



MAY 2007

DEVELOPING BIOFUELS: CONGRESSIONAL RECOMMENDATIONS

Congress is moving rapidly to spur a new industry across rural America – clean, renewable fuels from biomass feedstocks, including annual and perennial crops and waste products. The “perfect storm” of rising oil and gas prices, national security concerns about U.S. dependence on imported oil from politically volatile and war-torn regions, and concerns regarding climate change caused by greenhouse gases largely generated from heavy use of fossil fuels make the need for Congressional action urgent.

For rural Westerners, many of whom have experienced a long, steady decline in income, the national interest in biofuels could not come at a better time. Congress now has a rare, historic opportunity to implement policies that will transform rural America (as in, for example, the establishment of the transcontinental railroads, the adoption of the Homestead Acts, or Franklin Roosevelt’s New Deal).

WORC with its deep roots in the rural West and longstanding commitment to sustainable, community-friendly energy and agricultural policies is uniquely positioned to set forth a pro-active, visionary, yet achievable and sustainable agenda for federal biofuels initiatives.

WORC’s biofuels policy recommendations are grounded in principles related to stewardship, open and fair markets, and sound community development. WORC eschews biofuels plans that fail to incorporate rural economic development and sound stewardship principles including wildlife conservation, and water, soil, and air quality.

POLICY RECOMMENDATIONS

1. Excise tax credits or other incentives should be capped at 30 million gallons per year for ethanol producers and 15 million gallons per year for biodiesel producers, thereby fostering locally owned biofuels production. Widely dispersed ownership of biofuels production capacity will result in numerous important public interest dividends:

- Substantially enhanced income in rural communities – Studies in Minnesota and Iowa indicate that locally owned ethanol plants return 75 cents for every \$1 in local economic activity, compared to 25 cents for absentee owned energy production.
- Capping production incentives at 15-30 million gallons per year means that farmers, investors and engineers in every region of the country can tackle the challenge of generating transportation fuels from biomass appropriate to their climates, soils, and water constraints, utilizing sustainably produced local biomass feedstocks.
- A more competitive market that is responsive to local conditions, ecologies and feedstocks. Cookie-cutter plants or technologies will fail to maximize the engineering and technological creativity and ingenuity of the American people. Encouraging development on a scale that allows for local financing and farmer or rancher ownership will foster a cornucopia of technology and business models and seed a vibrant and healthy new biofuels industry.
- When producers of the feedstock can participate in ownership in the production of biofuels, they can effectively hedge the volatility that may result as commodities markets adjust to the new realities of biofuels.
- Widely dispersed biofuels production will more readily accommodate small scale family-owned livestock feeding and back-grounding strategies, adding value to animal agriculture without unduly stressing water and land stewardship.



2. ***Biofuels and biomass must be clearly defined as renewable fuels from any agricultural crop, forest product or byproduct that can be used to produce a liquid fuel, thermal energy, or electricity. Biofuels do not include fossil fuels (coal, oil, natural gas) or liquid fuels, thermal energy or electricity produced from fossil fuels, or nuclear power, which are not renewable. Federal incentives and support for biomass and biofuels feedstocks must be clearly linked to sustainability criteria that protect the nation's soil, air, and water resources.***
 - Federal policy should not lump biofuels together with other so-called alternative fuels, such as liquids from coal or other energy sources derived from fossil fuels. First, sustainably produced biofuels are renewable, whereas fossil fuels are exhaustible. Second, biofuels have much lower emissions of carbon dioxide and other climate warming gases than fossil fuels. Third, the capital costs (in dollars invested per installed daily barrel of capacity) would be several times higher for coal refineries producing coal liquids than for biodiesel plants, plants making ethanol from corn, or even cellulosic ethanol plants. Federal investment in one or two plants producing coal liquids could squeeze out federal support for research, development and production of clean, renewable biofuels, given current and projected budget constraints.
3. ***Set a biodiesel Renewable Fuel Standard goal of 4 billion gallons by 2025.***
 - This should be done in tandem with increasing the efficiency of diesel usage. This amount of diesel approximates the amount used in American agricultural production, which makes it a good fit. Encouraging the use of biodiesel on-farm makes a great deal of sense. Savings in transportation, internalizing benefits to producers who also share in the production of feedstocks and manufacture of biodiesel will provide multiple economic and social well-being dividends in rural America. Moreover, farmers and ranchers are optimally placed to utilize the byproducts of biodiesel manufacturing in sustainable, integrated livestock production. The national security advantages of running a large portion of agriculture on biodiesel are self evident. Additional biodiesel can be absorbed into municipal fleets, school buses, garbage trucks, and so on, to clean up urban airsheds.
4. ***Establish a Farmer Owned Reserve to guard against weather disasters, and volatile market distortions in the value of biofuel feedstock commodities.***
 - Ethanol-related increases in the price of corn impact livestock producers. WORC has consistently advocated for fair, cost of production prices to agricultural producers, so the idea that corn growers might earn a living wage should be viewed as an opportunity, rather than a threat. The new reality is that food commodities will be inextricably linked to energy commodities in the marketplace and must be managed to ensure a healthy reserve that can moderate market volatility, however caused. This is especially critical in light of world oil markets and the likelihood that markets will become more unstable as peak oil dawns, and foreign oil producers pursue their self-interests, sometimes at odds with U.S. interests.
 - Long USDA precedent and experience, practical handling issues and a modest, but much-needed, source of income in hard-pressed rural areas are compelling reasons to establish a farmer owned reserve system.
 - The nation maintains a strategic petroleum reserve, which protects producers and consumers from market fluctuations, and also provides a strategic cushion for national security in the event that petroleum imports were suddenly drastically reduced. For all of the same reasons, a biomass reserve is an important public policy.
5. ***Develop programs that will encourage and assist farmers as they tool up to shift their production to meet the nation's new energy needs, including appropriate risk management tools (oilseed crop insurance).***
 - Facilitate crop insurance for new commodities.
 - Assist with incentives and mechanisms to finance new equipment that supports the transition from one commodity to another.

6. *Appropriate sufficient funds to invest in agricultural research on low input oilseed crops in different regions, perennial grasses for cellulosic ethanol, and other viable biomass feedstocks for distributed energy generation.*

- Study and test oilseed varieties and crops. Study and test optimal combinations of perennial grasses in different bioregions. Study and test integrated livestock production (backgrounding and finishing) that is compatible with the family-owned grass-fed cow-calf production of this region; appropriately scaled and more decentralized.

7. *Appropriate funds to provide technical and business assistance to rural communities through the Extension Service, public education, and community based organizations as delivery systems to support new technologies, basic business management training, and workforce development.*

- Most farmers have done an extraordinary job of management in a business where the margin of survival is thin indeed. However, introducing a manufacturing portfolio in rural America with maximum local ownership and management necessitates access to a variety of financial tools, management and technical support, such as business models and start up planning grants, computer information data bases and software, cash flow and accounting programs and training, personnel and human resource management training and support. Many a small business has run aground on the shoals of the above items. With the existing infrastructure of Extension and public and higher education institutions as potential delivery systems, as well as community based organizations and cooperatives, federal support can be made available to the grassroots as expeditiously as possible.

8. *Significantly raise and extend the Renewable Fuel Standard for cellulosic ethanol (currently at 250 million gallons by 2013.) Require the Department of Energy to support a variety of cellulosic ethanol and biomass conversion technologies, regionally appropriate and adaptable to local crops and other feedstocks. Foster innovation by requiring that Requests for Proposals for cellulosic ethanol be awarded to widely distributed production plants utilizing a variety of feedstocks, enzymes, and other inputs.*

- In order to jumpstart cellulosic ethanol production capacity, the best strategy is not a “silver bullet” (e.g. single enzyme or engineering model); but rather a “silver buckshot” approach that encourages the creativity and innovation of numerous engineers, universities, inventors and entrepreneurs. Appropriate, sustainable cellulosic ethanol feedstocks will vary around the country and within the regions. Federal incentives should reflect this reality by making it possible to utilize mixed perennial range grasses in the Northern and High plains, forestry waste products in the Pacific Northwest, rice hulls in California, switch grass in the Midwest, forest or crop wastes in the Southeast, solid waste in the Northeast, or other biomass that is indigenous and/or abundant in each region.
- Multiple cellulosic technologies and feed stocks also serve to build into the American biofuels industry an inherent resilience, allowing for the unanticipated and unforeseen vicissitudes and calamities that can befall one feedstock, or one region, or one design, or one business plan.
- Cellulosic ethanol is critical to prevent the exploitation, erosion, and degradation of soils and water. Researchers at the University of Minnesota have identified that poly cultures of native perennial grasses can provide significant biomass while enhancing soil fertility.
- One unit of cellulosic ethanol energy requires only .10 units of fossil energy, compared to corn ethanol, which takes .74 units of fossil energy per unit of ethanol.

9. *Close the loop-hole in the Energy Policy Act of 2005 which allows corn ethanol to be substituted for cellulosic ethanol if it utilizes alternative fuels for process energy.*

- If left in place, this loop-hole could easily result in the 250 million gallon goal (by 2013) for cellulosic ethanol being entirely taken up by corn ethanol plants that use coal-fired process steam, or anaerobic digestors, many of which are already on the drawing boards or under construction.

10. Recognize renewable and sustainably produced biomass as a thermal fuel that can be readily substituted for natural gas, fuel oil, or coal in heating applications in our homes, schools and industries.

- Expand the Fuels for Schools program to all regions of the Forest Service enabling rural school districts to switch from fossil fuel to sustainable woody biomass from our national forests. This has the dual advantage of stabilizing the school districts energy budgets and utilizing forest waste that is now left to burn in the forest either as a prescribed burn or as a forest fire.
- Provide incentives, comparable to other renewable energies, for the utilization of sustainably produced thermal biomass in homes and industry. As an example this may include tax credits to home owners or businesses that switch from fossil fuel heating to wood pellets, wood chips, straw or another biomass product.

11. Congress should adopt sustainability criteria that ensure conservation and stewardship of soil, water, air and other natural resource values, including wildlife. The primary feedstocks for biofuels need to be grown in a manner consistent with the highest standards of conservation and stewardship.

- The first principal of liquid fuels from biomass must be one that embraces and upholds the long term viability, of the resource. It is well-known that high input, intensive agricultural monocultures can effectively “mine” the fertility of the soil and poison the waters. In light of the impasse that the world has reached with fossil fuels, and the clear limits to natural ecosystems implicit in phenomena like greenhouse gases in the atmosphere, it is incumbent upon policy makers to be visionaries as they shape the future so that the next generation of energy sources is sustainable for our children and children’s children.
- For biofuels to be viable as an alternative to fossil fuels, they must be authentically sustainable and minimize effects on atmospheric carbon and other greenhouse gases.
- In a world where many are hungry, it is critical that energy production not threaten the viability of the earth to generate sustenance. If we are turning to agriculture for a major contribution to energy, we must safeguard resources of soil and water.
- Credible biofuels development must not result in the increased use of coal and other fossil fuels, exacerbating atmospheric greenhouse gas concentrations. To the greatest extent practicable, biofuels plants should be run on cogeneration technologies, wind generated electricity, and other “green” energy sources. Congress can and should discourage the use of hydrocarbons to generate biofuels, and encourage clean, renewable energy sources to operate biofuels plants.
- Federal support for research, development and production of genetically engineered feedstocks would undermine the potential economic and ecological benefits of developing diverse, sustainable feedstocks for biodiesel, ethanol and distributed energy facilities. Widespread use of crops genetically engineered for fuel production would likely contaminate non-engineered crops grown for food. Moreover, successful development of traits useful for biofuels production is likely to be achieved more quickly and safely through new advances in conventional breeding science, without genetic engineering.



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