

Bioenergy



Capitol Hill Day

***Bioenergy:
Driver for Economic Growth, National &
Energy Security and Resource Sustainability***

The Road Ahead:

As national and global demand for energy continues to increase, bioenergy solution sets must remain a fundamental component of America's energy future. This rise in energy consumption and costs, combined with increasing volatility in the world's energy markets, means that we as a nation must pursue aggressive goals to reduce our dependency on foreign sources of energy--in a sustainable, reliable, and cost effective manner.

Bioenergy is a critical component of this goal. It uses readily available biomass resources from America's farms, ranches, forests, and waste streams for a wide variety of uses, including transportation fuels, electricity, and heat. Bioenergy has strong potential to reduce our consumption and dependency on fossil and imported fuels. The recently updated USDA Billion Ton Study projects that the U.S. will have between 1.1 and 1.6 billion tons of sustainable biomass available for industrial bioprocessing by 2030. Stated simply, the U.S. will be able to produce more than enough biomass to meet current bioenergy production goals and targets without disrupting markets or negatively impacting the environment,

As a nation we must focus our collective efforts to work towards the implementation of sustainable, domestically-produced energy solutions - solutions that will aid rural development, strengthen our national security and reduce our dependence on volatile oil markets. In order to readily achieve these goals, Congress must support the following bioenergy policy and technology objectives, including:

- A unified, science-based definition of biomass that is utilized across all policy and agency frameworks.
- Maintaining the Renewable Fuel Standard, which will help displace up to 36 billion gallons of petroleum-based transportation fuel annually by 2022.
- Level the policy playing field by extending and reinstating critical federal tax credits such as the electricity production tax credit, 1603 Treasury grant, biodiesel blenders credit, cellulosic biofuels production tax credit, and others.
- The extension of tax benefits to other bioenergy technologies such as thermal, biogas and the utilization of algae.
- Reauthorization of the Farm Bill's Energy Title with the necessary flexibility and funding to ensure that the full potential of agriculture- and forestry-based energy contributions can be realized.
- The development and deployment of management and assessment tools to help ensure sustainable feedstock supplies.
- Fund the joint Department of Defense, Department of Energy, and Department of Agriculture initiative under the Defense Production Act to support the construction of advanced biofuels production capacity.
- Increased investments in research and development that will support the scale up of infrastructure to harvest, collect, transport, and store biomass as well as move bioconversion technologies to commercial-scale production platforms.
- Providing alternative financing pathways for bioenergy systems.

Biomass is a clean and abundant, renewable energy source that utilizes sustainable practices to produce an abundant supply of reliable energy.

Quick Facts

Bioenergy:

- The production of transportation fuels, electricity, and heat from biomass resources produced on America's farm, ranches, and forests.
- Biomass resources include agricultural crops and residues, wood and wood byproducts, dedicated energy crops such as fast growing grasses and short-rotation woody crops, animal manures, municipal solid wastes, and other biobased materials.

Economic Impacts:

- A 2010 25x'25 study found that meeting the RFS2 and a 25% RES by 2025 would produce \$215 billion of additional economic activity and the creation of over 700,000 jobs.
- The Memphis Bioworks Foundation projected that a 40 million gallon cellulosic biofuels plant would produce between 120 and 200 direct and indirect jobs.
- According to 25x'25, mill wastes and agricultural byproducts used for heat and power production continue to grow and today represent a \$1 billion industry with 14,000 jobs and nearly 90 commercial scale electricity production plants across 20 states.
- Bio-ERA estimated that the jobs multiplier for advanced biofuels is five, meaning that for every one job that is created through the development of advanced biofuels additional jobs are created in other sectors of the economy to support this growth.
- Mississippi State University estimated that the employment multiplier for the recovery of logging residues for biopower is 2.92 and for operation of a co-fired electricity plant is 2.25
- According to the *2011 Billion Ton Study Update: Biomass Supply for a Bioenergy and Bioproducts Industry*, the United States has the potential to produce enough biomass on a sustainable basis to replace around one-third of the current U.S. fossil fuel transportation demand.

Sustainability:

- Strengthening the market for biomass encourages landowners to sustainably manage their forests, keeping forests as forests with all their ecological and recreational benefits.
- Sustainably managed forests have the capability to provide fuel for energy for generations to come.
- Dedicated bioenergy cropping systems can be grown on marginal lands and used to buffer streams and rivers to reduce soil, nutrient and pesticide runoff and store carbon.

Current Stats:

- In 2009, bioenergy accounted for over 4% of the nation's energy consumption.
- The industrial sector accounted for 44% of biomass energy consumption; 31% was used in the transportation sector; residential and commercial heating used 17%, and the electric power sector utilized 8%.

U.S. Primary Energy Consumption by Source, 2010 (Quad BTU)

