Woody Biomass for Energy– Tax Incentives

FACT SHEET 6.6

INTRODUCTION

Tax savings are often used to promote economic development in the United States. A case in point is Congress' *Energy Tax Incentives Act of 2005*. This landmark energy tax law provides major tax cuts to producers to boost renewable biomass electric and biofuels energy production and conservation.

This fact sheet outlines the major tax incentives for woody biomass used for energy production. It covers income tax credits, excise tax credits, accelerated depreciation for capital investment, extending existing incentives for longer periods, adding more taxpayers or properties eligible for existing tax breaks, alternative minimum tax relief, and increased tax benefits.

Please note that many incentives contain definite effective periods, eligibility cut-off dates and phase-out provisions. These temporary provisions make tax planning more complex.

FEDERAL TAX INCENTIVES

1. Biomass for Electricity Tax Credit

An income tax credit is allowed for electricity produced from renewable resources (Sec. 38 and 45 of Internal Revenue Code). The amount of credit for 2008 is 2.1 cents per kilowatt-hour for closed-loop biomass electricity production and only 1 cent per kilowatt-hour for open-loop biomass electric energy (IRS Notice of Inflation Adjustment Factor, April 30, 2008).

Qualified taxpayers are energy producers using *closed-loop biomass*, *open-loop biomass*, and other renewable resources.

Closed-loop biomass is any organic matter of a plant managed exclusively for electricity production at a qualified facility.

- The electricity must be sold to unrelated persons in order to qualify for this credit. In other words, power generated for self-use does not qualify.

- Generally, the electricity production facility using closed-loop biomass must be placed in service *after December 31, 1992, and before January 1, 2009* (Sec. 45(d)(2)(A)(i)).

Open-loop biomass from a *forestry* source is any waste material (solid, cellulosic or lignin) derived from "mill and harvesting residues, precommercial thinnings, slash, and brush; solid wood waste materials, including waste pallets, crates, dunnage, manufacturing and construction wood wastes, and landscape or right-of-way tree trimmings; or wood bark and lignin material recovered from spent pulping liquors" (IRS Notice 2006-88)

- The open-loop biomass power generation facility *must be placed in service before December 31, 2008* to qualify (Sec. 201 of Tax Relief and Health Care Act of 2006).

- Cogeneration where open-loop biomass is

Wang, L. 2008. Woody Biomass for Energy - Tax Incentives.
In: Hubbard, W.; L. Biles; C. Mayfield; S. Ashton (Eds.). 2007. Sustainable Forestry for Bioenergy and Bio-based Products: Trainers Curriculum Notebook. Athens, GA: Southern Forest Research Partnership, Inc.

used to produce both electric and thermal energy (such as heat or steam) may also qualify (IRS Notice 2006-88).

- Recycled paper does not qualify for the open-loop biomass tax credit (Sec. 45(c)(3)(A)(ii)(II)).

2. Cellulosic Biomass Fuel Tax Credit

One of the most widely used biofuels, ethanol, can be produced from the cellulose found in trees. Non-food feedstocks, such as wood and switchgrass, are increasingly gaining support for production of cellulosic biofuels.

The 2008 Farm Bill enacted a temporary new tax credit—$1.01 per gallon for qualified cellulosic biomass fuel producers (the Food, Conservation and Energy Act, P.L.110-234). This tax credit is effective for a four-year period — January 1, 2009 through December 31 2012.

3. Cellulosic Biomass Fuel Bonus Depreciation Deduction

To stimulate property investment in biomass fuel production, a special 50-percent bonus depreciation deduction is available for a qualified cellulosic biomass ethanol plant property (Sec. 168(l)). This bonus depreciation deduction is an additional deduction on top of the regular depreciation deduction.

To qualify, the property must be:

- placed in service before January 1, 2013;

- used solely for cellulosic biomass ethanol production;

- a new investment (i.e., "the original use commences with the taxpayer").

The tax law defines the term "*cellulosic biomass ethanol*" as "ethanol produced by enzymatic hydrolysis of any lignocellulosic or hemicellulosic matter that is available on a renewable or recurring basis."(Code Sec. 168(l)(3)). Lignocellulosic or hemicellulosic matter includes, but is not limited to woody materials, bagasse (from sugar cane), corn stalks, and switchgrass (Joint Committee on Taxation, Technical Explanation of the Tax Relief and Health Care Act of 2006 (JCX-50-06)).

4. Ethanol Excise Tax Credit

Excise tax incentives play a significant role in biomass fuel tax laws. By definition, an excise tax is a selective sales tax on a specific commodity or service and usually the tax is passed on to the consumer as part of the cost of the goods or services.

In 2004 an important new excise tax credit was established to benefits ethanol producers. This credit, 51 cents per gallon if the proof is 190 or greater, is found (under "the alcohol mixture credit" of the American Jobs Creation Act. The amount of credit is 51 cents per gallon of ethanol, if the proof is 190 or greater. The 51 cents per gallon credit amount will be reduced to 45 cents per gallon for 2009 and beyond. However, if the production level falls short of 7.5 billion gallons of ethanol, the credit reduction will be delayed (the 2008 Farm Bill).

5. Small Ethanol Producer Tax Credit.

The federal tax code provides an additional 10 cent-per-gallon tax credit for the first 15 million gallons of ethanol produced by eligible small businesses. A small ethanol producer is one, whose productivity capacity of any type of alcohol is less than 60 million gallons at all times during the tax year.

- This capacity includes alcohol made from petroleum, natural gas, coal, peat, and alcohol that is less than 150 proof (IRS Pub.501).

- This credit is effective through December 31, 2012 (2008 Farm Bill).

6. Qualified Gasification Technology Project Tax Credit

Gasification technology converts biomass (or other feedstock) into a synthetic gas, usually combusted to generate electricity. Certified gasification projects qualify for a 20% property investment tax credit in the year of investment (Sec. 48B). This credit is part of the general investment tax credits (under Sec. 46). Some special stipulations include:

- The taxpayer must apply for and receive certification by the Treasury Department (in consultation with the Energy Department) to qualify.

- The gasification investment cannot exceed $650 million, so the maximum amount of credit a project may claim for a taxable year is $130 million (20% of $650 million).

- There is a cap on the total amount of gasification investment credit available--$350 million, which is allocated based on a Department of Energy ranking of certified projects (IRS notice 2007-53).

- The tax credits will be favorably allocated to projects that sequester carbon dioxide emissions. To a lesser degree, the tax credit favors projects that will capture future carbon dioxide emission.

- The gasification project may be certified only during a 10-year period beginning on October 1, 2005 (Sec. 48B(d)(2)).

- The term "biomass" means any agricultural or plant waste, byproduct of wood or paper mill operations, including lignin in spent pulping liquors, and other products of forestry maintenance.

- Commonly recycled paper is excluded from the term "biomass" and thus does not qualify for the gasification technology project tax credit.

7. Nonconventional Fuel Production Tax Credit

The nonconventional fuel production tax credit is an income tax credit for fuels produced from nonconventional sources, including biomass, that are sold to an unrelated party (Sec. 45K). The term "biomass" in this credit is defined as "any organic material other than oil and natural gas (or any product thereof), and coal (including lignite) or any product thereof." (Sec. 45K(c)(3)). The amount of credit is $3 multiplied by the barrel-of-oil equivalent of the qualified fuel. Qualifying fuels include oil from shale or tar sands and gas from geopressured brine, Devonian shale, coal seams or a tight formation or biomass and liquid, gas, or synthetic fuels produced from coal. Excess credits not used in one year may be carried back one year and carried forward 20 years, beginning in tax years ending after December 31, 2005.

8. Biodiesel and Renewable Diesel Tax Credits

The tax code provides a biodiesel tax credit at 50 cents per gallon of biodiesel for eligible biodiesel producers. The same rate of tax credit is available for biodiesel mixture producers. The Tax Code defines biodiesel as "monoalkyl esters of long chain fatty acids derived from plant or animal matter" that meet the registration requirements for fuels and fuel additives imposed by the Environmental Protection Agency under Section 211 of the Clean Air Act (42 U.S.C. 7545) and the requirements of the American Society of Testing and Materials D6751 (Code Sec. 40A(d)(1)). Current law also provides an excise tax credit that benefits agri-biodiesel businesses. The amount of credit is $1.00 per gallon. However, agri-biodiesel is biodiesel derived solely from virgin oils including oils from corn, soybeans, sunflower seeds, cottonseeds, canola, crambe, rapeseeds, safflowers, flaxseeds, rice bran, mustard seeds, or animal fats (Code Sec. 40A(d)(2)).

In addition, there is a renewable diesel tax credit available at a rate of $1.00 per gallon. The same rate of tax credit applies to renewable diesel mixture producers. Renewable diesel is defined as diesel fuel derived from biomass using a thermal depolymerization process (Code Sec. 40A(f)(3)).

SUMMARY

The existing tax incentives for woody biomass energy mainly targets electric power and liquid fuel producers of bioenergy. To qualify for these credits, energy generation firms must sell the energy they generate to outside, unrelated parties. Power or biofuel generated for self-use generally do not qualify for today's tax breaks.

Specific requirements must be met to qualify for the federal tax incentives for bioenergy. For example, commonly recycled paper is excluded from the term "biomass" and thus do not qualify for the electricity income tax credits or the gasification technology project tax credit.

In addition, the federal tax incentives for woody biomass bioenergy contains a limited window of opportunity: as an example, the open-loop biomass power generation facility must be placed in service before January 1, 2009 to qualify. After the end of the 2008 it will be too late for new facility to take advantage of this tax incentive unless Congress extends it.

Lastly, there are no direct tax incentives targeting owners of forests for bioenergy. However, the tax incentives for biomass energy production generally help to create markets and increase demand for forest products. It is in this manner that forest landowners can reasonably expect rewards for their forest property for bioenergy uses.