



# ISSUE BRIEF

## **New Cellulosic Biomass Ethanol Depreciation Allowance “50% Depreciation for Cellulosic Biomass Ethanol Plant Property”**

Date of Enactment: December 20, 2006 (Public Law No: 109-432)

The provision applies to cellulosic biomass ethanol plant property placed in service after December 20, 2006 and prior to January 1, 2013.

**Overview:** The provision allows an additional first-year depreciation deduction equal to 50 percent of the adjusted basis of qualified cellulosic biomass ethanol plant property. The cellulosic enhanced-depreciation benefit will improve the after-tax cash flow for the first year for the plant owner or, if it is a pass-through entity, its members. The net present value of the cash-flow will be significantly improved with the 50% allowance allowed in the first year. Additionally, the 50% allowance coupled with other depreciation techniques could lead to 60% of a facility being depreciated in year one.

The benefit to the cellulosic ethanol plant is as follows: When an ethanol plant is able to lower its taxable income significantly in year one and year two; then the cash-flow otherwise needed for either tax distributions or payments, would be available for debt service, which puts the plant in a considerably better financial position.

Example: A 50 million gallon cellulosic biomass ethanol plant with capital construction costs of \$250,000,000 (current estimate) will gain **a tax benefit of \$57,145,000 in its first year of operation.** Without the provision, the same company would gain a tax benefit of only \$14,290,000 in the first year, a difference in the first year of \$42.8 million (see chart on page 2).

The tax benefit is created by the 50% depreciation allowed in the first year. In this case, the amount depreciated in year one is \$125,000,000 + the remaining normally allowed depreciation of \$17,862,500 for a total depreciation deduction of \$142,862,500. Without the provision, and with normal depreciation rules, a first year deduction of only \$35,725,000 would have been allowed.

The benefit of enhanced depreciation is the time-value of money, which means that if a 50% depreciation deduction is taken in year one, then in later years, the bonus depreciation is offset by a comparable disadvantage over the remaining depreciable life. If the entire amount cannot be used in the first year, then it can be carried forward.

Attached is a worksheet comparing the tax benefit of a plant with and without the cellulosic enhance depreciation provision.

## Worksheet Comparing The Tax Benefit To A Cellulosic Biomass Ethanol Plant With And Without The Enhanced Cellulosic Depreciation Provision

### ASSUMPTIONS

Cost	<b>\$250,000,000</b>
Bonus depreciation	50%
Convention for MACRS	Half-year
Discount rate for present value calc.	7%
Tax rate	40%

### Tax Benefit of Cost Recovery with Bonus Depreciation

Year	7 year MACRS	Bonus	MACRS	Total Deduct	Tax Benefit	Comparison
1	14.29%	<b>125,000,000</b>	17,862,500	142,862,500	<b>57,145,000</b>	<b>42,855,000</b>
2	24.49%		30,612,500	30,612,500	<b>12,245,000</b>	(12,245,000)
3	17.49%		21,862,500	21,862,500	<b>8,745,000</b>	(8,745,000)
4	12.49%		15,612,500	15,612,500	<b>6,245,000</b>	(6,245,000)
5	8.93%		11,162,500	11,162,500	<b>4,465,000</b>	(4,465,000)
6	8.92%		11,150,000	11,150,000	<b>4,460,000</b>	(4,460,000)
7	8.93%		11,162,500	11,162,500	<b>4,465,000</b>	(4,465,000)
8	4.46%		5,575,000	5,575,000	<b>2,230,000</b>	(2,230,000)
	<u>100.00%</u>	<u>125,000,000</u>	<u>125,000,000</u>	<u>250,000,000</u>	<u><b>100,000,000</b></u>	<u>-</u>

Net Present Value of Tax Benefit: **86,238,432** **7,219,512**

### Tax Benefit of Cost Recovery without Bonus Depreciation

Year	7 year MACRS	Bonus	MACRS	Total Deduct	Tax Benefit
1	14.29%	<b>0.00</b>	35,725,000	35,725,000	<b>14,290,000</b>
2	24.49%		61,225,000	61,225,000	<b>24,490,000</b>
3	17.49%		43,725,000	43,725,000	<b>17,490,000</b>
4	12.49%		31,225,000	31,225,000	<b>12,490,000</b>
5	8.93%		22,325,000	22,325,000	<b>8,930,000</b>
6	8.92%		22,300,000	22,300,000	<b>8,920,000</b>
7	8.93%		22,325,000	22,325,000	<b>8,930,000</b>
8	4.46%		11,150,000	11,150,000	<b>4,460,000</b>
	<u>100.0%</u>	<u>-</u>	<u>250,000,000</u>	<u>250,000,000</u>	<u><b>100,000,000</b></u>

Net Present Value of Tax Benefit: **79,018,921**

The tax benefit figures assume that the taxpayer in whose return the depreciation deductions are claimed, i.e., the plant owner or, in the case of a pass-through entity, the members, can fully utilize the deduction against otherwise taxable income. This may not be the case for a first year plant if the bonus depreciation creates a tax loss or for a pass-through member who is subject to the limitations on deduction losses from passive activities. In both cases, the loss or disallowed deduction is carried forward to future years, which would reduce the advantage of the bonus depreciation.

**The following is a technical explanation of the special depreciation allowance for cellulosic biomass ethanol plant property, which is a new sec. 168(l) of the Internal Revenue Code.  
(as prepared by the Joint Committee on Taxation)**

**Explanation of Provision:** In order to qualify, the property generally must be placed in service before January 1, 2013.

The provision allows an additional first-year depreciation deduction equal to 50 percent of the adjusted basis of qualified cellulosic biomass ethanol plant property. Qualified cellulosic biomass ethanol plant property means property used in the U.S. solely to produce cellulosic biomass ethanol. For this purpose, cellulosic biomass ethanol means ethanol derived from any lignocellulosic or hemicellulosic matter that is available on a renewable or recurring basis. For example, lignocellulosic or hemicellulosic matter that is available on a renewable or recurring basis includes bagasse (from sugar cane), corn stalks, and switchgrass.

The additional first-year depreciation deduction is allowed for both regular tax and alternative minimum tax purposes for the taxable year in which the property is placed in service. The additional first-year depreciation deduction is subject to the general rules regarding whether an item is deductible under section 162 or subject to capitalization under section 263 or section 263A. The basis of the property and the depreciation allowances in the year of purchase and later years are appropriately adjusted to reflect the additional first-year depreciation deduction. In addition, the provision provides that there is no adjustment to the allowable amount of depreciation for purposes of computing a taxpayer's alternative minimum taxable income with respect to property to which the provision applies. A taxpayer is allowed to elect out of the additional first-year depreciation for any class of property for any taxable year.

In order for property to qualify for the additional first-year depreciation deduction, it must meet the following requirements. The original use of the property must commence with the taxpayer on or after the date of enactment of the provision. The property must be acquired by purchase (as defined under section 179(d)) by the taxpayer after the date of enactment and placed in service before January 1, 2013. Property does not qualify if a binding written contract for the acquisition of such property was in effect on or before the date of enactment.

Property that is manufactured, constructed, or produced by the taxpayer for use by the taxpayer qualifies if the taxpayer begins the manufacture, construction, or production of the property after the date of enactment, and the property is placed in service before January 1, 2013 (and all other requirements are met). Property that is manufactured, constructed, or produced for the taxpayer by another person under a contract that is entered into prior to the manufacture, construction, or production of the property is considered to be manufactured, constructed, or produced by the taxpayer.

Property any portion of which is financed with the proceeds of a tax-exempt obligation under section 103 is not eligible for the additional first-year depreciation deduction. Recapture rules apply under the provision if the property ceases to be qualified cellulosic biomass ethanol plant property.

Property with respect to which the taxpayer has elected 50 percent expensing under section 179C is not eligible for the additional first-year depreciation deduction under the provision.

**Effective Date:** The provision applies to property placed in service after the date of enactment, in taxable years ending after such date.

**Present Law:** A taxpayer is allowed to recover, through annual depreciation deductions, the cost of certain property used in a trade or business or for the production of income. The amount of the depreciation deduction allowed with respect to tangible property for a taxable year is determined under the modified accelerated cost recovery system ("MACRS"). Under MACRS, different types of property generally are assigned applicable recovery periods and depreciation methods.

The recovery periods applicable to most tangible personal property (generally tangible property other than residential rental property and nonresidential real property) range from 3 to 25 years. The depreciation methods generally applicable to tangible personal property are the 200-percent and 150-percent declining balance methods, switching to the straight-line method for the taxable year in which the depreciation deduction would be maximized. In lieu of depreciation, a taxpayer with a sufficiently small amount of annual investment may elect to deduct (or “expense”) such costs (sec. 179). Present law provides that the maximum amount a taxpayer may expense, for taxable years beginning in 2003 through 2009, is \$100,000 of the cost of qualifying property placed in service for the taxable year. The \$100,000 amount is reduced (but not below zero) by the amount by which the cost of qualifying property placed in service during the taxable year exceeds \$400,000. The \$100,000 and \$400,000 amounts are indexed for inflation for taxable years beginning after 2003 and before 2010. In general, under section 179, qualifying property is defined as depreciable tangible personal property that is purchased for use in the active conduct of a trade or business. Additional section 179 incentives are provided with respect to a qualified property used by a business in the New York Liberty Zone (sec. 1400L(f)), an empowerment zone (sec. 1397A), a renewal community (sec. 1400J), or the Gulf Opportunity Zone (section 1400N). Recapture rules generally apply with respect to property that ceases to be qualified property.

Section 179C provides a temporary election to expense 50 percent of the cost of qualified refinery property. Qualified refinery property generally includes assets, located in the United States, used in the refining of liquid fuels: (1) with respect to the construction of which there is a binding construction contract before January 1, 2008; (2) which are placed in service before January 1, 2012; (3) which increase the output capacity of an existing refinery by at least five percent or increase the percentage of total throughput attributable to qualified fuels (as defined in section 45K(c)) such that it equals or exceeds 25 percent; and (4) which meet all applicable environmental laws in effect when the property is placed in service.

For purposes of section 179C, the term “refinery” refers to facilities the primary purpose of which is the processing of crude oil (whether or not previously refined) or qualified fuels as defined in section 45K(c). The limitation of section 45K(d) requiring domestic production of qualified fuels is not applicable with respect to the definition of refinery under this provision; thus, otherwise qualifying refinery property is eligible even if the primary purpose of the refinery is the processing of oil produced from shale and tar sands outside the United States. The term refinery would include a facility which processes coal or biomass via gas into liquid fuel.

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Please note, the technical explanation was completed by the Joint Committee of Taxation

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Questions: If you have questions about this issue, please contact Larry Schafer at the Renewable Fuels Association at 202.289.3835 or at [lschafer@ethanolrfa.org](mailto:lschafer@ethanolrfa.org)

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