Energy Facts

A Greener Biofuels Tax Credit:
The Path to Better Biofuels

Next-generation biofuels have the potential to deliver better environmental performance—reduced lifecycle greenhouse gas emissions and farming practices that result in cleaner water and healthier soils—with less impact on food and feed prices. Market incentives are needed, however, to reward good conservation practices. These incentives will prevent growers from having to compete solely on the basis of low feedstock prices and forego potential improvements in the environmental performance of their farming systems. Congress should start by immediately ending the main corn ethanol tax credit—the Volumetric Ethanol Excise Tax Credit (VEETC)—which rewards volume without requiring measurable environmental performance. To jumpstart advanced biofuels, NRDC proposes a technology-neutral Greener Biofuels Tax Credit that rewards producers for creating biofuels that protect our climate and natural resources.

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Today's Tax Incentives Have Failed to Create a Sustainable Biofuels Industry

Policies designed to encourage the first-generation of biofuels—ethanol from corn and biodiesel from soybeans—had multiple objectives: enhanced energy security, rural economic development, improved air quality, and reduced greenhouse gas emissions compared to gasoline. These early biofuels were meant to serve as a stepping stone to the next generation of technologies—those using wastes and dedicated energy crops as feedstocks. Current biofuels incentives, however, overwhelmingly subsidize ethanol made from corn and have failed to help commercialize advanced biofuels.

Today's corn ethanol fails to deliver promised climate benefits and worsens the environmental impacts of intensive corn and soybean production on soils, water and forests. Corn ethanol tax incentives—currently in the form of the VEETC—cost taxpayers approximately $6 billion per year, an unsound investment as the national debt looms large. Furthermore, the VEETC duplicates the Renewable Fuel Standard (RFS), which already requires oil companies to blend increasing amounts of ethanol into our fuel supply. There is considerable support for improved tax incentives that encourage the development of better-performing advanced biofuels.

U.S. policy must provide clear, strong incentives for environmental performance if low-carbon liquid fuels are to become an important part of the solution to climate change. A performance-based tax credit that gives refineries an economic incentive to purchase more sustainable biomass feedstocks will encourage farmers to manage for sustainability, which in practice means minimizing tillage, fertilizer use, erosion, and runoff.

A Performance-Based Tax Credit Will Reward Sustainable Producers and Support Innovation

A Greener Biofuels Tax Credit will shift from paying blenders—the oil companies and refineries that blend ethanol into gasoline—to paying the biorefineries that produce biofuels. Corn ethanol and soy biodiesel producers will be eligible for the Greener Biofuels Tax Credit

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if they employ advanced processes like renewable power and purchase feedstocks from farmers who improve soil quality and minimize polluted runoff. Next-generation biofuel producers could further enhance their earnings by choosing environmentally preferable feedstocks—such as wastes, sustainably harvested cover crops or perennial energy crops like switchgrass and willow, and algae—that require little land disturbance, fertilizer, or irrigation to grow and thereby greatly reduce greenhouse gas emissions.

Many innovative biofuel technologies are being advanced by startup companies with limited revenues. A Greener Biofuels Tax Credit should be convertible from a production tax credit to an investment tax credit or direct grant to aid these small companies and help facilitate a more rapid scale-up of next-generation biofuels. This approach will also help in the difficult investment climate currently facing this fledgling industry. The investment credit, however, should be limited to the first billion gallons of advanced biofuels production capacity.

The Greener Biofuels Tax Credit will Reward Both Climate Performance and Ecosystem Services

NRDC proposes that this new tax credit be worth $1.00 per 76,000 British thermal units (Btu)—the energy content of one gallon of ethanol. Half of the credit will reward climate performance, while the other half rewards other ecosystem services:

- **Climate Performance –** The portion of the new tax credit which rewards climate performance will be paid in direct proportion to greenhouse gas reductions, based on EPA rules for calculating lifecycle emissions developed for the RFS. A refinery's choice of feedstocks, conversion technology, and management of direct refinery emissions will determine the lifecycle emissions of its biofuels. A zero carbon biofuel (100 percent reduction compared to gasoline) will be eligible for the full climate performance tax credit of $0.50 per gallon. The credit will ramp down to $0.10 per gallon for biofuels achieving a minimum greenhouse gas emission reduction of 50 percent compared to gasoline.
- **Ecosystem Services –** To earn the second half of the new tax credit—up to $0.50 per gallon—refineries will have to purchase more sustainable biomass feedstocks, grown by farmers who optimize conservation on the land. The key environmental elements affected by farmers—soil quality, water quality and wildlife habitat—will be scored for biomass feedstocks, using a simple evaluation tool developed by the USDA. Farmers or their technical advisors will enter basic information about on-farm management practices to determine conservation scores. Similar evaluations will be developed for forest biomass, waste, and algae feedstocks. The USDA will develop certification criteria for independent, third-party professionals to assess and annually spot-check conservation scores for feedstock producers.

To qualify for the Greener Biofuels Tax Credit, scores will have to exceed a minimum stewardship threshold, and will be averaged for each biorefinery. The IRS will use the annual climate and ecosystem services scores to determine a total tax credit rate per eligible gallon of annual biofuel production, up to the maximum of $1.00 per gallon equivalent.

Jumpstarting the Next Generation of Better Biofuels

Now is the time to end the VEETC and stop rewarding volume without requiring biofuels to deliver measurable environmental performance. A technology-neutral Greener Biofuels Tax Credit will reward producers for creating the low-carbon biofuels we need to protect our climate and natural resources.

Characteristics of Biofuels Eligible for the Greener Biofuels Tax Credit

- Feedstock meets the definition of renewable biomass
- Feedstock is sourced from farms meeting USDA Conservation Compliance requirements
- Feedstock is sourced from lands not converted from perennial species to annual crops
- Feedstock is not from intact ecosystems such as forest, wetland or grassland
- Feedstock is not irrigated
- Feedstock is not invasive or noxious species
- Crop residue is removed at sustainable levels
- Biorefineries meet the greenhouse gas reduction threshold for their RFS-defined category of renewable fuel
- Feedstock meets the environmental performance threshold score

A Greener Biofuels Tax Credit Will:

- **Reward comprehensive environmental performance** by basing payments on contributions to sustainability instead of only on production volume.
- **Be technology neutral** by applying to all fuels (ethanol, biodiesel, butanol, etc.) and all feedstocks (corn, cellulose, algae, vegetable oils, etc).
- **Protect the climate** by rewarding lifecycle greenhouse gas emission reductions beyond those required by the RFS.
- **Protect the environment** by rewarding soil and water conservation on the farm where feedstocks are produced.
- **Be streamlined** by developing workable reporting systems for farmers, biofuel refiners, and the IRS.
- **Be fiscally responsible** by costing only a small fraction of corn ethanol tax credits like the VEETC.

Greener Biofuels Tax Credit Payments for Three Hypothetical Biorefineries