the United States today. However, the technology of production has been improved greatly in recent years and demonstration plants are expected to be producing in the near future. This emerging industry faces start-up risks as new, costly plants are built and the technology is improved to achieve commercial-scale production. Targeted government support is needed to help overcome the initial barriers to commercial production.

Recommendation

Initiate a program that would share the cost of biomass feedstocks used by cellulosic ethanol producers for their increase in production above their previous year's level of production. The program would be modeled after the Commodity Credit Corporation (CCC) Bioenergy Program, which expired in 2006, as authorized by Section 9010 of the 2002 farm bill. The new cost share program would provide \$25 million annually in mandatory funding for FY 2009-2012. Eligible biomass feedstocks would include sugar crop and specialty crop waste products.

Background

The CCC Bioenergy Program operated during FY 2001-2006. The initial purpose of the program was to generate demand for surplus farm products, expand biofuel production, and support new biofuel production capacity. The 2002 farm bill funded the program at up to \$150 million annually for FY 2003-2006. The program made payments to commercial U.S. ethanol and biodiesel producers. Payments were based on the year-over-year increase in biofuel production made from eligible commodities. Eligible commodities included major field crops, such as wheat, corn, grain sorghum, oats, rice, and soybeans and other oilseeds; cellulosic crops (such as switchgrass and short rotation trees); and animal fats, oils and greases, including recycled oils. The new recommended

program would operate similarly to the CCC Bioenergy Program, except that payment eligibility would be limited to the increase in cellulosic ethanol produced from biomass feedstocks. The program would include an annual payment limitation per ethanol producer.

EXPANSION OF BIOBASED PRODUCTS MARKET

Recommendation In Brief

Reauthorize the Federal Procurement of Biobased Products program, revise provisions to improve its effectiveness, and invest \$18 million over 10 years to expand and improve the program.

Problem

Section 9002 of the 2002 farm bill created the Federal Procurement of Biobased Products program to encourage Federal government purchases of biobased products. However, several provisions of the authorizing legislation have hampered program implementation and are likely to do so in the future. These provisions include the definition of a biobased product, the limitations on the use of mandatory funding, the lack of funding for program administration, and the lack of authority to designate intermediate production inputs (materials used to create biobased products) for preferred procurement. To increase the Federal market penetration of biobased products, these concerns must be addressed. During USDA Farm Bill Forums, support for biobased products was frequently expressed by people like Suzy of Iowa who said, "...renewable energy and bioproducts are all important things to consider as we head into the 21st Century." Millie, of New Mexico, stated it simply when she said, "Renewable energy and bioproducts need to be priorities."

Recommended Solution

The Administration recommends that the authority in Section 9002 be amended to define "biobased products" as a product determined by the Secretary to be a commercial or industrial product (other than food or feed) that is composed, in whole or in significant part, of biological products including renewable domestic agricultural materials (including plant, animal, and marine materials) or forestry materials. This amends the current definition so that renewable agricultural materials are not limited to domestic sources, thus resolving trade restriction concerns with the current statutory language. The \$1 million in annual mandatory funding currently provided for testing should be continued and expanded to include environmental and performance testing for the purposes of public information as well as for designation of items for procurement. In addition, \$800,000 in annual mandatory funding would enable USDA to provide assistance to other Federal agencies in implementing the procurement program as well as allow USDA to audit and oversee biobased product manufacturers to ensure that their claims regarding their products are valid and that criteria are met for using the label authorized by the program. Finally, materials used to create biobased products, such as chemical building blocks, should be eligible for biobased product designation and labeling.

Background

The Federal Procurement of Biobased Products program helps develop the market for biobased products by encouraging the purchase of these products by the Federal government. Through Federal government purchases, the commercial viability of these products could be established and government demand for biobased products increased,

thus leading to wider public acceptance, increased demand, and increased production of a greater variety of biobased products.