Testimony of the Honorable James C. Greenwood
President and CEO, Biotechnology Industry Organization
Subcommittee on Conservation, Energy, and Forestry
Committee on Agriculture
U.S. House of Representatives

May 18, 2012

The Biotechnology Industry Organization (BIO) is the world's largest biotechnology organization, with more than 1,100 members worldwide. Within its broad membership, innovative industrial and agricultural biotechnology companies are developing new feedstocks and biological catalysts for production of advanced biofuels, renewable chemicals, and biobased products. Because these feedstocks, manufacturing methods, and products are based on plants and biological processes, they are more efficient, sustainable and environmentally friendly. Importantly, the development and use of biomass for fuels and chemicals in an American bio-based economy, by necessity, cannot be outsourced to other countries.

Ten years ago this week, less than a year following the attacks of September 11, 2001, President George W. Bush signed into law a Farm Bill that, for the first time, embraced the vital role American farmers and foresters can – and must – play in producing domestic energy and therefore improving national security and rural economic prosperity.

Because of bipartisan Congressional support in 2002, and again during the 2008 Farm Bill, agricultural energy programs are revitalizing rural economies, reducing farmer dependence on commodity support programs, and ushering a new generation of advanced biofuels, renewable chemicals, and biobased products to the cusp of commercialization. In short this program is working and our member companies are beginning to put steel in the ground. Please allow me to share a few examples:

(1) INEOS Bio and its joint venture partner, New Planet Energy, are preparing to open the Indian River County BioEnergy Center near Vero Beach, Florida, pictured here [point to picture], later this year. This biorefinery is a major landmark for the country – the first commercial cellulosic biorefinery.

The Biorefinery Assistance Program, which is a valuable Farm Bill energy initiative, helped INEOS Bio obtain debt financing from a farm credit agency with a long history of working with USDA lending programs. Lending, in turn, created over $130 million in private investment for a project that will produce 8 million gallons of cellulosic ethanol and 6 megawatts of renewable electricity per year from renewable biomass, such as yard waste or municipal solid waste, and create 380 direct or indirect jobs. Raising private capital investment to build this first-of-a-kind

facility would have been nearly impossible in today's financial environment without the Biorefinery Assistance Program.

(2) ZeaChem, based in Lakewood, Colorado, is using biotechnology breakthroughs to convert fast-growing poplar trees to chemicals and cellulosic ethanol in central Oregon. Another valuable Farm Bill energy program, the Biomass Crop Assistance Program, or BCAP, helps farmers in the county surrounding the facility to grow the trees that will feed both the demonstration project and the commercial facility when it is completed in the next few years. ZeaChem's commercial biorefinery will employ 100 people and invest several hundred million dollars in local infrastructure; it will also provide employment opportunities to another 442 people.

(3) Coskata, based in Warrenville, Illinois, is leveraging the Biorefinery Assistance Program to secure private capital for a cellulosic biorefinery in Greene County, Alabama, that is expected to create as many as 1,000 new jobs.

Farm Bill energy programs, such as the Biobased Markets Program, are also fostering innovation and domestic job creation in the renewable chemicals and biobased products sector. Myriant, for example, is one BIO member investing in the United States by building a 30 million pound per year commercial succinic acid biorefinery in Lake Providence, Louisiana. The biorefinery will create 50 full time jobs and will revitalize the Port of Lake Providence. The Biobased Markets Program is expanding consumer awareness of these promising alternatives to petroleum-derived chemicals and products through consumer labeling and preferred procurement procedures.

Biotechnology is unlocking the potential of agriculture and forestry to create new opportunities like these for rural economic prosperity and energy security. Farm Bill energy programs, such as the Biorefinery Assistance Program, BCAP, and the Biobased Markets Program, in combination with complimentary federal policies like the Renewable Fuel Standard and supportive tax policies, are speeding technologies to commercial reality. We must continue investments in America's energy and agricultural future, much like the Senate Agriculture Committee acknowledged when it passed mandatory funding for these programs in the bipartisan bill that passed the committee last month on a vote of 16 to 5. I urge this committee to do its part as well and to reauthorize Farm Bill energy programs with meaningful mandatory funding.

For purposes of my written testimony, I attach hereto the following supporting documents as references to the subcommittee:

<u>Appendices</u>
Appendix A – Timeline and photo book of energy title program results
Appendix B – Energy Title "program-by-program" job creation and other statistics
Appendix C – Detailed justification of Biorefinery Assistance Program
Appendix D – USDA analysis of BCAP program reforms under final rulemaking
Appendix E – Letter of support for Farm Bill energy programs signed by over 100 organizations

INEOS Bio New Planet Energy
Indian River Bioenergy Center
Vero Beach, Fla. April 3, 2012

Bio
BIOTECHNOLOGY
INDUSTRY ORGANIZATION

ZeaChem, Inc.

Cellulosic Biofuel Demonstration Biorefinery

Boardman, Ore. August 2011

Bio
BIOTECHNOLOGY
INDUSTRY ORGANIZATION

Myriant

Bio-Succinic Acid Commercial Biorefinery

Lake Providence, La. April 2012

Farm Bill Energy Title
Timeline* of a Successful Policy Initiative
2012

***source: BIO**

Date	Event
February 13, 2002 Enactment of the Farm Security and Rural Investment Act of 2002 [Pub. L. 107-171]	Enactment of the first-ever Farm Bill Energy Title, with comprehensive approach to agriculture energy development and a focus on developing renewable energy, including biofuels and biobased products.
	Enactment of **Biobased Product Purchasing Requirement Program** • Required federal agencies to purchase products from a list of environmentally preferable biobased products provided they were reasonably comparable in price/performance/availability. • Funded at $8M over the life of the 02 Farm Bill.
	Enactment of the **Biomass Research and Development Grant Program** for biorefinery construction. • Awarded grants of up to 50% to offset the cost of developing/constructing biorefineries to demonstrate the commercial viability of converting biomass to fuels or chemicals. • Funded $60M over the life of the program.
2002	Cargill-Dow joint venture, which eventually becomes NatureWorks LLC, opens PLA resin manufacturing facility in Blair, Neb., producing 70,000 tons and employing 230 people, following three years of pilot production.
February 10, 2005	Final guidelines issued for designating biobased products for federal reference.
March 2006	USDA BioPreferred Program designates first six categories of biobased products for preferred federal purchasing: mobile equipment hydraulic fluids; roof coatings; water tank coatings; diesel fuel additives; penetrating lubricants; and bedding, bed linens, and towels.
November 2006	DuPont Tate & Lyle opens commercial biorefinery, producing 100 million

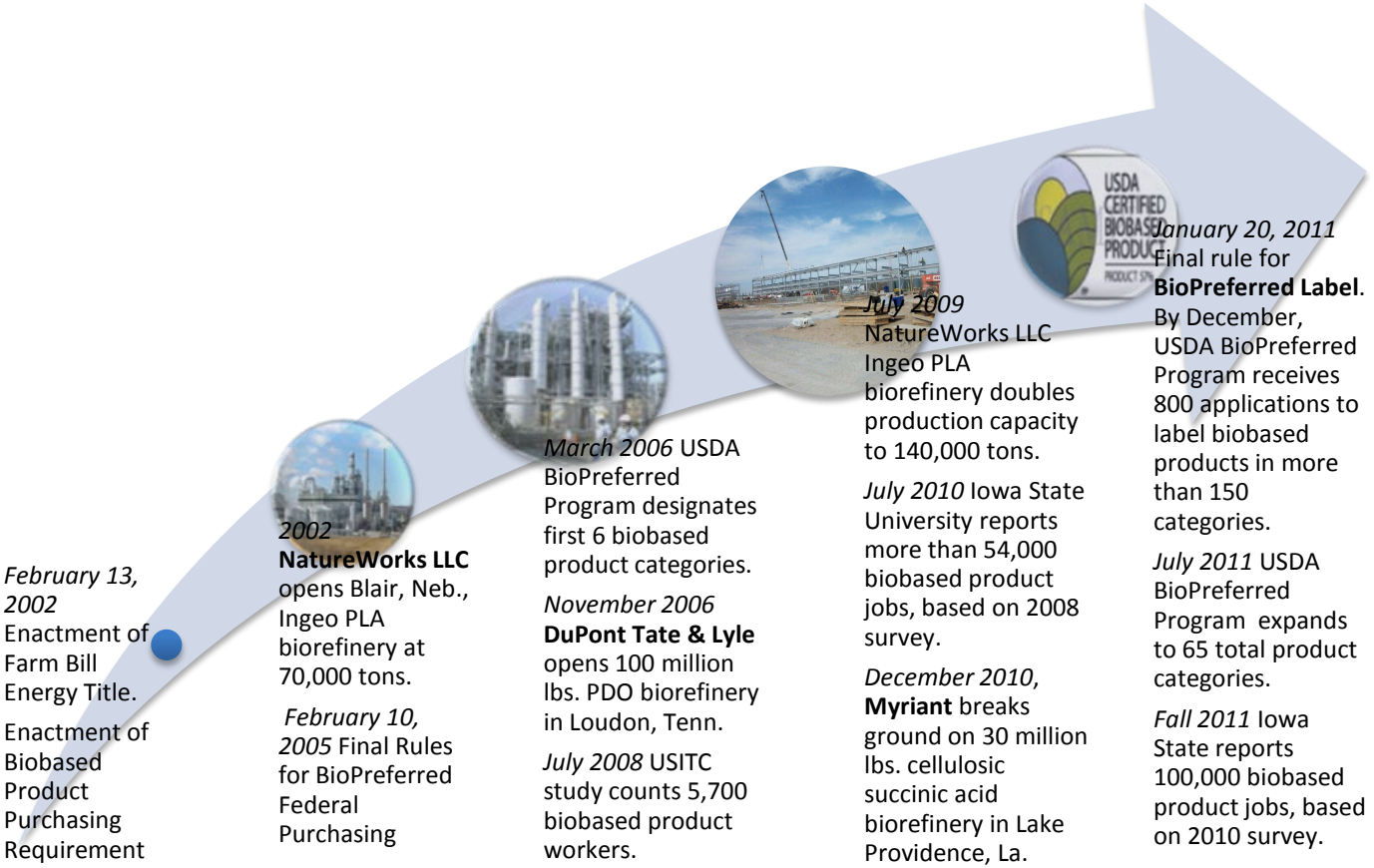
	pounds of PDO annually, in Loudon, Tenn., following six years of pilot production.
June 11, 2007	Notice inviting applications for biomass research and development grants. This notice, issued five years after the 2002 Farm Bill, was the first funding opportunity to help with the costs of biorefineries.
May 2008	USDA BioPreferred Program designates additional 27 categories of biobased products for preferred federal purchasing.
May 22, 2008 Enactment of the Food, Conservation, and Energy Act of 2008 (Pub. L. 110-234)	Enactment of the **Biobased Markets Program** • Funded at $9M over the life of the Farm Bill (2008-2012).
	Enactment of the **Biorefinery Assistance Program** • Provides loan guarantees for the development, construction, and retrofitting of commercial-scale advanced biorefineries. • Funded at $320M over the life of the Farm Bill (2008-2012).
	Enactment of the **Biomass Crop Assistance Program (BCAP)** • Provides payments to rural landowners to establish, produce, and deliver biomass feedstocks for biofuels production. • Funded at "such sums as necessary".
July 2008	U.S. International Trade Commission study, "Industrial Biotechnology: Development and Adoption by the U.S. Chemical and Biofuel Industries," counts 5,700 workers in the biobased industry.
July 2009	NatureWorks LLC doubles production capacity to 140,000 tons of PLA at Blair, Neb., biorefinery.
October 2009	USDA BioPreferred Program designates additional 9 categories of biobased products for preferred federal purchasing.
December 2009	USDA offers conditional commitment and begins to negotiate loan guarantee for Sapphire Energy under the **Biorefinery Assistance Program**.
October 2010	USDA BioPreferred Program designates additional 9 categories of biobased products for preferred federal purchasing.
October 27, 2010	Final Rule issued on the **Biomass Crop Assistance Program**. This final rule importantly reformed the CHST matching payment program to incentivize collection and delivery of only that biomass that would otherwise be uneconomical to retrieve and convert into energy.
December 2010	POET Biorefining facilities in Emmetsburg, Iowa, Scotland, S.D. and Chancellorsville, S.D. qualify as Biomass Conversion Facilities under **BCAP** rule.

	Myriant breaks ground on a 30 million pound commercial succinic acid facility in Lake Providence, La.
January 5, 2011	USDA offers conditional commitments and begins to negotiate loan guarantees for INEOS Bio, Enerkem and Coskata, under the **Biorefinery Assistance Program.** INEOS Bio has operated a pilot biorefinery in Fayetteville, Ark., since 2003. Enerkem has operated a demonstration biorefinery in Quebec since 2009. Coskata operated a demonstration biorefinery in Madison, Pa., for two years, beginning in 2009.
January 20, 2011	Final Rule issued on the **Biobased Markets Program. Final Rule issued for "BioPreferred" Voluntary Labeling of Biobased Product.** By the end of 2011, BioPreferred had received applications for the certification of more than 800 individual products in 150 different categories, ranging from industrial supplies to personal care items. BioPreferred has identified more than 25,000 products available on the market.
February 3, 2011	USDA Inspector General Report criticizing the initial implementation of the **Biomass Crop Assistance Program** and making recommendations for reforming its administration.
February 9, 2011	INEOS Bio New Planet Energy breaks ground in Vero Beach, Fla., on the Indian River BioEnergy Center, a biorefinery that will produce eight million gallons of cellulosic ethanol and six megawatts of power when fully operational. The project creates 175 construction jobs.
February 14, 2011	Interim Final Rule issued on the **Biorefinery Assistance Program.**
March 11, 2011	Notice of Funds Availability (NOFA) inviting applications for the **Biorefinery Assistance Program** through May 10, 2011.
May 2011	Farm Service Agency (FSA) announces the first **Biomass Crop Assistance Program** project area, with up to 50,000 acres across 39 counties in central and western Missouri and eastern Kansas, producing up to 150,000 tons per year. 700,000 potential U.S. jobs could be created pursuant to the **Biomass Crop Assistance Program**. USDA BCAP Fact Sheet http://www.fsa.usda.gov/Internet/FSA_File/bcap_update_may2011.pdf
June 6, 2011	Extension of the NOFA inviting applications for the **Biorefinery Assistance Program** to July 6, 2011.
July 2011	USDA **BioPreferred Program** designates additional 14 categories of biobased

	products for preferred federal purchasing. Farm Service Agency announces four new **Biomass Crop Assistance Program** project areas, with more 78,000 acres across more than 100 counties in five states.
August 2011	INEOS Bio New Planet Energy closes private financing, supported by a **Biorefinery Assistance Program** loan guarantee, of Indian River BioEnergy biorefinery. The project employs 50 permanent operators.
September 2011	Farm Service Agency announces four additional **Biomass Crop Assistance Program** project areas, with more than 19,000 acres across 31 counties in four states.
September 15, 2011	Final Rule for **Biomass Crop Assistance Program** amended to provide specifically for prioritizing limited program funds in favor of the "project area" portion of BCAP, with any remaining funds to be eligible for CHST payments.
November 2011	Sapphire Energy closes financing for an algal biofuel biorefinery in Columbus, N.M., supported by USDA **Biorefinery Assistance Program** loan guarantee. Sapphire began construction in June 2011, and will employ 60 operational personnel. Indirect jobs may total 750.
January 2012	USDA offers conditional commitments and begins negotiations for loan guarantees with ZeaChem and Fiberight. ZeaChem began operation of a demonstration biorefinery in Boardman, Ore., in December 2011. Fiberight began a pilot cellulosic ethanol facility in Virginia in 2009 and is working to convert an existing Blairstown, Iowa waste-to-energy facility. The projects employ 100 people and create 338 construction jobs.
January 27, 2012	Notice of Funds Availability for the **Biorefinery Assistance Program** announces there will be no funds available for the program for FY 2012.

Biotechnology Industry Organization (BIO)

Timeline: BioPreferred



Biotechnology Industry Organization (BIO)

Timeline: Biorefinery Assistance Program

February 13, 2002
Enactment of the **Biomass Research and Development Grant Program** for biorefinery construction.

June 11, 2007
Notice inviting applications for **BRDI** grants.

May 22, 2008
Enactment of **Biorefinery Assistance Program,** providing construction loan guarantees.

December 2009
Sapphire Energy receives conditional commitment of loan guarantee under **BAP**.

January 5, 2011
INEOS New Planet Energy, Enerkem, and **Coskata** receive conditional commitments for loan guarantees under BAP.

February 9, 2011
INEOS New Planet Energy breaks ground in Vero Beach, Fla. on 8 million gallon cellulosic biorefinery.

February 14, 2011
Interim Final Rule issued on BAP.

March 11, 2011
BAP invites applications for available funds.

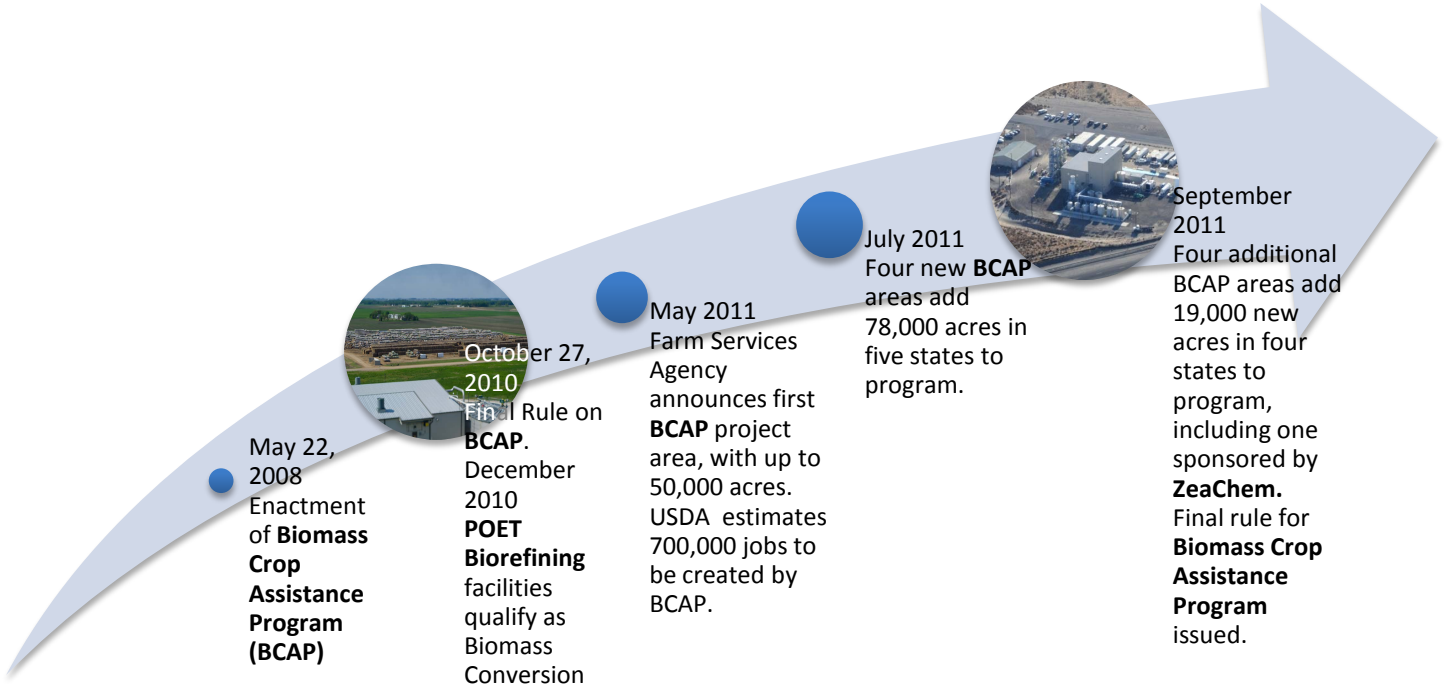
August 2011
INEOS New Planet Energy closes private financing. The project employs 50 operators.

November 2011
Sapphire Energy closes financing for 1 million gallon algal biorefinery in Columbus, N.M.

January 2012
ZeaChem and Fiberight receive conditional commitments for loan guarantees.

Biotechnology Industry Organization (BIO)

Timeline: Biomass Crop Assistance Program



Abengoa Bioenergy, Hugoton, Kans.

26.5 million gallons per year, cellulosic ethanol.
Start Date: 4Q 2013.

Figure 1: Abengoa biorefinery project stack yard.

Figure 2: Abengoa biorefinery construction progress, Feb. 2012.

DuPont Tate & Lyle, Loudon, Tenn.

100 million lbs. per year, 1,3 propanediol
Start Date: November 2006.

Figure 1: DuPont Tate & Lyle PDO Biorefinery.

Fiberight, Blairstown, Iowa

6 million gallon per year cellulosic ethanol.
Start Date: 2Q 2013.

Figure 2: Fiberight biorefinery undergoing renovation to cellulosic ethanol.

Gevo, Luverne, Minn.

22 million gallon per year biobutanol.
Start Date: 4Q 2012.

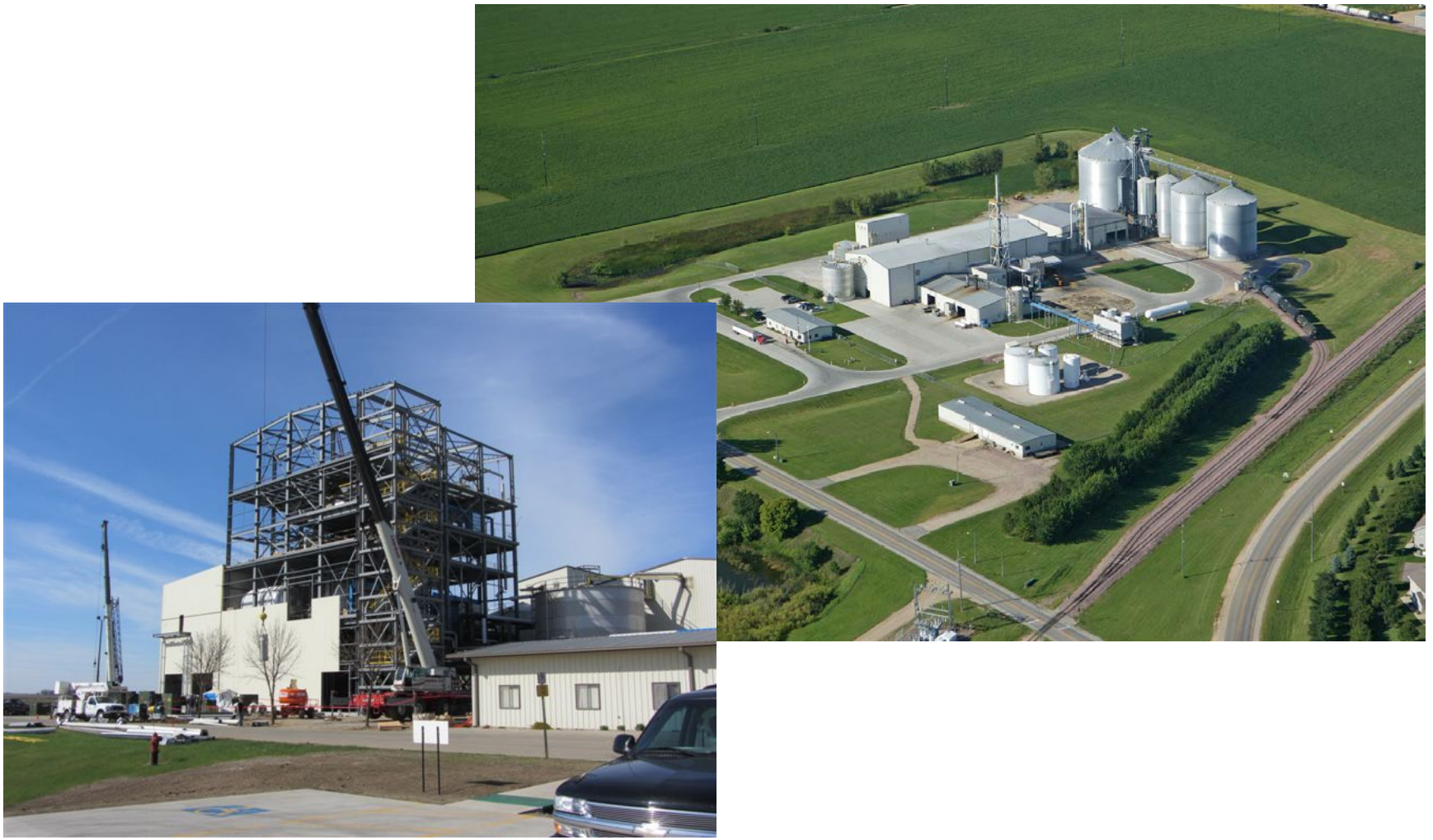


Figure 3: Gevo biorefinery undergoing renovation for biobutanol production.

INEOS New Planet Energy, Vero Beach, Fla.

8 million gallon per year cellulosic ethanol; 6 MW biomass electricity.
Start Date: 2Q 2012

Figure 5: USDA Sec. Tom Vilsack checks construction progress, August 2011.

Figure 4: INEOS Bio New Planet Energy groundbreaking February 2011.

Myriant, Lake Providence, La.

30 million lbs per year of bio-succinic acid.
Start Date: Q1 2013

Figure 6: Myriant construction progress March 2012.

NatureWorks, LLC, Blair, Neb.

140,000 tons per year PLA
Start Date: 2002

Figure 7: NatureWorks PLA biorefinery, in operation since 2002.

POET-DSM Advanced Biofuels, Emmetsburg, Iowa

25 million gallons per year cellulosic ethanol.
Start Date: 3Q 2013.

Figure 9: POET-DSM corn stover stack yard November 2011.

Figure 8: POET-DSM groundbreaking March 2012.

Sapphire Energy, Columbus, N.M.

1 million gallon per year integrated algal biorefinery.
Start Date: 1Q 2014

Figure 10: Sapphire IABR construction progress November 2011.

Figure 11: Sapphire IABR ground preparation October 2011.

ZeaChem, Boardman, Ore.

250,000 gallon per year cellulosic ethanol and acetyl acid.
Start Date: 4Q 2011

Figure 12: ZeaChem demonstration biorefinery, aerial view.

Figure 14: ZeaChem demonstration facility under construction, September 2011.

Energy Title Programs – Proven Effective

REAP

- REAP provides competitive grants and loan guarantees for a broad range of energy efficiency and renewable energy technologies so all agricultural sectors can benefit. Grants may not exceed 25% of the project cost. Loan guarantees are capped at $25 million per loan.

- REAP is a popular program with applications far exceeding resources, providing a long-lasting safety net by cutting input costs and developing revenue sources while serving the public by increasing energy security, cutting energy-related pollution and sparking rural economic development.

- REAP provides excellent value, as it requires a $3 match for each $1 of federal funds and creates jobs, with the USDA estimating 15,000 jobs created or saved in 2010 and 2011.

- REAP has funded over 7,800 projects in every state in the union since 2003, benefitting every state.

Biorefinery Assistance Program

- 9003 is the key federal program enabling the construction and development of next generation biorefineries.

- 9003 is a highly efficient program that has already unlocked hundreds of millions of dollars of private capital at minimal public cost.

- The nation's first commercial cellulosic biofuel production is expected to come online this summer at the INEOS Bio biorefinery in Vero Beach, Florida -- thanks to a USDA biorefinery loan under 9003. This project is expected to create 380 high quality jobs in central Florida over the next year.

- The INEOS Bio project -- and several more to follow in Mississippi, Iowa, Oregon and elsewhere – will provide a much needed technology demonstration that will hasten private investment in additional biorefinery construction and transition the industry to self sustainability.

BCAP

- BCAP provides funding for the establishment and maintenance of purpose-grown energy crops and for the collection, harvest, storage, and transportation of biomass material to approved energy conversion facilities.

- BCAP is the *only* federal program targeted at the deployment of next generation biorefinery feedstocks. As such, it is vital to establishing a sustainable and reliable feedstock supply for the commercialization of cellulosic biofuels and bioproducts.

- USDA's October 2010 rulemaking fully resolved issues with the program's initial roll out.

- BCAP has helped establish innovative purpose-grown energy crop projects on over 150,000 acres across 10 states, including Arkansas, Pennsylvania, Oklahoma, Kansas, Montana, and elsewhere. It is estimated that these projects will create more than 3400 jobs and will provide the feedstocks to produce approximately two million gallons of biofuels each year.

Biomass R&D Initiative

- BRDI funds critical research and development of advanced feedstocks and new uses of biomass for fuels, chemicals and power.

- BRDI research is paving the way for the transition to next-generation feedstocks, such as perennial grasses, short rotation woody crops, and agricultural/forestry residues – along with innovative new applications of that biomass

- BRDI funding has supported more than 30 key research projects in dozens of states, including South Dakota, Georgia, Nebraska, Iowa, Mississippi, and elsewhere

Biobased Markets Program

- The Sec. 9002 Biobased Markets Program is the key federal program expanding markets and consumer awareness of renewable chemicals and biobased products

- 9002 has helped create hundreds of new American small businesses and thousands of new jobs producing home-grown biobased alternatives to imported petroleum-based products (source: USDA BioPreferred)

- 9002 is also helping to revitalize the domestic chemical manufacturing sector, bringing high quality manufacturing jobs back to hard-hit regions of the country, while provide new income opportunities for farmers and reducing our dependence on foreign oil – all at a very small price tag.

Biodiesel Education Program

- It is crucial that the public understands the benefits of biodiesel in order to build out the industry and increase demand for this advanced biofuel across the country.

The Biorefinery Assistance Program Is Vital To Advanced Biorefinery Construction & Commercialization

Background

The federal Biorefinery Assistance Program ("the 9003 program") was authorized in Section 9003 of the Food, Conservation, and Energy Act of 2008 ("2008 Farm Bill"). The 9003 program provides for loans for the development, construction, and retrofitting of commercial-scale biorefineries. It also provides for grants to help pay for the development and construction costs of demonstration-scale biorefineries.

The 9003 program is a targeted grant and loan guarantee program in which loans are issued by private lenders. It is managed by the U.S. Department of Agriculture ("USDA"), a federal agency with extensive experience in loan guarantee programs. This 9003 program and its signal of federal support has become vital to unlocking private capital for next generation biorefinery construction.

USDA is the optimum agency to oversee the 9003 program, as it has decades of experience successfully administering loan guarantee programs for small businesses in rural areas. Despite the small risk of backing emerging technologies, the USDA's loan guarantee programs have been delivering overwhelmingly positive returns to taxpayers. In fact, USDA has a loan portfolio of over $100 billion, with more than 97 percent of those loans up-to-date on payments and supporting good jobs across the country.

Under the 9003 program, loans are issued by commercial banks, not the government. Applicants apply to USDA with a commercial bank partner, who has already done due diligence and will take on the majority of the risk. Banks working with the USDA also have decades of experience in commercial lending to small businesses. Companies receiving these loans have been required to invest a substantial amount of their own funds, so they have a clear incentive to succeed. Successful projects cost the taxpayer nothing, other than program administrative costs, making the 9003 program one of the most cost-effective federal programs for technology deployment.

The purpose of the 9003 program is to help pioneer companies developing new technologies that contribute to U.S. energy independence attract private capital for construction. The program has just begun to issue awards, but already is helping to bridge the "valley of death" for next generation commercial biorefineries. These projects are making real progress, meeting benchmarks and creating high-quality jobs. Projects that recently received 9003 loan guarantees have been vetted by federal officials, third party due diligence, and private investors. However, they are still vulnerable to external conditions, including economic and policy uncertainty.

Importance

This is a cost efficient program which has already spurred construction and development of several next generation biorefineries, including the ones described below. These biorefinery projects and advanced biofuels they will produce are yielding concrete results for taxpayers, supporting high-quality jobs, economic opportunity, while also contributing to our nation's energy security and independence. The first two loan guarantees listed below have been finalized, and the next two are currently working to finalize the loan guarantees they have been granted.

- **INEOS New Planet BioEnergy** in Vero Beach, Florida, finalized a $75 million private loan backed by USDA to build a biorefinery capable of producing 8 million gallons of cellulosic ethanol per year from agricultural vegetative waste, yard cuttings, wood and municipal solid waste ("MSW"). The plant will also have an electricity capacity of 6 MW. Construction is already approximately one-third complete, and is on schedule to be finished by the end of April 2012. Over 85 percent of the equipment for the project is being supplied by manufacturers in the U.S. **Associated Jobs: 50 permanent, 380 direct and indirect (including 275 construction jobs) over the next year.**

- **Sapphire Energy** finalized a $54.5 million loan guarantee to demonstrate an integrated algal biorefinery process that will cultivate algae in ponds, and will use dewatering and oil extraction technology to produce an intermediate that will then be processed into drop-in green fuels such as jet fuel and diesel. The project will be constructed in Columbus, New Mexico. **Associated Jobs: 750 direct and indirect.**

- **Coskata, Inc.** has been granted a provisional $250 million loan guarantee to construct and operate a biorefinery facility in rural western Alabama. The project will use woody biomass to produce 55 million gallons of ethanol per year. **Associated Jobs: 700 direct and indirect.**

- **Enerkem, Inc.** has been granted a provisional $80 million loan guarantee to build and operate a biorefinery in Pontotoc, Mississippi, which will be capable of producing 10 million gallons of ethanol per year, using 100,000 metric tons of dried MSW. **Associated Jobs: 70 permanent.**

Recommendation

The Biorefinery Assistance Program is one of the most effective programs under the Energy Title of the 2008 Farm Bill. It is very much a public-private program whose signal of federal support has led, and has the opportunity to continue to lead, to construction of next generation biorefineries. These biorefineries create good long-lasting jobs and help increase U.S. energy independence and security. ***It is critical that the next Farm Bill reauthorize and fund the Biorefinery Assistance Program, and ensure that it supports the full range of biorefinery products. USDA will need new authority to include renewable chemicals and biobased products under the 9003 program.***

USDA FSA

FACT SHEET

UNITED STATES DEPARTMENT OF AGRICULTURE
FARM SERVICE AGENCY

May 2011

Biomass Crop Assistance Program (BCAP)

Overview

BCAP, created in the 2008 Farm Bill, is a primary component of the domestic agriculture, energy, and environmental strategy to reduce U.S. reliance on foreign oil, improve domestic energy security, reduce carbon pollution, and spur rural economic development and job creation. BCAP provides incentives to farmers, ranchers and forest landowners to establish, cultivate and harvest biomass for heat, power, bio-based products and biofuels.

BCAP addresses a classic chicken-or-egg challenge around the start up of commercial scale bioenergy activities. If commercial-scale biomass facilities are to have sufficient feedstocks, then a large-scale energy crop must exist. Conversely, if profitable crop production is to occur, then viable consumers must exist to purchase the crop.

The federal Renewable Fuels Standard (RFS) requires 21 billion gallons of non-corn-starch biofuels in the national fuel supply by 2022 and new types of biomass feedstocks must be available to meet this requirement. Many bioenergy crops need several years to become established. Many bioenergy facilities need several years to reach commercial scale. BCAP serves as catalyst to unite these dynamics by reducing the financial risk for landowners who decide to grow unconventional crops for these new markets.

- With BCAP, crop producers and bioenergy facilities can team together to submit proposals to USDA for selection as a BCAP project area.

- If selected, crop producers will be eligible for reimbursements of up to 75 percent of the cost of establishing a bioenergy perennial crop. Producers can receive up to five years of annual payments for herbaceous (non-woody) crops (annual or perennial), and up to 15 years of annual payments for woody crops (annual or perennial).

- Assistance for the collection, harvest, storage and transportation of crops to facilities will be available for two years, per producer, in the form of a matching payment for up to $45 per ton of the delivery cost.

Highlights

- **Expenditures**

Refinements to the final BCAP regulations have targeted program expenses to a more limited set of materials than were eligible for payment under the Notice of Funding Availability (NOFA) .

- **Blue, white and green-collar job creation in rural America:**

The Record of Decision on the BCAP Environmental Impact Statement estimates that by 2023, up to $88.5 billion in economic activity and 700,000 jobs could be created.

- **New energy crops**

BCAP reduces the financial risk for producers who volunteer to grow crops at an unexplored scale. Potentially eligible crops include switchgrass, miscanthus giganteus, fast-growing woody poplar, jatropha, algae, energy cane, camelina or pongamia.

- **Enhanced stewardship and conservation measures**

1. Biomass must be collected and harvested according to an approved conservation, forest stewardship, or similar plan to protect soil and water quality and preserve land productivity into the future.
2. Native sod cannot be converted under BCAP contracts.
3. Crop collection, harvesting and transportation must be in strict accordance with invasive plant species protections.

- **Protects existing woody markets**

Biomass may not qualify for incentives if FSA determines that the biomass would be diverted from pre-existing markets.

- **Provides feedstock neutrality**

Maintains the 2008 Farm Bill definition of renewable biomass by supporting the use of both woody and herbaceous materials for energy purposes. The production of heat, power, biofuels, and bio-based products all remain supported by BCAP, as required by statute.

- **Kick-starts liquid cellulosic biofuels to meet RFS targets**

Provides incentives for the harvest of biomass for conversion to cellulosic biofuels that achieve 60 percent lower lifecycle greenhouse gas emissions.

- **Matching payments for eligible materials.**

1. Subject to the availability of funding, provides for matching payments to eligible material owners at a rate of $1 for each $1 per dry ton paid by a qualified biomass conversion facility, in an amount up to $45 per dry ton. An eligible material owner

may be a producer of an eligible crop or a person or entity with the legal right to collect or harvest eligible material. By law matching payments may be made to eligible material owners for a maximum of two years.
2. To qualify for matching payment, eligible materials must be collected or harvested directly from the land. Materials cannot be "collected or harvested" after transport and delivery to a conversion facility.
3. Woody eligible material collected or harvested outside of BCAP project area contracts must be a byproduct of preventive treatments that are removed to reduce hazardous fuels, to reduce or contain disease or insect infestation, or to restore ecosystem health.
4. Woody eligible material collected or harvested outside of BCAP project area contracts must not be separated from material for higher value products after delivery to a conversion facility.
5. All eligible material must be harvested in accordance with an approved conservation, forest stewardship, or equivalent plan.
6. Matching payments are only available for eligible materials sold for a fair market value. This requirement replaces the NOFA restrictions regarding related party transaction and makes matching payments available to startup and other vertically integrated operations, but prevents efforts to defeat the purpose of BCAP by inflating biomass prices to gain higher matching payments.
7. Eligible materials do not include harvested grains, fiber or other commodities eligible to receive payments under Title I of the 2008 Farm Bill; algae; food waste or yard waste; or animal waste and animal waste by-products including fats, oils, greases and manure.

- **Establishment payments**

1. CCC will pay producers up to 75 percent of the costs of establishing a perennial crop. Eligible costs do not include the acquisition of land or equipment. Establishment payments are not available for annual crops. Annual crops, however, are eligible for annual payments.
2. Eligible crops cannot be crops eligible to receive payments under Title I of the 2008 Farm Bill, or any plant that is invasive.

- **Annual payments**

1. Biomass producers in BCAP project areas can receive annual payments up to five years for herbaceous biomass (annual and perennial) and up to 15 years for woody biomass (annual and perennial).
2. Cropland base and yield history applicable to the land enrolled in a BCAP contract will be preserved.
3. Annual payments are reduced by a percentage of the value of the crop and any matching payments received as follows:

- (a) 1 percent if biomass sold for cellulosic biofuels (60 percent lower greenhouse gas emissions)
- (b) 10 percent if biomass sold for advanced biofuels
- (c) 25 percent if biomass sold for heat, power or biobased products
- (d) 100 percent if biomass sold for anything other than heat, power, biofuels or biobased products.

- **Eligible land**

Eligible land for BCAP project area contracts include agricultural and non-industrial private forestland, but does not include federal or state-owned land, land that is native sod, or land enrolled in the Conservation Reserve Program, Wetlands Reserve Program, or Grassland Reserve program.

For More Information

For more information on BCAP, please visit FSA's BCAP website at http://www.fsa.usda.gov/bcap.

October 21, 2011

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109 Hart Senate Office Building
Washington, DC 20510

The Honorable Collin C. Peterson
U.S. House of Representatives
1305 Longworth House Office Building
Washington, DC 20515

Dear Senators Stabenow and Roberts and Representatives Lucas and Peterson:

We are writing to urge your strong support for agriculture and forestry-based energy programs and policies in the new farm bill. There are a multitude of reasons why these Federal investments make great sense. The national security benefits are clear. And stable Federal support is essential to help meet rising energy demand and rapidly deploy new biofuels, bioproducts and energy crops, renewable and distributed electricity generation, thermal energy, as well as energy efficiency.

The innovative programs authorized in the Energy Title of the 2008 Farm Bill[1], such as the Rural Energy for America Program, the Biomass Crop Assistance Program, the Biorefinery Assistance Program, and the Biobased Markets Program, have also been particularly valuable to U.S. farmers and the rural economy. These programs, administered by the U.S. Department of Agriculture (USDA), have helped finance thousands of diverse renewable energy projects and improved energy efficiency at farms, ranches and businesses across rural America. Programs are generally over-subscribed and show no signs of abating even as the economy has slowed.

And numerous reputable studies all come to the same conclusion – that building the clean energy economy is likely to create millions of jobs. This is already happening in part due to Farm Bill clean energy investments that have leveraged hundreds of millions of dollars from the private sector. Of course, these jobs and industries bolster U.S. technological competitiveness as well.

[1] The Food, Conservation, and Energy Act of 2008, Pub. L. No. 110-234.

The benefits of Energy Title initiatives also come at a very modest cost. Of all the programs authorized in the 2008 Farm Bill, the Energy Title programs account for less than one percent of total outlays. Further, as longstanding agricultural safety net programs come under increasing budgetary pressure, these energy programs will continue to strengthen and diversify the rural economy.

We recognize the significant budgetary constraints facing Federal policymakers and the bold steps Congress is undertaking to address these challenges. The daunting scope of the task facing the nation is illustrated by the broad and unprecedented powers – and lofty expectations – bestowed on the Joint Select Committee on Deficit Reduction. This deficit reduction effort will require considerable sacrifices from many sectors of the Federal government, including agriculture.

However, as the House and Senate Agriculture Committees engage with members of the Joint Select Committee on Deficit Reduction and set forth the policy priorities of rural America within the next Farm Bill, for the reasons outlined above, we urge you to ensure that the Energy Title is preserved and robust mandatory funding is provided for critically important programs.

We thank you for your leadership on all of these important issues and pledge to work with you to craft farm, forest, and energy policies that work for all of agriculture and rural America.

Regards,

25x'25 Alliance
Advanced Biofuels Association
Advanced Ethanol Council
Agriculture Energy Coalition
Algal Biomass Organization
American Biogas Council
American Coalition for Ethanol
American Council for an Energy-Efficient Economy (ACEEE)
American Council on Renewable Energy (ACORE)
American Loggers Council
American Nursery and Landscape Association
Association of Equipment Manufacturers
Association of State Energy Research and Technology Transfer Institutions (ASERTTI)
Biomass Coordinating Council

Biomass Power Association
Biomass Thermal Energy Council
Biotechnology Industry Organization (BIO)
Distributed Wind Energy Association (DWEA)
Energy Future Coalition
Environment and Energy Study Institute (EESI)
Environmental Law & Policy Center (ELPC)
Florida Renewable Energy Producers Association
Fresh Energy
Growth Energy
Institute for Agriculture and Trade Policy
Iowa Environmental Council
Iowa Solar/Small Wind Energy Trade Association
Iowa Wind Energy Association
Mississippi Biomass and Renewable Energy Council
National Association of Conservation Districts
National Association of State Energy Officials (NASEO)
National Center for Appropriate Technology
National Farmers Union
National Woodland Owners Association
North Carolina Association of Professional Loggers
North Carolina Woodland Owners Association
Ohio Environmental Council
Renewable Fuels Association
Rural Alliance for Renewable Energy
Show Me Energy Cooperative
Society of American Florists
Society of American Foresters
South Carolina Biomass Council
South Carolina Clean Energy Business Alliance
Southeast Energy Efficiency Alliance
Southern Alliance for Clean Energy
Tennessee Renewable Energy and Economic Development Council
Texas Renewable Energy Industries Association

Cc: Joint Select Committee on Deficit Reduction

James C. Greenwood
President & CEO
Biotechnology Industry Organization

James C. Greenwood is President and CEO of the Biotechnology Industry Organization (BIO) in Washington, D.C., which represents more than 1,100 biotechnology companies, academic institutions, state biotechnology centers and related organizations across the United States and in more than 30 other nations. BIO members are involved in the research and development of innovative healthcare, agricultural, industrial and environmental biotechnology products. BIO also produces the annual BIO International Convention, the world's largest gathering of the biotechnology industry, along with industry-leading investor and partnering meetings held around the world.

Since his appointment in January of 2005, he has markedly enhanced the trade association's capacity – increasing both its staff and budget by nearly fifty percent. BIO is now a world class advocacy organization playing a leading role in shaping public policy on a variety of fronts critical to the success of the biotechnology industry at the state and national levels as well as internationally.

Mr. Greenwood represented Pennsylvania's Eighth District in the U.S. House of Representatives from January 1993 through January 2005. A senior member of the Energy and Commerce Committee, he was widely viewed as a leader on health care and the environment. From 2001 to 2004, Mr. Greenwood served as Chairman of the Energy and Commerce Committee Subcommittee on Oversight and Investigation with oversight authority over issues in the full Committee's vast jurisdiction. He led hard-hitting investigations into corporate governance at Enron, Global Crossing and WorldCom; terrorist threats to our nation's infrastructure; and waste and fraud in federal government agencies.

Prior to his election to Congress, Mr. Greenwood served six years in the Pennsylvania General Assembly (1981-86) and six years in the Pennsylvania Senate (1987-1992). Mr. Greenwood graduated from Dickinson College in 1973 with a BA in Sociology. From 1977 until 1980, he worked as a caseworker with abused and neglected children at the Bucks County Children and Youth Social Service Agency. Mr. Greenwood is married with three children and resides in Upper Makefield, Pennsylvania.

Committee on Agriculture
U.S. House of Representatives
Required Witness Disclosure Form

House Rules* require nongovernmental witnesses to disclose the amount and source of Federal grants received since October 1, 2008.

Name: **JAMES C. GREENWOOD**

Organization you represent (if any): **BIOTECHNOLOGY INDUSTRY ORGANIZATION**

1. **Please list any federal grants or contracts (including subgrants and subcontracts) you have received since October 1, 2008, as well as the source and the amount of each grant or contract. House Rules do NOT require disclosure of federal payments to individuals, such as Social Security or Medicare benefits, farm program payments, or assistance to agricultural producers:**

Source:_____ **Amount:**_____

Source:_____ **Amount:**_____

2. **If you are appearing on behalf of an organization, please list any federal grants or contracts (including subgrants and subcontracts) the organization has received since October 1, 2008, as well as the source and the amount of each grant or contract:**

Source:_____ **Amount:**_____

Source:_____ **Amount:**_____

Please check here if this form is NOT applicable to you: _____X_____

Signature: Jim Greenwood

* Rule XI, clause 2(g)(4) of the U.S. House of Representatives provides: *Each committee shall, to the greatest extent practicable, require witnesses who appear before it to submit in advance written statements of proposed testimony and to limit their initial presentations to the committee to brief summaries thereof. In the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include a curriculum vitae and a disclosure of the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by the witness or by any entity represented by the witness.*

PLEASE ATTACH DISCLOSURE FORM TO EACH COPY OF TESTIMONY.