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Energy and Environmental Tax Changes in the Flood of Recent Federal Revenue Laws and What They Imply

by Richard A. Westin

Editors' Summary: In the United States, the need for independence from foreign oil and gas sources, a desire for more domestic production to meet the growing demand for oil and gas, and an interest in reducing pollution from hydrocarbon usage has influenced many recent developments in federal tax legislation. In this Article, Richard A. Westin summarizes this recent legislation in an attempt to discover what direction Congress seems to be moving with regard to energy and the environment. He describes legislation affecting a number of relevant industries, provides information on predicted revenue effects, and offers brief commentary on each development.

As of this writing, oil prices are well above $60 per barrel, discussion of climate change is increasing, and Middle East politics are disturbingly unstable. Yet the United States depends on Middle Eastern oil, and an oil cutoff could deeply imperil the U.S. economy. The past two years have witnessed significant federal tax legislation, a good part of which is directed towards energy independence and the environment. The first piece of major legislation is the American Jobs Creation Act of 2004,[1] and the second is the Energy Tax Incentives Act of 2005 (2005 Energy Tax Act).[2] The third is the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (referred to as the 2005 Transportation Act).[3] The Gulf Opportunity Zone Act of 2005,[4] the Tax Increase Prevention and Reconciliation Act of 2005,[5] and the Tax Relief and Health Care Act of 2006[6] amended the foregoing Acts in modest ways.[7] At the heart of the legislation lie several themes: the need for independence from foreign oil and gas sources, a desire for more domestic production to meet the growing demand for oil and gas, and an interest in reducing pollution from hydrocarbon usage.

This Article is an effort to size up the new legislation in light of these imperatives and to try to determine the U.S. Congress' general direction. It is not a commentary on whether the entire system is right or wrong, and it is not entirely comprehensive. Because so many tax issues affect energy and the environment, making a complete catalog is unrealistic. Some arbitrary choices had to be made. For example, the tax deferrals allowed in connection with restructuring the energy industry were ignored.[8]

The Article is broken into major headings with a brief summary of each new law followed by a technical discussion, a statement of the estimated revenue gains or losses followed by a brief commentary. The technical discussion assumes a fairly advanced understanding of federal income taxation, but adds little to the policy implications of each of the changes in the tax law. In most cases, revenue estimates from the excellent staff on the Joint Committee on Taxation the White House Tax Expenditures Budget[9] are included and followed by a brief policy discussion.

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1. Pub. L. No. 108-357, 118 Stat. 1418. Hereinafter section references are to the Internal Revenue Code (IRC) of 1986 (26 U.S.C.), unless otherwise indicated.
2. Pub. L. No. 109-58, 119 Stat. 594.
3. *Id*. 109-59, 119 Stat. 1144.
4. *Id*. 109-135, 199 Stat. 2577.
5. *Id*. 109-222, 120 Stat. 345.
6. Tax Relief and Health Care Act, Pub. L. No. 109-432, 120 Stat. 2922 [hereinafter the 2006 Act].
7. The Working Families Tax Relief Act of 2004 made some minor modifications to the contents and revenue projections of this article. *See* Joint Comm. on Taxation, Estimated Budget Effects of the Conference Agreement for H.R. 1308, The Working Families Tax Relief Act of 2004, JCX 60-04 (Sept. 23, 2004).
8. *See* I.R.C. §451(i).
9. The budget document describes tax expenditures as follows on the first page of the document: The Congressional Budget Act of 1974 (Pub. L. No. 93-344) requires that a list of "tax expenditures" be included in the budget. Tax expenditures are defined in the law as "revenue losses attributable to provisions of the Federal tax laws [that] allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of liability." Tax Expenditures, White House Fiscal 2008 Budget (2007), *reproduced in* 2007 Tax Notes Today 25-14 (Feb. 6, 2007) [hereinafter White House 2008 Budget].

I. Consumers

A. Residential Energy Credits for Consumers

1. Credit for Residential Energy-Efficient Property

Summary. Congress has granted individuals a temporary 30% credit for a variety of advanced energy-saving investments for periods before 2009.[10] It is estimated to produce a tiny revenue loss, and only a minor impact on taxpayer behavior.

The Energy Policy Act of 2005 grants consumers a personal credit known as the residential energy-efficient property credit.[11] This is a new credit allowed for amounts spent on qualified photovoltaic property,[12] qualified solar water heating property,[13] and qualified fuel cell property[14] used in personal homes. It is a nonrefundable credit, meaning it can reduce one's taxes to zero, but not provide a subsidy beyond that. It is available for property placed in service[15] between 2005 and 2009.

The annual credit is allowed for 30% of the taxpayer's qualified expenditures during the taxable year, limited to (a) a maximum of $2,000 for qualified photovoltaic property expenditures (hence limited to a $600 credit), (b) a maximum of $2,000 for qualified solar water heating property expenditures (hence limited to a $600 credit), and (c) a maximum of $500 for each 0.5 kilowatt of capacity of qualified fuel cell property expenditures; this is theoretically a large number for a huge house.[16] Expenditures for labor, piping, and wiring are included when calculating the credit.[17] To qualify for the credit, the property cannot be used to heat swimming pools or hot tubs.[18] Also, in order for a solar water heating property expenditure to qualify, it must be certified for performance by either the nonprofit Solar Rating Certification Corporation or a comparable entity endorsed by the government of the state where the property is installed.[19]

Expenditures are considered made at the completion of the original installation or, if in connection with the structure's construction or reconstruction, when the taxpayer's original use of the structure (as modified) began.[20]

The credit declines where the taxpayer's use of the item is for business purposes. If over 20% of use is for business purposes, then only the nonbusiness portion can be used to calculate the credit. If business use is 20% or less, the taxpayer can claim the credit for the entire expenditure.[21] Tenant-shareholders in a cooperative housing corporation and members of condominium associations are treated as having contributed their proportionate share of the group's expenditures.[22] Expenditures made from subsidized energy financing are not creditable.[23] If the credit is allowed for an expenditure, the basis increase of the property that would otherwise result declines by the amount of the taxpayers claimed.[24]

This credit will not affect any carryforward of certain unused personal credits, namely the adoption credit,[25] the mortgage credit certificate credit,[26] and the credit for first-time homebuyers in Washington, D.C.[27]

Revenue Effects. The Joint Committee on Taxation has estimated total revenue losses as a result of this provision in the years 2005-2010 at $31 million and the same for 2005-2015.[28] Because this provision was extended for a short period, the revenue losses should be somewhat larger. The White House broke out the fuel cell and solar components,[29] projecting a loss of $30 million between 2006 and 2012.

Comment. Why be so cheap and offer such a short life for the incentive? It implies only a tiny revenue expense and yet could help stimulate energy independence and pollution avoidance. The revenue loss with respect to fuel cells and solar equipment suggests that the incentive is weak. In any case, the overall revenue losses—and congressional commitment—seem minor.

10. The original expiration date was extended from 2008 to 2009 by §206 of the 2006 Act.
11. I.R.C. §25D, *added by* Energy Policy Act of 2005, §1335.
12. The term "qualified photovoltaic property expenditure" means an expenditure for property that uses solar energy to generate electricity for use in a dwelling unit located in the United States and used as a residence by the taxpayer. *Id.* §25D(d)(2). It can include solar panels that form part of a roof. *Id*.
13. The term "qualified solar water heating property expenditure" means an expenditure for property to heat water for use in a dwelling unit located in the United States and used as a residence by the taxpayer if at least half of the energy used by such property for such purpose is derived from the sun. *See id.* §25D(d)(1).
14. The term "qualified fuel cell property expenditure" means an expenditure for qualified fuel cell property (as defined in §48(c)(1)) installed on or in connection with a dwelling unit located in the United States and used as a principal residence (within the meaning of §121) by the taxpayer. *See id.* §25D(d)(3).
15. Placed in service generally means actually used or, if earlier, in a state of readiness for actual use. Richmond Television v. United States, 354 F.2d 410 (4th Cir. 1965) (depreciation available when placed in service, meaning ready for assigned use).
16. I.R.C. §25D(b). An average house uses one kilowatt. *See* http://www.ceert.org/faq.html. Fuel cells for houses are sold by at least one manufacturer.
17. I.R.C. §25D(e)(1).
18. *Id.* §25D(e)(3).
19. *Id.* §25D(b)(2).
20. *Id.* §25D(e)(8). *See id.* §24D(e)(4), *amended by* 2005 Gulf Opportunity Zone Act, §402(m)(1), for the treatment of units with multiple occupants.
21. For dwelling units that are jointly occupied, one computes the credit by treating all the individuals as one taxpayer and their individual credit is computed in proportion to their personal expenditures. The allocation applies separately for each of the different properties, i.e., qualified photovoltaic property, qualified solar water heating property, and qualified fuel cell property. *Id.* §25D(e)(7), (4).
22. *Id.* §25D(e)(5).
23. The term "subsidized energy financing" means financing provided under a federal, state, or local program, a principal purpose of which is to provide subsidized financing for projects designed to conserve or produce energy. *See id.* §48(a)(4)(C).
24. *Id.* §25D(f).
25. *Id.* §23(c), *amended by* Energy Policy Act of 2005, §1335(b)(1).
26. *Id.* §25(e)(1)(C), *amended by* Energy Policy Act of 2005, §1335(b)(2).
27. *Id.* §1400C(d), *amended by* Energy Policy Act of 2005, §1335(b)(3). The 2005 Gulf Opportunity Act softened the rules by providing that the dollar limits, e.g., $2,000 for solar property, are calculated with regard to credits carried over from earlier years. *Id.* §25D(b)(1), *amended by* Gulf Opportunity Zone Credit Act, §402(i)(1). It applies to property placed in service after 2005.
28. Joint Comm. on Taxation, Estimated Budget Effects of the Conference Agreement for Title XIII of H.R. 6, The Energy Policy Tax Incentives Act of 2005, JCX-59-05 (Provision C-5), July 27, 2005 (as passed by the U.S. Senate) [hereinafter Budget Effects—Tax Incentives Act].
29. White House 2008 Budget, *supra* note 9, Item 30.

2. Credit for Certain Nonbusiness Energy Property Installed at Home

Summary. There is a small temporary credit for energy efficiency improvements added to existing homes. This 10% credit applies to expenditures with respect to improvements to a building envelope, such as pigmented metal roofs, external doors and windows, skylights, advanced main air circulating fans, heat pumps, natural gas, propane, oil furnaces or hot water boilers, and other energy-efficient property. The credit is applied to primary residences in the United States and is capped at $500 per taxpayer.

The Energy Policy Act of 2005 granted individual taxpayers a new personal tax credit known as the nonbusiness energy property credit[30] for the installation of qualified energy-efficient property[31] in their principal residences. Prior to the Act, no credit was allowed for existing homes. The new credit is only available for new property placed in service in 2006 and 2007.

The credit has several parts: (a) 10% of the amount paid or incurred for the installation of energy efficiency improvements during the year; plus (b) a credit of $50 for any advanced main air circulating fan; (c) $150 for any qualified natural gas, propane, or oil furnace or hot water boiler; and (d) $300 for any item of energy-efficient building property,[32] meaning heat pumps, as well as efficient air conditioners and water heaters. Installation costs are excluded, which may be fine for the handyman, but hard on others.

An advanced main air circulating fan is a fan "used in a natural gas, propane, or oil furnace," the annual electricity use of which is not more that 2% of the total energy use of the furnace.[33] A qualified natural gas, propane, or oil furnace or hot water boiler is one that reaches an annual fuel utilization efficiency rate of at least 95.[34]

The total credit cannot exceed $500 for all taxable years, and of that, not more than $200 can be for expenditures attributable to windows.[35] The property must meet quality and performance standards[36] as well as any certification requirements set by U.S. Treasury regulations. The applicable standards are those in effect at completion of construction, reconstruction, or erection of the property, or at the time the taxpayer acquires the property. If an expenditure otherwise qualifies for the credit, it can be applied to two or more dwelling units, but the credit amount must be computed separately for each residence in proportion to the dollar amount spent on each.[37] For example, tenant-shareholders in a co-op apartment and condo owners are treated as having made their proportionate share of the group's expenditures.[38] If more than 20% of an item's use is for business purposes, then only the part that is used for nonbusiness purposes is creditable, but if the item's business use is not over 20%, then the taxpayer can claim the credit for the entire expenditure.[39] If the credit is allowed for an expenditure, the basis increase of the property that would otherwise result declines by the amount of the credit that is allowed.[40]

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2010 are estimated at $556 million.[41] The White House figures are comparable.[42]

Comment. Congress evidently believes this small credit will stimulate purchases amounting to about $2.00 per citizen. It

30. I.R.C. §25C, *added by* Energy Policy Act of 2005, §1333(a).

31. "Qualified energy efficiency improvements" means any energy-efficient building envelope component that meets the prescriptive criteria for such component established by the 2000 International Energy Conservation is in effect on the date of the enactment of this section (or, in the case of a metal roof with appropriate pigmented coatings that meet the Energy Star® program requirements), if:

> (A) such component is installed in or on a dwelling unit located in the United States and owned and used by the taxpayer as the taxpayer's principal residence (within the meaning of §121),
> (B) the original use of such component commences with the taxpayer, and
> (C) such component reasonably can be expected to remain in use for at least 5 years.

Id. §25C(c)(1).
The term "building envelope component" means:

> (A) any insulation material or system which is specifically and primarily designed to reduce the heat loss or gain of a dwelling unit when installed in or on such dwelling unit,
> (B) exterior windows (including skylights),
> (C) exterior doors, and
> (D) any metal roof installed on a dwelling unit, but only if such roof has appropriate pigmented coatings which are specifically and primarily designed to reduce the heat gain of such dwelling unit.

Id. §25C(c)(2).

32. The term "energy-efficient building property" means:

> (A) an electric heat pump water heater which yields an energy factor of at least 2.0 in the standard Department of Energy test procedure,
> (B) an electric heat pump which has a heating seasonal performance factor (HSPF) of at least 9, a seasonal energy efficiency ratio (SEER) of at least 15, and an energy efficiency ratio (EER) of at least 13,
> (C) a geothermal heat pump which—
>
> (i) in the case of a closed loop product, has an energy efficiency ratio (EER) of at least 14.1 and a heating coefficient of performance (COP) of at least 3.3,
> (ii) in the case of an open loop product, has an energy efficiency ratio (EER) of at least 16.2 and a heating coefficient of performance (COP) of at least 3.6, and
> (iii) in the case of a direct expansion (DX) product, has an energy efficiency ratio (EER) of at least 15 and a heating coefficient of performance (COP) of at least 3.5,
>
> (D) a central air conditioner which achieves the highest efficiency tier established by the Consortium for Energy Efficiency, as in effect on January 1, 2006, and
> (E) a natural gas, propane, or oil water heater which has an energy factor of at least 0.80.

Id. §25C(d)(3).

33. *Id.* §25C(d)(5).

34. *Id.* §25C(d)(4). The law does not explain what this efficiency rating refers to.

35. *Id.* §25C(b)(1)-(2).

36. Performance standards for the different types of property can be found in *id.* §25C(d).

37. Also, for dwelling units that are jointly occupied, the credit is computed by treating all of the individuals as one taxpayer and their individual credits will be computed in proportion to their personal expenditures. *Id.*

38. *Id.* §25C(e)(1). These rules are similar to those that apply under §25D(e) *as amended by* §1335 of the Energy Policy Act of 2005.

39. *Id.* These rules are similar to those that apply under §25D(e)(7) *as amended by* §1335 of the Energy Policy Act of 2005.

40. *Id.* §25C(f).

41. BUDGET EFFECTS—TAX INCENTIVES ACT, *supra* note 28, Provision C-3.

42. White House 2008 Budget, *supra* note 9, Item 28 (in millions of dollars: $230 loss in 2006; $380 loss in 2007; $150 loss in 2008; and $150 loss in 2012).

raises many questions, such as the extent to which tax revenues are being given away for purchases that would have occurred anyway, and the difficulty of sorting out energy prices as a factor influencing consumer decisions on this kind of property. It does have the merit of combining environmental benefits with a measure of energy independence.

3. Short-Lived Credit for Manufacture of Energy-Efficient Appliances Made in 2006 and 2007

Summary. Manufacturers who make certain energy-efficient dishwashers, clothes washers, and refrigerators are briefly entitled to tax credits for their production. This temporary credit is available only to makers of these classes of appliances. The U.S. Senate report explains the provision as follows:

> The Committee believes that providing a tax credit for the production of energy-efficient clothes washers and refrigerators will encourage manufacturers to produce such products currently and to invest in technologies to achieve higher energy-efficiency standards for the future. In addition, the Committee intends to encourage those manufacturers already producing energy-efficient clothes washers and refrigerators to accelerate production.
>
> The provision provides a credit for the production of certain energy-efficient clothes washers and refrigerators. The credit would equal $50 per appliance for energy-efficient clothes washers produced with a modified energy factor ("MEF") of 1.42 MEF or greater for washers produced before 2007 and for refrigerators produced before 2005 that consume 10 percent less kilowatt-hours per year than the energy conservation standards promulgated by the Department of Energy [DOE] that took effect on July 1, 2001. The credit equals $100 for energy-efficient clothes washers produced with a MEF of 1.5 or greater and for refrigerators produced that consume at least 15 percent less kilowatt-hours per year (at least 20 percent less for production in 2007) than the energy conservation standards promulgated by the Department of Energy that took effect on July 1, 2001. The credit is $150 in the case of a refrigerator that consumes at least 20 percent less kilowatt-hours per year than such standards and is produced before 2007. A refrigerator must be an automatic defrost refrigerator-freezer with an internal volume of at least 16.5 cubic feet to qualify for the credit. A clothes washer is any residential clothes washer, including a residential style coin operated washer, that satisfies the relevant efficiency standard.[43]

Revenue Effects. The Joint Committee anticipates losses of $117 in 2006 and $63 million in 2007.[44] The White House anticipates a loss of $200 million in 2006-2007[45]:

Comment. Why manufacturers would not manufacture energy-efficient appliances anyway is unclear, given that they can provide a dollars-and-cents explanation for why consumers should purchase economically superior products. The revenue loss is trivial, but the precedent of giving money to manufacturers in connection with making commonplace goods is remarkable.

B. Benefits for Realty Business

1. Accelerated Deduction for Energy-Efficient Commercial Buildings

Summary. The Internal Revenue Code (Code) now allows a deduction for the cost of energy-efficient commercial building property placed in service during the tax year.[46] The Code grants a maximum deduction of $1.80 per square foot, minus any deductions taken in prior years.[47] The deduction is only available for property installed in 2006, 2007, and 2008.[48]

A threshold to the availability of this deduction is that the property fall under the definition of energy-efficient commercial building property.[49] The definition of energy-efficient commercial building property covers depreciable or amortizable property, installed on or in a U.S. building, within the scope of Standard 90.1-2001,[50] that is part of interior lighting, hot water systems, heating, cooling, ventilation, or the building envelope.[51] Qualifying property must also meet installation requirements to reduce the energy costs related to the above property (interior lighting, hot water systems, heating, cooling, and ventilation combined) by one-half in reference to the estimated energy consumption of the same building meeting only the minimal requirements of Standard 90.1-2001[52] and meet the certification requirements to be promulgated by the Treasury Secretary.[53] If for some reason the one-half reduction cannot be met, there may be the possibility of the partial deduction.

Partial deduction may be allowed for individual components that work to reduce the total annual energy and power costs of the building.[54] The property must meet the same certification as promulgated by the Secretary of the Treasury. The deduction amount is reduced from $1.80 to $.60 per square foot.[55] There is also a special section devoted to lighting systems, but only under the partial deduction provision.[56]

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2010 are estimated at $263 million and $279 million for 2005-2015.[57] The White House estimates a loss of $400 million from corporations and $140 million from individuals.[58]

43. S. Rep. No. 108-54, at 28-29 (2003) (Conf. Rep.) (to accompany S. 1149).

44. Budget Effects—Tax Incentives Act, *supra* note 28, Provision A-9.

45. White House 2008 Budget, *supra* note 9, Item 29.

46. *See* I.R.C. §179D(a).

47. *See id.* §179D(a), (b).

48. *See id.* §179D(h).

49. *See id.* §179D(c)(1).

50. Standard 90.1-2001 means the standard of the American Society of Heating, Refrigerating, and Air Conditioning Engineers and the Illuminating Engineering Society of North America. *See id.* §179D(c)(2).

51. *See id.* §179D(c)(1).

52. *See id.*

53. *See id.* §179D(d)(6).

54. *See id.* §179D(d).

55. *See id.* §179D(d)(1)(A)(ii).

56. *See id.* §179D(f).

57. Budget Effects—Tax Incentives Act, *supra* note 28, Provision C-1.

58. White House 2008 Budget, *supra* note 9, Item 26.

Comment. The revenue losses are modest, but it is unclear why this provision is necessary in that shrewd buyers ought to be willing to pay more for a more efficient building.

2. Credit for Construction of New Energy-Efficient Homes

Summary. The 2006 Act extended for a year the right of certain eligible contractors to claims tax credits for building energy-efficient homes located in the United States.[59] It was originally enacted in 2005.

Section 45L is part of the general business credit. It allows an eligible building contractor to claim a tax credit for each qualified new energy-efficient home that the contractor constructs and which is acquired by someone from the contractor for use as a residence. The credit is $2,000 for a 50% or greater reduction in energy usage or $1,000 for a 30% or greater (but less that 50%) reduction in energy usage. The 2006 Act extended the credit for another year so as to apply to qualified new energy-efficient homes acquired before 2009. The credit extends to vacation homes, trailers, condos, co-ops, and other habitable properties.

Revenue Effects. The Joint Committee on Taxation estimates a loss of $28 million from 2005-2015.[60]According to the White House, the revenue losses will total $80 million from corporations and $10 million from individuals.[61]

Comment. Once again, the revenue losses are modest, but it is not clear why this provision is necessary. Presumably, shrewd buyers will pay more for a more efficient home.

II. Automobile Industry

A. Incentives for Fuel-Efficient Cars

1. Alternative Motor Vehicles Credit

Summary. The Energy Policy Act of 2005 provides for a sweeping new alternative motor vehicle credit.[62] This credit has four different components: (a) the new qualified fuel cell motor vehicle credit; (b) the new advanced lean burn credit; (c) the new qualified hybrid motor vehicle credit; and (d) the new qualified alternative fuel motor vehicle credit. The vehicle notably missing under the Act is the electric car. In all cases covered by this section, the buyer claims the credit. The revenue effects appear at the end of the section; however, in light of the need for change, the revenue cost of less than $2 billion seem acceptable.

2. New Qualified Fuel Cell Motor Vehicle Credit

The first component of the new alternative motor vehicle credit is the new qualified fuel cell motor vehicle credit.[63] A new qualified fuel cell motor vehicle is a new manufactured vehicle that (a) is propelled by power derived from one or more cells that convert chemical energy directly into electricity by combining oxygen with hydrogen fuel that is stored on board the vehicle in any form and may or may not require modification prior to use, (b) has, in the case of a passenger automobile or light-duty truck, received a certificate that it meets or exceeds the Bin 5 Tier II emission levels established in U.S. Environmental Protection Agency (EPA) regulations under §202(i) of the Clean Air Act (CAA),[64] and (c) is acquired for use or lease, but not for resale, by the taxpayer.

The amount of the credit rises with the gross vehicle weight rating (GVWR) of the new qualified fuel cell motor vehicle. The gross vehicle weight rating is basically weight class. For the tax year, the credit is:

(a) $8,000 if the GVWR of the vehicle is no more than 8,500 pounds (lbs.), but only $4,000 if the vehicle is placed into service after 2009;
(b) $10,000 if the GVWR of the vehicle is more than 8,500 lbs. but no more than 14,000 lbs.;
(c) $20,000 if the GVWR of the vehicle (a truck or bus by inference) is more than 14,000 lbs. but no more than 26,000 lbs.; and
(d) $40,000 if the GVWR of the vehicle is more than 26,000 lbs.

The credit may also be increased to reflect its fuel efficiency if the new qualified fuel cell motor vehicle is a passenger car or light-duty truck. Fuel efficiency is often referred to in the automobile industry as rated fuel economy. The 2002 model-year city fuel economy (MYCFE) is the estimated lifetime fuel savings of a qualifying vehicle compared to a comparable 2002 model-year vehicle.[65] The credit for fuel economy is as follows:

(a) $1,000 if the vehicle achieves 150% but less than 175% of the 2002 MYCFE,[66] as that term is defined in the tables below;
(b) $1,500 if the vehicle achieves 175% but less than 200% of the 2002 MYCFE;
(c) $2,000 if the vehicle achieves 200% but less than 225% of the 2002 MYCFE;
(d) $2,500 if the vehicle achieves 225% but less than 250% of the 2002 MYCFE;
(e) $3,000 if the vehicle achieves 250% but less than 275% of the 2002 MYCFE;
(f) $3,500 if the vehicle achieves 275% but less than 300% of the 2002 MYCFE; and
(g) $4,000 if the vehicle at least achieves 300% of the 2002 MYCFE.[67]

The 2002 MYCFE for a passenger car[68] is:

59. I.R.C. §45L(g), *amended by* 2006 Act §205.

60. BUDGET EFFECTS—TAX INCENTIVES ACT, *supra* note 28, Provision B-8.

61. White House 2008 Budget, *supra* note 9, Item 27.

62. I.R.C. §30B, *added by* Energy Policy Act of 2005, §1341(a).

63. *Id.* §30B(b)(3).

64. 42 U.S.C. §§7401-7671q, ELR STAT. CAA §101-618.

65. *See generally* RIA, RIA's COMPLETE ANALYSIS OF THE TAX PROVISIONS OF THE ENERGY AND TRANSPORTATION ACTS OF 2005 ¶ 903 (Thomson RIA ed., 2005). Ford Motor unveiled a hydrogen fuel cell-powered Explorer in late 2006. It uses a Ballard fuel cell.

66. A vehicle's 2002 MYCFE is determined on a gasoline gallon equivalent basis as it is determined by the Administrator of EPA using the tables provided in §30B(b)(2)(B). §30B(c)(2)(A)(ii). These tables are reproduced later in this piece.

67. I.R.C. §30B(b)(2)(A).

68. *Id.* §30B(b)(2)(B)(i).

Vehicle inertia weight class[69]	2002 model-year city fuel economy
1,500 or 1,750 lbs.	45.2 miles per gallon (mpg)
2,000 lbs.	39.6 mpg
2,250 lbs.	35.2 mpg
2,500 lbs.	31.7 mpg
2,750 lbs.	28.8 mpg
3,000 lbs.	26.4 mpg
3,500 lbs.	22.6 mpg
4,000 lbs.	19.8 mpg
4,500 lbs.	17.6 mpg
5,000 lbs.	15.9 mpg
5,500 lbs.	14.4 mpg
6,000 lbs.	13.2 mpg
6,500 lbs.	12.2 mpg
7,000 to 8,500 lbs.	11.3 mpg.

The 2002 MYCFE for a light-duty truck[70] is:

Vehicle inertia weight class	2002 model-year city fuel economy
1,500 or 1,750 lbs.	39.4 mpg
2,000 lbs.	35.2 mpg
2,250 lbs.	31.8 mpg
2,500 lbs.	29.0 mpg
2,750 lbs.	26.8 mpg
3,000 lbs.	24.9 mpg
3,500 lbs.	21.8 mpg
4,000 lbs.	19.4 mpg
4,500 lbs.	17.6 mpg
5,000 lbs.	16.1 mpg
5,500 lbs.	14.8 mpg
6,000 lbs.	13.7 mpg
6,500 lbs.	12.8 mpg
7,000 to 8,500 lbs.	12.1 mpg.

The total credit is a combination of the base credit which depends on the vehicle's weight class (GVWR) and the additional credit based on the rated fuel economy. The credit is effective for any property placed in service after 2005[71] and does not apply to any property bought after 2014.[72] As in all cases, Congress may later extend the life of this provision.

3. New Advanced Lean Burn Technology Motor Vehicle Credit

The second component of the new alternative motor vehicle credit is the new advanced lean burn technology motor vehicle credit.[73] An advanced lean burn technology motor vehicle is a passenger automobile or a light-duty truck with an internal combustion engine that (a) is designed to primarily operate by using more air than is necessary for the complete combustion of the fuel, (b) incorporates direct injection, (c) achieves at least 125% of the 2002 MYCFE,[74] and (d) meets other conditions. The amount of the credit is much lower than for a fuel cell vehicle.

These other conditions include requiring 2004 and later model vehicles to be certified that the vehicle meets or exceeds the following:

> (I) in the case of a vehicle having a gross vehicle weight rating of 6,000 pounds or less, the Bin 5 Tier II emission standard established in regulations prescribed by the Administrator of the Environmental Protection Agency under section 202(i) of the Clean Air Act[75] for that make and model-year vehicle, and (II) in the case of a vehicle having a gross vehicle weight rating of more than 6,000 pounds but not more than 8,500 pounds, the Bin 8 Tier II emission standard which is so established. . . .[76]

A qualifying advanced lean burn technology vehicle must also be new, have been acquired for use or lease and not for resale, and have been made by a manufacturer.[77]

The credit is as follows:

> (a) $400 for a vehicle that achieves 125% but less than 150% 2002 MYCFE;
> (b) $800 for a vehicle that achieves 150% but less than 175% 2002 MYCFE;
> (c) $1,200 for a vehicle that achieves 175% but less than 200% 2002 MYCFE;
> (d) $1,600 for a vehicle that achieves 200% but less than 225% 2002 MYCFE;
> (e) $2,000 for a vehicle that achieves 225% but less than 250% 2002 MYCFE; and
> (f) $2,400 for a vehicle that achieves at least 250%.[78]

The credit may be further increased by a conservation credit amount that is determined based on a vehicle's lifetime fuel savings.[79] Where a vehicle's lifetime fuel savings is:

> (a) at least 1,200 gallons but less than 1,800 gallons, the credit is $250;
> (b) at least 1,800 gallons but less than 2,400 gallons, the credit is $500;
> (c) at least 2,400 gallons but less than 3,000 gallons, the credit is $750; and
> (d) at least 3,000 gallons the credit is $1,000.[80]

The credit is thus the sum of the amount determined for fuel efficiency and the additional amount for conservation. The credit is available for vehicles placed into service after 2005[81] and before December 31, 2010.[82]

69. The term "vehicle inertia weight class" has the same meaning as when defined in regulations prescribed by the Administrator of EPA for purposes of the administration of Title II of the CAA. *Id.* §30B(b)(2)(C).
70. *Id.* §30B(b)(2)(B)(ii).
71. Energy Policy Act of 2005, §1341(c).
72. I.R.C. §30B(j)(1). It is not clear to the author how one converts fuel cell mileage efficiency to gasoline mileage efficiency.
73. *Id.* §30B(c).
74. A vehicle's 2002 MYCFE is determined on a gasoline gallon equivalent basis as it is determined by the Administrator of EPA using the tables provided in §30B(b)(2)(B). *Id.* §30B(c)(2)(A)(ii).
75. 42 U.S.C. §§7521 et seq.
76. I.R.C. §30B(c)(3)(A).
77. *Id.* §30B(c)(3)(B)-(D).
78. *Id.* §30B(c)(2)(A)(i).
79. The term "lifetime fuel savings" means, in the case of any new advanced lean burn technology motor vehicle, an amount equal to the excess (if any) of—
    (A) 120,000 divided by the 2002 model year city fuel economy for the vehicle inertia weight class, over
    (B) 120,000 divided by the city fuel economy for such vehicle.
    Id. §30B(c)(4).
80. *Id.* §30B(c)(2)(B).
81. Energy Policy Act of 2005, §1341(c).

4. New Qualified Hybrid Motor Vehicle Credit

The third component of the new alternative motor vehicle credit is the new qualified hybrid motor vehicle[83] credit. A qualified hybrid motor vehicle is a vehicle that draws propulsion energy from onboard sources of stored energy, including both an internal combustion or heat engine using consumable fuel[84] and a rechargeable energy storage system, i.e., battery.[85] The Toyota Prius is the best known example.

If the vehicle is a passenger automobile or a light truck, it must also have received a certificate of conformity under the CAA and must meet or exceed the equivalent qualifying California low emission vehicle standard[86] for that make and model year, plus:

(a) vehicles with a GVWR of 6,000 lbs. or less must meet the Bin 5 Tier II emission standard established in EPA regulations under §202(i) of the CAA[87]; or

(b) vehicles with a GVWR of greater than 6,000 lbs. but less than 8,500 lbs. must meet the Bin 8 Tier II emission standard.[88]

Apparently to prevent granting credits for minor battery power, qualifying hybrid motor vehicle must also have a maximum available power[89] from the rechargeable energy storage system of:

(a) at least 4% for passenger automobiles and light-duty trucks;

(b) at least 10% for vehicles with a GVWR of more than 8,500 lbs. but no more than 14,000 lbs.; or

(c) 15% for vehicles with a GVWR in excess of 14,000 lbs.[90]

If the vehicle is not a passenger automobile or light-duty truck, it must have an internal combustion or heat engine that has received a certificate of conformity under the CAA for meeting the emission standards set in the regulations prescribed by the EPA Administrator for model years 2004-2007 diesel heavy-duty engines or ottocycle heavy-duty engines.[91]

In all cases, the taxpayer must be the vehicle's first user,[92] the vehicle must have been acquired for use or lease only by the taxpayer,[93] and the vehicle must have been made by a manufacturer.[94] A qualified hybrid motor vehicle does not include a vehicle that has a GVWR of less than 8,500 lbs. if that vehicle is not a passenger automobile or light-duty truck.[95]

The credit for a passenger automobile or light-duty truck with a GVWR of no more than 8,500 lbs. is the sum of (a) a fuel economy credit,[96] meaning the amount that would be determined for an advanced lean burn technology motor vehicle (treated as if the vehicle were an advanced lean burn technology motor vehicle), plus (b) a conservation credit,[97] meaning the amount of conservation credit that would be allowed if the vehicle were treated as an advanced lean burn technology motor vehicle.[98] So one would use the same standards to determine the credit for a qualified hybrid vehicle as one would if the vehicle were a lean burn technology motor vehicle in order to determine the total credit.

The credit for other qualified hybrid motor vehicles is the amount equal to the applicable percentage of the qualified incremental hybrid cost of the vehicle.[99] The applicable percentage is:

(a) 20% if the vehicle gets an increase in city fuel economy relative to a comparable vehicle[100] of at least 30% but not over 40%[101];

(b) 30% if the vehicle achieves an increase of at least 40% but not over 50%[102]; and

(c) 40% if the vehicle achieves an increase of over 50%.[103]

The qualified incremental hybrid cost of a vehicle is the amount of excess of the manufacturer's suggested retail price for such vehicle over the price for a comparable vehicle, to the extent that difference does not exceed:

(a) $7,500 if the vehicle has a GVWR of no more than 14,000 lbs.;

(b) $15,000 if the vehicle has a GVWR of more than 14,000 lbs. but not over 26,000 lbs.; and

82. I.R.C. §30B(j).

83. *Id.* §30B(d).

84. The term "consumable fuel" means any solid, liquid, or gaseous matter that releases energy when consumed by an auxiliary power unit. *Id.* §30B(d)(3)(B).

85. *Id.* §30B(d)(3)(A)(i).

86. CAA §234(e)(2).

87. 42 U.S.C. §§7521 et seq.

88. I.R.C. §30B(d)(3)(A)(ii).

89. Maximum available power:

> (i) Certain passenger automobiles and light trucks—In the case of a vehicle to which paragraph (2)(A) applies, the term "maximum available power" means the maximum power available from the rechargeable energy storage system, during a standard 10 second pulse power or equivalent test, divided by such maximum power and the SAE net power of the heat engine.
>
> (ii) Other motor vehicles—In the case of a vehicle to which paragraph (2)(B) applies, the term "maximum available power" means the maximum power available from the rechargeable energy storage system, during a standard 10 second pulse power or equivalent test, divided by the vehicle's total traction power. For purposes of the preceding sentence, the term "total traction power" means the sum of the peak power from the rechargeable energy storage system and the heat engine peak power of the vehicle, except that if such storage system is the sole means by which the vehicle can be driven, the total traction power is the peak power of such storage system.

Id. §30B(d)(3)(C).

90. *Id.* §30B(d)(3)(A)(iii).

91. *Id.* §30B(d)(3)(A)(iv).

92. *Id.* §30B(d)(3)(A)(v).

93. *Id.* §30B(d)(3)(A)(vi).

94. *Id.* §30B(d)(3)(A)(vii).

95. *Id.* §30B(d)(3)(A). This cuts out motorcycles and presumably all-terrain vehicles (ATVs).

96. *Id.* §30B(d)(2)(A)(i). *See id.* §30B(c)(2)(A).

97. *Id.* §30B(d)(2)(A)(ii).

98. *Id.* §30B(c)(2)(B)

99. *Id.* §30B(d)(2)(B)(i).

100. The term "comparable vehicle" means, with respect to any new qualified hybrid motor vehicle, any vehicle that is powered solely by a gasoline or diesel internal combustion engine and that is comparable in weight, size, and use to such vehicle. *Id.* §30B(d)(2)(B)(iv).

101. *Id.* §30B(d)(2)(B)(ii)(I).

102. *Id.* §30B(d)(2)(B)(ii)(II).

103. *Id.* §30B(d)(2)(B)(ii)(III).

(c) $30,000 if the vehicle has a GVWR of over 26,000 lbs.[104]

The manufacturer certifies the vehicle's qualified incremental hybrid cost, using Internal Revenue Service (IRS) guidance. This IRS guidance will provide procedures and methods for calculating fuel economy savings and incremental hybrid costs.[105]

For a new qualified hybrid motor vehicle that is sold during the phaseout period, only the applicable percentage of the credit is allowed.[106] The phaseout turns on sales of a particular manufacturer's hybrids cumulatively. The phaseout period is "the period beginning with the second calendar quarter following the calendar quarter which includes the first date on which the number of qualified vehicles manufactured by the manufacturer of the vehicle referred to [is] sold for use in the United States after 2005, is at least 60,000."[107] The applicable percentage is:

(a) 50% for the first two calendar quarters of the period;
(b) 25% for the third and fourth calendar quarters of the period; and
(c) 0% for each calendar quarter thereafter.[108]

Toyota and Lexus have already reached the limit.

The credit is applicable to any property that is placed into service after 2005.[109] The credit for hybrid vehicles that are passenger automobiles or light-duty trucks will only apply to property that is purchased before December 31, 2011.[110] For all other motor vehicles that qualify as hybrid vehicles, the credit will only apply to purchases before 2010.[111]

5. New Qualified Alternative Fuel Motor Vehicle Credit

The last component of the new alternative motor vehicle credit is the new qualified alternative fuel motor vehicle[112] credit. The credit applies to both vehicles that operate entirely on alternative fuel and certain mixed-fuel vehicles; in other words the vehicle cannot be operated on gasoline or diesel fuel except to the extent they may be part of a mixed fuel. A qualified alternative fuel motor vehicle is a new manufactured vehicle that is only capable of operating on an alternative fuel,[113] and that is acquired for use or lease, but not for resale by the taxpayer.[114] An alternative fuel is compressed natural gas, liquified natural gas, liquefied petroleum gas, hydrogen, and any liquid that is at least 85% methanol.[115]

The credit allowed equals the applicable percentage of the incremental cost of the vehicle.[116] The applicable percentage for a new qualified alternative fuel vehicle is:

(a) 50%[117]; plus
(b) 30% if the vehicle has (1) received a certificate of conformity through the CAA[118] and the vehicle meets or exceeds the most stringent standard available (other than zero emissions) under the CAA for the make and model year of the vehicle,[119] or (2) received an order certifying that vehicle met the same requirements as vehicles that can be sold or leased in California and meets or exceeds the most stringent standard available (other than zero emissions) for certification under California law[120] for that make and model.[121]

The incremental cost of a new qualified alternative fuel motor vehicle equals the excess of the manufacturer's suggested retail price (MSRP) of the vehicle over the MSRP for a gasoline or diesel fuel motor vehicle of the same model.[122] Incremental costs cannot exceed:

(a) $5,000 if the GVWR of the vehicle is not more than 8,500 lbs.[123];
(b) $10,000 if the GVWR of the vehicle is over 8,500 lbs. but no more than 14,000 lbs.[124];
(c) $25,000 if the GVWR of the vehicle is more than 14,000 lbs. but not over than 26,000 lbs.[125]; and
(d) $40,000 if the GVWR of the vehicle is over 26,000 lbs.[126]

A reduced credit is also available for mixed-fuel vehicles placed in service during the tax year.[127] A mixed-fuel vehicle is any motor vehicle described as a hybrid vehicle or as an alternative fuel motor vehicle or, generally speaking, a new manufactured vehicle that has a GVWR of more than 14,000 lbs. that

(a) is manufacturer-certified as able to perform efficiently in normal operation on a mix of alternative fuel and petroleum-based fuel,
(b) has received either an order of conformity under the CAA or an order that certifies the vehicle has met the same requirements as vehicles that can be sold or leased in California and also meets or exceeds the low-emission vehicle standard under §88.105-94 of Title 40 of the Code of Federal Regulations for the make and model, and
(c) is for use or lease, but not resale, by the taxpayer.[128]

104. *Id.* §30B(d)(2)(B)(iii).
105. *Id.* §30B(d)(2)(B)(v).
106. *Id.* §30B(f)(1).
107. *Id.* §30B(f)(2).
108. *Id.* §30B(f)(3).
109. Energy Policy Act of 2005, §1341(c).
110. I.R.C. §30B(j).
111. *Id.* §30B(j)(2).
112. *Id.* §30B(e).
113. *Id.* §30B(e)(4)(A)(i).
114. *Id.* §30B(e)(4)(A).
115. *Id.* §30B(e)(4)(B). A methanol car seems improbable except for a race car.
116. *Id.* §30B(e)(1).
117. *Id.* §30B(e)(2)(A).
118. 42 U.S.C. §§7521 et seq.
119. I.R.C. §30B(e)(2)(B)(i).
120. As enacted under a waiver granted by CAA §209(b).
121. I.R.C. §30B(e)(2)(B)(ii).
122. *Id.* §30B(e)(3).
123. *Id.* §30B(e)(3)(A).
124. *Id.* §30B(e)(3)(B).
125. *Id.* §30B(e)(3)(C).
126. *Id.* §30B(e)(3)(D).
127. *Id.* §30B(e)(5)(A).
128. *Id.* §30B(e)(5)(B)(i)-(v).

The reduced credit for mixed-fuel vehicles is: (1) 70% of the credit that would have been allowed if the vehicle were a qualified alternative fuel motor vehicle, for a 75/25 mixed-fuel vehicle,[129] and (2) 90% of the credit that would have been allowed for a 90/10 mixed-fuel vehicle.[130] A 75/25 mixed-fuel vehicle is one that operates on at least 75% alternative fuel and not over 25% petroleum-based fuel.[131] A 90/10 mixed-fuel vehicle uses at least 90% alternative fuel and not over 10% petroleum-based fuel.[132]

The credit is effective for property that is placed in service after August 8, 2005,[133] and ends for any property bought after 2010.[134]

6. Other Rules for the Alternative Motor Vehicle Credits

A taxpayer can always elect not to take the credit,[135] but the taxpayer must reduce the basis of the property by the credit allowed.[136] The portion of the credit for new alternative motor vehicles that is attributable to depreciable, i.e., those used in a business, is treated as a part of the general business credit of §38(b).[137] The rest of the credit is allowable to the extent of the excess of the regular tax[138] (reduced by refundable credits in §§21-26, the §27 foreign tax credit and the §30 qualified electric vehicles credit) over the tentative minimum tax for the taxable year.[139] So, the credit is not allowed against the Alternative Minimum Tax (AMT) and may be reduced even if the taxpayer is not subject to AMT.

The IRS is responsible for issuing regulations to recapture credit for property that ceases to be eligible for the credit.[140]

The credit is not allowed for the portion of the cost of any property that is taken as a deduction under the business property expensing election in §179.[141]

In order to avoid any double tax benefits, the amount of any income tax deduction or other credit that is allowed under some other code provisions must be reduced by the amount of the alternative motor vehicle credit allowed under §30B(a) for the tax year.[142]

For a motor vehicle used by certain tax-exempt entities, the person who sells the vehicle to the entity is treated as the taxpayer and may take the credit for himself as long as he discloses to the entity at the time of sale the amount of the allowable credit.[143] No credit is granted for vehicles used predominantly outside the United States.

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2015 are estimated at $1.686 billion.[144]

Comment. Why are there tax credits limited to new manufactured vehicles? For example, in Brazil, gasoline-powered cars—known as flex cars—are regularly adapted to run on ethanol, methanol, or combinations of the two, as well as gasoline or natural gas.[145] The cost of the conversion is under $1,000.[146] Assuming it is good environmental policy to have flex-cars, why exclude the owners of the huge population of aging fuel-hungry cars and trucks from benefiting from the same credit? Cars in the United States are easily converted to run on alcohol-based fuels by mechanics, but those conversions cannot qualify for the credit. Why not? Why can only manufacturers qualify? Why limit the credit for vehicles Americans own and operate outside the United States? Finally, the cutoff date of the end of 2010 may hinder long-term business planning for the credit.

B. Credit for Installation of Alternative Fueling Stations to Service Alternative Fuel Vehicles

Summary. There is now a 30% credit for installing alternative fuel dispensing pumps and equipment that dispense ethanol, compressed hydrocarbon gases, and hydrogen or biodiesel mixed with diesel fuel.

There is already a large deduction available for installing clean-fuel refueling property in §179A, but it is set to expire in favor of the new credit. The Joint Committee described the deduction as follows:

> Clean-fuel vehicle refueling property may be expensed and vehicle refueling property comprises property for the storage or dispensing of a clean-burning fuel, if the storage or dispensing is the point at which the fuel is delivered into the fuel tank of a motor vehicle. Clean-fuel vehicle refueling property also includes property for the recharging of electric vehicles, but only if the property is located at a point where the electric vehicle is recharged. Up to $100,000 of such property at each location owned by the taxpayer may be expensed with respect to that location. The deduction is unavailable for costs incurred after December 31, 2006.[147]

129. *Id.* §30B(e)(5)(A)(i).
130. *Id.* §30B(e)(5)(A)(ii).
131. *Id.* §30B(e)(5)(C).
132. *Id.* §30B(e)(5)(D).
133. Energy Policy Act of 2005, §1531(c).
134. I.R.C. §30B(j)(3).
135. *Id.* §30B(h)(9).
136. *Id.* §30B(h)(4). The basis is determined without regard to the rule in §30B(g)(1) that treats the new credit as a general business credit.
137. *Id.* §30B(g)(1); *id.* §38(b)(25), *amended by* Energy Policy Act of 2005, §1341(b)(1).
138. As defined in *id.* §26(b).
139. *Id.* §30B(g)(2)(B), *amended by* 2005 Gulf Opportunity Zone Act, §412(d).
140. *Id.* §30B(h)(8).
141. *Id.* §30B(h)(7). *See id.* §50(b)(1).
142. *Id.* §30B(h)(5)(B).
143. *Id.* §30B(h)(6). If it is sold to a tax exempt entity, the credit is subject to the limitations that apply to the general business credit. *Id.* §30B(b)(6), *amended by* 2005 Gulf Opportunity Zone Act, §402(j). *See id.* §50(b)(3)-(4).
144. Joint Comm. on Taxation, Estimated Revenue Effects of Title XV of H.R. 6, The Energy Policy Tax Incentives Act of 2005, JCX-51-05 (Provision IV-1), June 28, 2005 (as passed by the Senate).
145. *Brazil Fights Oil Prices With Alcohol*, Christian Sci. Monitor, Oct. 7, 2005, *available at* http://www.csmonitor.com/2005/1007/p05s01-woam.html.
146. The author's conversations with Brazilians informs me the cost of installing a flex-kit in a gasoline powered car is about $1,000. That squares with the information that Flex Tec sells a conversion kit adaptor for gasoline to E-85 (85%) ethanol for $500-$700. *See* Domestic Fuel, http://domesticfuel.com (last visited Apr. 5, 2007); Flex Tec Corp., www.flextec.net (last visited Apr. 5, 2007). The president of Flex Tec informed the author by telephone that installation costs $300-$400 and that the kit allows cars to run on 100% ethanol.
147. Joint Comm. on Taxation, Technical Explanation of the Conference Agreement of H.R. 6, Title XIII, Energy Tax Incentives Act of 2005, 151 Cong. Rec. S9117 (July 27, 2005).

The 2005 Congress granted a generous credit to taxpayers who install pumps and rechargers to dispense alternative fuels and to recharge electric vehicles. The credit expires in 2008. The 2005 provision allows a taxpayer to take a credit against his or her income tax liability for the particular tax year equal to 30% of the cost of any qualified alternative fuel vehicle refueling (QAFVR) property[148] the taxpayer placed in service during that year.

The credit is available for pumps and chargers used for retail sale or for vehicles used by a business. A pump or recharger at a residence also qualifies, up to $1,000. The credit cannot exceed $30,000 for depreciable QAFVR property, and the credit for any other QAFVR property cannot exceed $1,000.[149] The tax basis of the QAFVR property declines by credit.[150]

For depreciable QAFVR property, the credit is part of the general business credit and is included in the list of credits that now make up the current business credit.[151] For QAFVR property that does not fit in under the general business credit provision, the credit cannot exceed (a) the regular tax[152] reduced by the sum of nonrefundable personal credits, the foreign tax credit, electric vehicle credit, and the alternative motor vehicle credit, over (b) the tentative minimum tax for the taxable year.[153]

If tax-exempt entities, governmental units, or certain foreign persons or entities[154] buy QAFVR property, then the seller is treated as the taxpayer who placed the property in service. This is only true if the taxpayer discloses the amount of any credit allowable to the person or entity; the credit is also subject to the limits applicable to the general business credit.[155] The credit only applies to property used in the United States.[156] A taxpayer can elect not to take the credit,[157] and if the property ceases to be qualified clean-fuel vehicle refueling property, the benefit of the deduction is recaptured as income for the year in which the recapture occurs.[158] This credit ends as to property placed in service after 2009, except for property that relates to hydrogen, in which case the credit terminates after 2014.[159]

Revenue Effects. Estimated net revenue losses (there were gains in the years 2014-2015) as a result of this provision in the years 2005–2015 are $874 million.[160]

Comment. Because the credit is limited to $30,000 per location, the major beneficiaries are both the huge petroconglomerates and independently owned gas stations that add new pumps and chargers to private dispensers, such as cab fleets, that buy fuel at wholesale. It will also help individuals who recharge electric cars and gas-electric hybrids. Because there has to be an 85% or more blend of methanol, ethanol, or other alcohol, biodiesels are excluded. The credit should greatly encourage making these clean fuels available. One question is whether the credit is needed in light of the other credits granted to clean fuels. This may turn out to be a highly useful credit that facilitates the sale of environmentally superior fuels.

148. "Qualified alternative fuel vehicle refueling property" has the meaning given to such term by §179A(d), but only with respect to any fuel:

> (A) at least 85% of the volume of which consists of one or more of the following: ethanol, natural gas, compressed natural gas, liquefied natural gas, liquefied petroleum gas, or hydrogen; or
>
> (B) any mixture of biodiesel (as defined in §40A(d)(1)) and diesel fuel (as defined in §4083(a)(3)), determined without regard to any use of kerosene and containing at least 20% biodiesel.

See I.R.C. §30C(c)(1).

According to §179A(d), the term "qualified clean-fuel vehicle refueling property" means any property (not including a building and its structural components) if—

> (1) such property is of a character subject to the allowance for depreciation,
>
> (2) the original use of such property begins with the taxpayer, and
>
> (3) such property is—
>
> (A) for the storage or dispensing of a clean-burning fuel into the fuel tank of a motor vehicle propelled by such fuel, but only if the storage or dispensing of the fuel is at the point where such fuel is delivered into the fuel tank of the motor vehicle, or
>
> (B) for the recharging of motor vehicles propelled by electricity, but only if the property is located at the point where the motor vehicles are recharged.

Under §40A(d)(1), the term "biodiesel" means the monoalkyl esters of long chain fatty acids derived from plant or animal matter which meet—

> (A) the registration requirements for fuels and fuel additives established by the Environmental Protection Agency under section 211 of the Clean Air Act (42 U.S.C. §7545), and
>
> (B) the requirements of the American Society of Testing and Materials D6751.

Section 4083(a)(3) defines diesel fuel as follows:

> (A) In general. The term "diesel fuel" means—
>
> (i) any liquid (other than gasoline) which is suitable for use as a fuel in a diesel-powered highway vehicle, or a diesel-powered train,
>
> (ii) transmix, and
>
> (iii) diesel fuel blend stocks identified by the Secretary.
>
> (B) Transmix. For purposes of subparagraph (A), the term "transmix" means a byproduct of refined products pipeline operations created by the mixing of different specification products during pipeline transportation.

149. *Id.* §30C(b).

150. *Id.* §30C(e)(1).

151. *See id.* §38(b). This section refers to the current year business credit and lists all the credits included therein. The current year business credit is then added to the business credit carryforwards and carrybacks in determining the general business credit. The application of this limit never produces a negative credit.

152. The 2005 Gulf Opportunity Act, §412(d) amended §30(c)(d)(2)(A) to clarify that regular tax means regular tax liability as defined in §26(b). This presents some further reductions under §55(c).

153. I.R.C. §30C(d)(2).

154. *See id.* §50(b)(3), (4).

155. *Id.* §30C(e)(2). Such property must be treated as depreciable for general business credit limitation purposes. 2005 Gulf Opportunity Zone Act, §402(m)(1) (effective retroactively as to property placed in service after 2005).

156. I.R.C. §30C(e)(3). The credit cannot be combined in §179 bonus expensing.

157. *Id.* §30C(e)(4).

158. *Id.* §30C(e)(5).

159. *Id.* §30C(g).

160. BUDGET EFFECTS—TAX INCENTIVES ACT, *supra* note 28, Provision D-1.

III. Persons Involved in Comprehensive Environmental Response, Compensation, and Liability Act Litigation: Facilitating Settlements

The Tax Increase Prevention Reconciliation Act of 2005[161] treats Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)[162] funds established under consent decrees for the sole purpose of resolving CERCLA claims will be treated as beneficially owned by the federal government, hence not subject to federal income taxation.[163] The new provision applies to funds established after May 17, 2006, and ends for funds established after 2010.[164] There are various modest restrictions.

The rationale is that Congress was concerned that the usual rule, subjecting such funds and accounts to income taxation, might prevent taxpayers from entering into prompt settlements with EPA for the cleanup of Superfund hazardous waste sites and reduce the ultimate amount of funds available for cleanup.

Revenue Effects. These will be negligible according to the Joint Committee on Taxation.[165]

Comment. The practical effect is a loss of federal revenues. Whether the Act will, in fact, modify the behavior of taxpayers with CERCLA liabilities is a matter of speculation. Presumably it will at least have some effect at the margins.

IV. Oil and Gas Industry

A. Efforts to Increase Domestic Oil and Gas Supplies

1. Credit for Marginal Production

Summary. New §45I of the 2004 Jobs Act grants a marginal well production credit to taxpayers with oil and gas operating interests.[166] As a practical matter, this new credit is a dead letter because the price of oil and gas has skyrocketed since enactment, with the result that a phaseout provision in the new section has obliterated the credit's value. It may however, offer a cushion in the event of an oil price collapse.

The credit is:

credit amount	X	taxpayer's qualified crude oil[167] and qualified natural gas[168] production

This credit is in addition to depletion deductions on the same production.

The key term "credit amount"[169] refers to $3 per barrel (as adjusted for inflation after 2005) of qualified crude oil production, and 50 cents per 1,000 cubic feet of qualified natural gas production.[170] These hydrocarbons must come from a qualified marginal well:

> (a) located in the United States;
>
> (b) whose production during the tax year is treated as marginal production under the percentage depletion rules of §613A(c) (6); and
>
> (c) having an average daily production of not more than 25 barrel-of-oil equivalents and producing water at a rate at least 95% of total well effluent. This means that the maximum amount of annual production on which credit will be able to be claimed is 9,125 barrels or barrel equivalents (365 days x 25 barrels/day). This is a per-well limit; any number of domestic wells can qualify, and the size or nature of the taxpayer does not matter.

This definition largely overlaps the definition of a stripper well property (property which has average daily production of 15 or fewer barrel equivalents of oil and gas) used in connection with percentage depletion deduction rules for marginal production. The credit is also available for production from heavy oil property (a property whose most substantial production is heavy oil—any domestic crude oil produced from any property, if the crude oil had a weighted average gravity of 20 degrees API or less).[171]

Because the new credit largely incorporates the definition of marginal property used for the increased percentage depletion that applies when the reference price of crude oil is less than $20, any property that will qualify for this new marginal production credit may also qualify for increased percentage depletion.[172]

The credit is subject to a phaseout which reduces the credit as domestic unregulated oil and gas prices increase. The credit will not be available to production when the reference price of oil exceeds $18 ($2 for natural gas). The credit declines proportionately in the $15-$18 range, but this is partly offset by an inflation adjustment for purposes of the phaseout of the enhanced oil recovery (EOR) credit.[173] In addition, the taxpayer must elect out of the §45K (formerly §29) nonconventional fuel production credit as to production potentially qualifying for both credits.

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2004-2009 are $94 million.[174]

161. 42 U.S.C. §§9601-9675, ELR Stat. CERCLA §§101-405.

162. *Id.*

163. I.R.C. §468B(g); 2006 Act, §201(a) (effective for accounts and funds established after May 17, 2006).

164. I.R.C. §468B(g)(3).

165. Joint Comm. on Taxation, Estimated Revenue Effects of the Conference Agreement for H.R. 4520, The American Jobs Creation Act of 2004, JCX-69-04 (Provision III-C-11, Items III-B-8, -9), Oct. 7, 2004.

166. Operating interest means interests that share in operating risks, as opposed, e.g., to royalty interests. Operating interests are also sometimes called working interests.

167. There is a typographical error in the law in that it refers to "qualified credit oil production" in one place and "qualified crude oil production" in another. This will likely be corrected in a Technical Corrections Act.

168. I.R.C. §45I(b)(1)(A), (b)(2)(C)(i), (c)(2)(A).

169. The enhanced oil recovery (EOR) credit provided by §43 does provide for these types of reduction.

170. *Id.* §45I(b)(1)(B). *See id.* §43(b)(3)(B) for the computation.

171. *See id.* §613A(c)(6)(F).

172. *Id.* §45I(c)(3)(A)(i). The same definition of marginal property also applies for purposes of the exception to the 100% of taxable income limitation relating to depletion for oil and gas produced from marginal properties. *See id.* §613A(c)(6).

173. *Id.* §45I(b)(2)(B).

174. Joint Comm. on Taxation, Estimated Revenue Effects of H.R. 4520, The American Jobs Creation Act of 2004, JCX-45-04 (Provision IV-12), June 22, 2004 (as passed by the U.S. House of Representatives) [hereinafter American Jobs Creation Act—JCX-45-04].

Comment. This is an extraordinary insurance program for marginal producers. The economic problem for the oil and gas industry is predicting prices in the future to confidently deploy capital to their projects. A simpler, broader solution would be to impose an oil import fee that guarantees a floor on oil and gas prices. It would raise large revenues and eliminate the need for convoluted tax provisions such as the new §45I. At this point, it makes sense to repeal this new rule on the ground of being dead on arrival. An illustrative oil import fee might be structured as follows:

> If and when the world market price for imported petroleum equals or exceeds a stated "floor amount," say $70, the fee disappears. If world prices drop below the floor price, the federal government imposes a fee equal to the difference on importation. For example, if the world market price were $50, then the fee would be $20. The revenues would go to the Treasury but would be borne by U.S. consumers. Domestic oil prices would never be less than the floor price because no U.S. producer would be so unwise as to charge less than the floor price.

2. Extension of Enhanced Oil Recovery Credit to Alaskan Mega-Projects

Summary. The 2004 Jobs Act extended the EOR credit to construction costs of certain enormous Alaska gas treatment plants that were paid or incurred in taxable years beginning after 2004.[175] The credit is 15% of qualified EOR costs, including costs of depreciable tangible property, intangible drilling and development costs,[176] and tertiary injectant expenses. These advanced extraction practices are applied to wring out the last drop of oil or gas.

Under the new rule, qualified EOR costs will also include amounts paid or incurred during the tax year to construct a gas treatment plant in the area[177] of the United States lying above 64 degrees North latitude that prepares Alaska natural gas (this excludes the Arctic National Wildlife Refuge) for transportation through a pipeline with a capacity of at least two trillion British thermal units (Btu) of natural gas per day and produces carbon dioxide (CO_2) which is injected into hydrocarbon-bearing geological formations.[178]

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005–2014 are $295 million.[179]

Comment. This appears to be lavish special interest legislation for one or more large projects, twisting a credit for specialized extraction processes into a gift for building a handful of large facilities in the far North.

3. Accelerated Deductions for Alaska Natural Gas Pipelines

Summary. The 2004 Jobs Act decreased the period over which Alaska natural gas pipelines[180] can be written off from 15 years to 7.[181] Qualifying pipelines include the pipe, trunk lines, related equipment, and appurtenances used to carry natural gas, but do not include any gas processing plants.[182] Because the accelerated depreciation only applies after 2013, this is a most curious provision.

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005–2014 are $150 million.[183]

Comment. This seems to be pure special interest legislation, which, combined with the Alaska mega-project credit, represents a huge, seemingly pointless tax break for the petroleum industry. It merits scrutiny.

4. Refining Exemption Ceiling Applicable to Independent Oil and Gas Producers Qualifying for Percentage Depletion Raised Refinery Runs of 75,000 Barrels-Per-Day

Summary. Larger oil refiners will now be able to claim percentage depletion deductions on their oil and gas production.

Taxpayers with oil and gas revenues must claim annually the higher of cost or percentage depletion deductions.[184] Cost depletion is limited to the taxpayer's basis in the oil or gas property, whereas percentage depletion is a fixed percentage of revenues and commonly offers the more generous deductions. Above all, when basis in the property is exhausted, percentage depletion is still available. Percentage depletion for oil and gas is only available under the so-called independent producers and royalty owner's exemption. If a taxpayer or a related person was engaged in refining of crude oil, the taxpayer qualified for the independent producer or royalty owner exemption only if, on any day of the tax year, the taxpayer's refinery runs and the related person(s) never exceeded 50,000 barrels.[185]

The 2005 Energy Tax Act raised the 50,000-barrel-per-day limitation to 75,000,[186] and added a further relaxation: the 75,000-barrel limit average daily refinery runs for any tax year are now computed by dividing the total refinery runs for the tax year by the number of days in the tax year.[187] This changes the refinery limitation from one

175. I.R.C. §43(c)(1)(D), (c)(5), *amended by* 2004 Act, §707(a).

176. *Id.* §263(c) defines intangible drilling development costs. Basically, they are the "soft cost" (not hardware) expanded in drilling a well. This allows a current deduction for the soft costs, e.g., rig workers' wages, of drilling wells.

177. A specialized meaning of U.S. applies here. It is imported from §638(*l*). This means the plant might be in territorial waters and still qualify.

178. *Id.* §43(c)(1)(D).

179. Joint Comm. on Taxation, Estimated Budget Effects of the Conference Agreement for H.R. 4520, The American Jobs Creation Act of 2004, JCX-69-04 (Provision VII-7), Oct. 7, 2004 [hereinafter American Jobs Creation Act—JCX-69-04].

180. "Alaska natural gas pipeline" means the natural gas pipeline system located in the state of Alaska that has a capacity of more than 500 billion Btu of natural gas per day, and is placed in service after 2013, or treated as placed in service on January 1, 2014, if the taxpayer who places the system in service before then (but after 2004), elects such treatment. I.R.C. §168(i)(16)(B)(ii). There are some further details.

181. *Id.* §168(e)(3)(C)(iii), *amended by* 2004 Act, §706(a).

182. *Id.* §168(i)(16).

183. American Jobs Creation Act—JCX-69-04, *supra* note 179, Provision VII-6.

184. I.R.C. §611(a).

185. *Id.* §613(A)(d)(4) (before amendment).

186. *Id.*, *amended by* 2005 Act, §1328(a). It is for tax years ending after August 8, 2005. *See* 2005 Act, §1328(b).

187. I.R.C. §613A(d)(4).

based on actual daily production to a limit based on average daily production for the year—another act of largesse for the oil industry.

The effect is to allow much larger refiners to get in on percentage depletion, decreasing their federal income tax liabilities. It does not apply solely to newly discovered oil and gas, and is not tied to demonstrating further exploration and development. Even then, the oil exploration business is so risky, and prices of products fluctuate so widely, that the deduction for depletion is a minor consideration when deciding to go forward with the hunt for new oil or gas.[188] A preexisting tax expenditure item in §263 allows an immediate deduction for the soft costs of drilling a well.

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2015 are $158 million,[189] but the overall revenue loss from allowing percentage depletion to exceed costs is far larger.

Comment. This tax gift is for smaller domestic oil and gas producers and royalty owners. No serious consideration justifies it. It is not even limited to exploration or development-related production. The presence or absence of percentage depletion is a trivial concern compared to predictions of future prices when considering domestic oil and gas exploration and development. This change simply expands the population of taxpayers who can claim percentage depletion to a larger number of companies with refining operations. The key benefit is that taxpayers can now claim depletion deductions in excess of their base investment in particular oil and gas properties. In fact, percentage depletion is a good practice because it is easier to apply than cost depletion, which calls to periodically revising economically recoverable reserves. However, it permits deductions in excess of basis, something otherwise unheard of in the Code, and costly in terms of lost revenue.[190] The tax policy solution has long been to drop cost depletion, adopt percentage depletion deductions alone, and limit depletion deductions to basis.[191]

5. Refiners Get Immediate Write-Offs for One-Half the Costs of Property Installed Before 2012 as Part of a New Refinery or to Increase Output or Throughput

Summary. New §179C, enacted by the 2005 Energy Tax Act, lets domestic refiners immediately write off one-half the cost of building a new refinery or improving an existing refinery that enhances its output. Under prior law, petroleum-refining assets were depreciated over a 10-year recovery period.[192] Pre-existing §179 lets businesses expense the cost of most types of tangible personal property and some real estate, but the amount that can be expensed is subject to dollar amount limitations, a phaseout, and could not be more than the taxpayer's active business taxable income.

The new expensing opportunity only applies to qualified refinery property, meaning any portion of a qualified refinery[193]:

> (a) that is new[194];
>
> (b) placed in service after August 8, 2005, and before 2012[195];
>
> (c) if the cost relates to only part of a refinery, that part meets the requirements for increased output or throughput[196]; and
>
> (d) that meets all applicable environmental laws in effect on the date the portion of the refinery was placed in service.[197]

A qualified refinery is one located in the United States that is designed to serve the primary purpose of either processing liquid fuel from crude oil or qualified fuels.[198] It may also be a facility that processes coal gas into liquid fuel.[199] The refinery can be obtained under a leaseback.[200] To qualify for the §179C deduction for a part of a qualified refinery, that part must enable the existing qualified refinery to increase total volume output (ignoring asphalt or lube oil) by at least 5% by volume on an average daily basis, or enable the existing qualified refinery to process at least 25% or more qualified fuels throughput on an average daily basis.[201] A topping plant, asphalt plant, lube oil facility, crude or product terminal, or blending facility built solely to comply with consent decrees or projects mandated by federal, state, or local governments is disqualified.[202] For example, a scrubber, even if installed as part of a larger project, is disqualified if the scrubber does not increase throughput or in-

188. White House 2008 Budget Item 10 shows a tax expensing intangible drilling and development expenses as costing $2.91 billion over 2008-2012.

189. BUDGET EFFECTS—TAX INCENTIVES ACT, *supra* note 28, Provision B-8.

190. White House 2008 Budget Item 11 shows the tax expenditures cost of percentage over cost depletion for fuels in millions of dollars: Excess of percentage over cost depletion, fuels.

191. BORIS I. BITTKER & LAWRENCE LOKKEN, FEDERAL TAXATION OF INCOME, ESTATES, AND GIFTS 5 (3d ed. 1999). The same problem exists in the mineral industry, but the excess of percentage over cost depletion is an AMT item. *See* I.R.C. §57(a)(1).

192. *See id.* §168(e)(1). For purposes of the 10-year classification, "petroleum refining assets" are assets used for the distillation, fractionation, and catalytic cracking of crude petroleum into gasoline and its other components. JOINT COMM. ON TAXATION, DESCRIPTION AND TECHNICAL EXPLANATION OF THE CONFERENCE AGREEMENT OF H.R. 6, TITLE XIII, THE ENERGY TAX INCENTIVES ACT OF 2005, JCX-60-05, at 42, July 28, 2005 [hereinafter ENERGY TAX INCENTIVES ACT—JCX-60-05].

193. I.R.C. §179C(c)(1).

194. *Id.* §179C(c)(1)(A).

195. *Id.* §179C(c)(1)(B). §179(c)(1)(F)(ii) provides an alternative period.

196. *Id.* §179C(c)(1)(C)

197. *Id.* §179C(c)(1)(D). A CAA waiver is not taken into account in determining whether the compliance requirement is met if a refinery's failure to satisfy environmental laws with respect to part of the refinery in service on or before August 8, 2005, will not disqualify the election under §179C for otherwise qualifying property; no written binding contract for the construction of which was in effect before June 15, 2005. *Id.* §179C(c)(1)(D), (E).

198. *Id.* §179C(d). §45k(c) defines "qualified fuels" as oil from shale or tar brine, Devonian shale, coal seams, or a tight formation or synfuels, including feedstocks. Section 45K(d) is a requirement that these only be domestic production of qualified fuels, does not apply to the definition of refinery. So, otherwise qualifying refinery property qualifies for the §179(c) the deduction even if the primary purpose of the refinery of oil from shale and tar sands outside of the U.S. ENERGY TAX INCENTIVES ACT—JCX-60-05, *supra* note 192, at 42-43.

199. ENERGY TAX INCENTIVES ACT—JCX-60-05, *supra* note 192, at 42 n.55.

200. I.R.C. §179(c)(2).

201. *Id.* §179C(3)(1)-(2).

202. *Id.* §179C(f)(2).

crease capacity to accommodate qualified fuels.[203] The election is available to cooperatives.[204]

Presumably, the new rule, like current §179, does not attract an alternative minimum tax adjustment.[205]

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2015 are $406 million.[206] The White House tax expenditure estimate in millions of dollars is much higher: $790 million from corporations.[207]

Comment. This provision offers a huge tax boost for building a new refinery or enhancing an older facility's output. U.S. refining capacity is reportedly declining, but the constraints have been environmental rather than financial. Oil companies are awash in cash—ExxonMobil was recently reported to hold over $30 billion.[208] The result of this new tax deduction is wasted tax revenue unless this tremendous tax bait is truly needed to get the industry to increase capacity.[209] A new refinery costs billions to construct. If new refineries are built—the last one was built in 1976—the revenue losses from this tax break may be far higher than the Joint Committee speculates.

6. Rapid Write-Offs of Initial Grading and Clearing Costs for Gas Utility Property

Summary. The 2004 Jobs Act amended §168 of the Code to allow initial grading and clearing costs for gas utility property to be written off over 15 years on the theory is that these costs are part of the cost of acquiring and installing the pipelines.[210]

This shortens the write-off period for initial expenditures and removes doubt as to how to treat them. Continual grading and clearing costs will generally be treated as current business expense deductions.[211]

Revenue Effects. Total estimated revenue gains as a result of this provision in the years 2005–2014 are $806 million.[212]

Comment. This is an expensive timing victory for gas utilities. Its significance with respect to energy independence and environmental policy is trivial.

7. New Natural Gas Gathering and Distribution Lines Placed in Service Before 2011 Can Be Written Off Over Fewer Years

Summary. The 2005 Energy Act renders new natural gas distribution pipelines placed in service before 2011 property that can be written off over 15 years if placed in service after April 11, 2005.[213] This shortens the write-off period by five years. Under pre-2005 Energy Tax Act law, natural gas distribution pipelines were assigned a 20-year recovery period.[214] Gathering lines can now be written off over seven years.

The 2005 Energy Tax Act came to the aid of the industry by providing that any natural gas gathering line[215] placed in service after April 11, 2005, like Alaska natural gas pipelines, gets a seven-year life for depreciation purposes.[216] The new rule is not retroactive, so pending tax litigation can go forward for lines placed in service before April 12, 2005. The stated legislative purposes are the following: to provide clarity and certainty in this litigious area regarding the recovery period of natural gas gathering lines[217]; to accommodate the legislatively declared reality that gas in gathering lines is more corrosive than interstate pipeline quality gas; and to foster investment in natural gas fields that will enhance the supply of natural gas.[218] In addition, natural gas gathering lines are exempt from the AMT depreciation adjustment.[219]

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2015 are $1.019 billion.[220]

Comment. There is no serious explanation of this large fiscal gift in the legislative history other than a reference to greater corrosion. Admittedly, it affects a competitive industry facing cost challenges, but the industry is largely protected as a regulated industry for the most part, although deregulation is in progress, with associated challenges.[221]

203. Energy Tax Incentives Act—JCX-60-05, *supra* note 192, at 43.

204. I.R.C. §179C(g)(1).

205. The issue here is that to the extent depreciation deductions exceed normal straight line deductions, the excess would otherwise go into the AMT base and attract or separate tax. *See id.* §56(a)(1).

206. Budget Effects—Tax Incentives Act, *supra* note 28, Provision B-3.

207. White House 2008 Budget, *supra* note 9, Item 23.

208. *See Exxon's Challenge: Topping Itself*, Fortune, Apr. 2006, *available at* http://money.cnn.com/2006/03/31/news/companies/exxon_f500_fortune/index.htm.

209. *See* Pro Tec Fuel Management, Fuel Outlook Winter 2006/2007 (2006), *available at* http://www.protecfuel.com/images/pdfs/Winter_06-07_Hedge_Programs.pdf.

210. I.R.C. §168(g)(3)(B), *amended by* 2004 Act, §901(c).

211. *Id.* §162(a).

212. American Jobs Creation Act—JCX-69-04, *supra* note 179, Provision VIII-D, at 21.

213. I.R.C. §168(e)(3)(E)(viii), *amended by* 2005 Act, §1325(a).

214. Energy Tax Incentives Act—JCX-60-05, *supra* note 192, at 3.

215. A "natural gas gathering line" means the pipe, equipment, and appurtenances determined to be a gathering line by the Federal Energy Regulatory Commission (FERC), or the pipe, equipment, and appurtenances used to deliver natural gas from the wellhead or a common point to the point at which that gas first reaches: a gas processing plant, an interconnection with a transmission pipeline for which a certificate as an interstate transmission pipeline has been issued by FERC, an interconnection with an intrastate transmission pipeline, or a direct interconnection with a local distribution company, a gas storage facility, or an industrial consumer. I.R.C. §168(i)(17), *amended by* 2005 Act, §1326(b).

216. *Id.* §168(e)(3)(C)(iv), *amended by* 2005 Act, §1326(a).

217. Rev. Proc. 87-56, 1987-2 C.B. 674 is the source of the problem, creating ambiguity as to whether to use seven or 15 years as the recovery period. *Compare* Clajon Gas Co. v. Commissioner, 119 T.C. 197 (2003), *rev'd* 354 F.3d 786 (8th Cir. 2004), *with* Duke Energy Natural Gas Corp. v. Commissioner, 172 F.3d 1255 (10th Cir. 1999), *rev'd* 109 T.C. 416 (1997).

218. H. Rep. No. 109-45 related to H.R. 1541.

219. I.R.C. §56(a)(1)(B), *amended by* 2005 Act, §1326(d).

220. Budget Effects—Tax Incentives Act, *supra* note 28, Provision B-5.

221. *See, e.g.*, Answers.com, *Natural Gas Distribution*, www.answers.com/topic/natural-gas-distribution (last visited Apr. 5, 2007).

8. Increased Net Income Limitation Percentage Depletion for Oil and Gas

Summary. Independent oil and gas producers can claim percentage depletion deductions against more than the net income from a marginal well.

Section 613A allows independent producers to claim percentage depletion equal to 15% of revenues from a well. For miners, percentage depletion cannot exceed 50% of the net income from the property, but oil and gas producers are generously limited to 100% of the income from a well.[222] The 2006 Act extended the rule that in the case of marginal wells, independent producers are exempt from even the 100% limit through 2007, retroactive to the beginning of 2006, when it was set to expire.[223]

Revenue Effects. The Joint Committee on Taxation has estimated a total 2004-2009 loss of $94 million.[224]

Comment. Another lopsided victory for the oil industry.

9. Acceleration of Geological and Geophysical Exploration Cost Deductions for Oil and Gas

Summary. Nonintegrated oil and gas companies can now write these costs off over two years. Ordinarily, such expenditures have to be capitalized.[225]

The 2005 Energy Tax Act generously allowed oil and gas companies to write off over two years all their geological and geophysical (G&G) exploration expenses.[226] Shortly thereafter, the 2005 Tax Increase Prevention Act[227] extended the period to five years for certain integrated oil and gas producers, namely, oil companies with an average daily worldwide production of crude oil of at least 500,000 barrels for the tax year, gross receipts in excess of $1 billion in the last taxable year ending during calendar year 2005, and an ownership interest in a crude oil refiner of 15% or more.[228]

Revenue Effects. The White House estimates the revenue losses from the accelerated deduction at $240 million from corporations and $50 million from individuals.[229]

Comment. The two- and five-year rules are both generous compared to the IRS position that G&G expenses must be capitalized into the depletable basis of particular areas of geological interest.[230] This has always been a difficult area, but it was stabilized legally prior to this pro-oil and gas amendment.

B. Environmental Improvement

1. Credit for Low-Sulfur Refining of Diesel Fuel

Summary. New §45H of the 2004 Jobs Act allows, retroactive to the beginning of 2003, small business refiners to claim a low-sulfur diesel fuel production credit[231] of 5 cents per gallon of low-sulfur diesel fuel up to a maximum of 25% of the refiner's investment needed to comply with EPA's low-sulfur rules.[232] The explanation is that Congress was worried that the cost of complying with EPA's the Highway Diesel Fuel Sulfur Control Requirements might force some small refiners out of business.[233]

A small business refiner's status is determined annually. This status requires a refiner of crude oil with 1,500 or fewer individuals engaged in the refinery operations of the business on any day during the tax year. Additionally, the average daily domestic refinery run or average retained production for all of the taxpayer's facilities for the year ending December 31, 2002, cannot exceed 205,000 barrels.

The total low-sulfur diesel fuel credit for any tax year for any facility is capped at 25% of the qualified capital costs the small business refiner incurred for the facility, reduced by the aggregate low-sulfur diesel fuel credits for all earlier tax years for the facility.[234] In other words, the sum of the annual credits is limited to 25% of qualified capital costs.[235] For a small business refiner whose average daily domestic refinery runs for 2002 exceeded 155,000 barrels, that 25% declines as daily production approaches 205,000 barrels.[236]

Qualified capital costs are those paid or incurred for a facility during the applicable period[237] to comply with EPA's Highway Diesel Fuel Sulfur Control Requirements. These include expenditures for constructing new process operation units or dismantling and reconstructing existing process units to be used to produce low-sulfur diesel fuel, associated adjacent or offsite equipment (including tankage, catalyst, and power supply), engineering, construction period interest, and site work.[238]

No credit will be allowed unless, within 30 months after the first day of the first tax year in which the credit is otherwise available, the refiner gets a certification from the IRS that its qualified capital costs for the facility comply with EPA regulations.[239] There are detailed application requirements and a special extension of the statute of limitation to accommodate the extended administration called for by the credit.[240] In addition, the tax basis of a facility for which a

222. I.R.C. §613(a).

223. 2006 Act, §118.

224. American Jobs Creation Act—JCX-45-04, *supra* note 174.

225. Rev. Rule 77-188, 1977-1 C.B. 76.

226. 2005 Act, §1329(c).

227. *Id.* §503(b).

228. I.R.C. §167(h).

229. White House 2008 Budget, *supra* note 9, Item 25.

230. Rev. Rule 77-188. 1977-1.6.B.76.

231. Low sulfur diesel fuel means diesel fuel with a sulfur content of 15 parts per million (ppm) or less. I.R.C. §45H(c)(5). The credit is part of the general business credit under 38. It is also a "qualified business credit" under §196(c) meaning that a taxpayer will be able to deduct any low sulfur diesel fuel production credits that remain unused at the end of the 20-year carry forward period under §196.

232. *Id.* §§45H, 38(b)(18), 280C(d), 1016(a)(31), 196(c)(12), *amended by* 2004 Act §339(a), (b), (c), (d), (e) respectively.

233. Energy Tax Incentives Act of 2002, S. Rep. No. 107-140, at 34, Mar. 1, 2002.

234. I.R.C. §45H(b)(1)(A)-(B).

235. *Id.* §45H(c)(1)(A)-(B). To calculate the average daily domestic refinery run or average retained production only refineries that were refineries of the refiner or a related person (as defined in §613A(d)(3) on April 1, 2003). *Id.* §45H(e).

236. *Id.* §45H(b)(2).

237. January 1, 2003 through the earlier of December 31, 2009, or the date that is one year after the taxpayer must comply with applicable EPA regulations. *Id.* §45H(c)(4).

238. *Id.* §45H(c)(2).

239. *Id.* §45H(f)(1).

240. *Id.* §45H(f)(4).

low-sulfur diesel fuel production credit was allowed declines by the amount of the credit.[241]

Revenue Effects. See the next entry, which combines this credit with accelerated depreciation deductions.

Comment. A retroactive credit equates to a check from the government for actions already taken. It cannot be viewed as a stimulus, but as a gift. The credit essentially means the government pays for a quarter of the cost of upgrading or installing new refinery capacity to clean up dirty fuel. Again, the relief goes to small refiners. To the extent the credit is needed to prevent a shutdown, it is understandable. Otherwise, it is not. The flaw is the failure to demand a taxpayer-by-taxpayer showing of a risk of actual shutdown.

2. Accelerated Write-Offs of EPA Sulfur-Related Compliance Costs for Smaller Refiners

Summary. The 2004 Act retroactively added new §179B, the heart of which is that small oil refiners can immediately write off 75% of the cost of complying with EPA requirements relating to diesel fuel sulfur content.[242]

Normally, the write-offs would be over much longer depreciation periods. The benefit is available to so-called small business refiners[243]; processors of up to 205,000 barrels per day who elect to apply §179B to the qualified capital costs[244] they paid or incurred by during the tax year.[245] Deductions the taxpayer claims under §179B reduce the basis of the property,[246] as is true of all depreciation deductions. The percentage is generally 75% of the costs paid or incurred for the purpose of complying with the Highway Diesel Fuel Sulfur Control Requirements, but this 75% declines for refiners whose average daily domestic refinery runs for the one-year period ending at the end of 2002, is over 155,000 barrels. The maximum number of percentage points declines pro rata between 155,000 barrels and 205,000 barrels per day, at which point §179B becomes unavailable.

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2014 are $119 million.[247] The White House figures are higher.[248]

Comment. This provision is another victory for the oil and gas industry. The current deduction is extraordinarily large, although the revenue losses are modest. The question not addressed in the legislative history is why a retroactive tax subsidy should be given to a business for doing what is required of it to prevent socially unacceptable levels of pollution. On the other hand, there is a congressional finding that smaller refiners may go out of business without help, which is discussed under Part IV.9., the credit for low-sulfur refining of diesel fuel.

3. Reinstatement of Leaking Underground Storage Tanks Trust Fund Financing Rate

Summary. Federal law imposes a modest .01 cent per gallon tax on gasoline, diesel fuel and kerosene on removal from a terminal or refinery, on entry into the United States, and upon sale to any person who is not properly registered, absent a prior taxable removal or entry of the fuel.[249] The purpose of the tax is to provide a fund available for removing and cleaning up leaking petroleum product storage tanks where no solvent person is available to pay for the project.[250] The 2005 Energy Act extended the tax from September 30, 2005, to September 30, 2011.

The same Act repealed the leaking underground storage tank (LUST) tax for exported dyed diesel and kerosene. At the same time, the Act eliminated the other exemptions for those products and left them—for constitutional reasons—taxed under the applicable cents-per-gallon rate for diesel fuel and kerosene under the removal-at-terminal rules under §4081.[251] The LUST tax is part of an exceptionally complicated system of excise taxes.

Revenue Effects. Total estimated revenue gains as a result of this provision in the years 2005-2015 are $349 million.[252]

Comment. This tax provides an appropriate way to distribute the cost of necessary environmental remediation. It should be reinstated when needed.[253]

241. *See id.* §§1001, 1016. "Basis" is in effect the taxpayer's capital invested in property. The higher it is the smaller the gain (or larger the loss) the taxpayer will realize on selling the property. The higher the basis, the more depreciation the taxpayer can claim as an offset against income.

242. The new provision applies to expenses paid or incurred after 2002 in tax years ending after 2002. 2004 Act §338(c). This is a lavish legislative gift.

243. A "small business refiner" is as defined in §45H(c)(1) and is, for any tax year, a refiner of crude oil with respect to which not over 1,500 individuals are engaged in the refinery operations on any day during that year, and which has an average daily domestic refinery run or average retained production for the one-year period ending on December 31, 2002 of not over 205,000 barrels per day. For this purpose, the average daily domestic refinery run or average retained production, only refineries which on April 1, 2003 were refineries of the refiner or certain related persons are taken into account. Individuals taken into account with respect to the 1,500 individual are those employed by the taxpayer directly in refining.

244. Qualified capital costs are defined in §45H(c)(2) and are, for any facility, costs paid or incurred during the applicable period (starting in 2003 as to any facility of a small business refiner, and ending the earlier of a year after the taxpayer must comply with the Sulfur Control Requirements for the facility or December 31, 2009) for compliance with the Sulfur Control Requirements for facility, including expenditures for: constructing new process operation units or dismantling and reconstructing existing process units to be used in the production of low-sulfur diesel fuel, associated adjacent or offsite equipment, e.g., tankage, catalyst, and power supply, engineering, construction period interest, and site work. *Id.* §179B(a).

245. *Id.* §179B(a), *amended by* 2004 Act, §338(a).

246. *Id.* §179B(c)(1). In determining corporate earnings and profits, amounts deductible under §179B are ratably deducted over five years. §312(k)(3)(B). Section 280B (capitalization of demolition costs) is inapplicable to costs under §179B. *Id.* §179B(d).

247. American Jobs Creation Act—JCX-69-04, *supra* note 179, Provision III-B, at 8.

248. White House 2008 Budget Item 39 for the Executive's estimate.

249. I.R.C. §4081(d)(3), *amended by* 2005 Act, §1362(a).

250. *See* Superfund Revenue Act of 1986, Pub. L. No. 99-499, tit. V, 100 Stat. 1613.

251. I.R.C. §4082(a), *amended by* 2005 Act, §1362(b)(1).

252. Budget Effects—Tax Incentives Act, *supra* note 28, Provision F-2.

253. It is somewhat unfair because it taxes persons who, for example, did not even exist when a particular leaking tank was installed and who have used utmost care to prevent leaks. Still, it does rough justice.

4. Reinstatement of Oil Spill Liability Trust Fund Tax

Summary. Thanks to the 2005 Act, the 5-cent-per-barrel Oil Spill Liability Trust Fund tax on crude oil and petroleum products was reinstated starting April 1, 2006, and ending after 2014.[254] Until the tax was suspended in 1995, there was a 5-cent-per-barrel tax on crude oil received at a U.S. refinery and imported petroleum products received for consumption, use, or warehousing, and any domestically produced crude oil exported from the United States if no taxes were imposed on the crude oil prior to exportation. The tax was effective only if the fund's balance fell below $1 billion. Revenues from the tax went into the Oil Spill Liability Trust Fund account. The fund's main purpose was paying the costs for responding to and removing oil spills. The new law reinstates collections of the tax until the balance in the Oil Spill Liability Trust Fund exceeds $2.7 billion.

Revenue Effects. Total estimated revenue gains as a result of this provision in the years 2005-2015 is $2.508 billion.[255]

Comment. This tax provides an appropriate way to distribute the cost of necessary environmental remediation. It needs to be reinstated periodically when needed.

5. Inclusion of Brownfields in Petroleum-Damaged Sites

Summary. Brownfields expensing was expanded to include sites that have been contaminated by petroleum products. Section 198 grants an immediate deduction for the costs of remediating contaminated sites. Absent §198, the cost might have to be capitalized and written off, if at all, over time. Section 109 of the 2005 Act extended the deduction through 2007 and extended it to sites contaminated by petroleum products as defined in §4612(a)(3).[256] The provision is effective as of the beginning of 2006. This is part of a buyer package that reinstated the so-called brownfields remediation deduction for expenses paid or incurred in 2006 and 2007.[257]

Revenue Effects. The Joint Committee has estimated a net revenue loss of $105 million from 2007-2016.[258] A related provision allows exclusion of gains and losses on the disposition of certain brownfields sites by certain CERCLA settlement funds, producing further revenue losses.[259]

Comment. Here is another victory for the oil industry, although this one is at least arguably equitable in terms of treatment among industries.

V. Electric Power Industry[260]

A. Rapid Write-Offs of Initial Grading and Clearing Costs for Electric Utility Transmission and Distribution Plant

Summary. The 2005 Energy Act shortened the write-off period from 20 to 15 years for certain assets used in the transmission of electricity for sale and related land improvements. A year earlier, in the 2004 Jobs Act, Congress modified the cost recovery rules to allow 20-year write-offs of initial grading and clearing costs for electric utility transmission and distribution plants.[261]

Revenue Effects. Not available.

Comment. One wonders if the gas utility industry used the same lobbyists as the electricity industry to get this subsidy. It is a small victory with no explanation in policy terms. It neither aids the environment nor advances energy independence. The marketplace can handle how and where to lay gas pipes and electrical lines.

B. Seven-Year Amortization of Air Pollution Control Facilities Installed After April 11, 2005, Available for Old Coal-Fired Plants

Summary. Congress granted a rapid seven-year recovery period for the cost of certain certified air pollution control facilities used in connection with an electric generation plants that are primarily coal fired. Prior law allowed elective 60-month amortization of some or all of the cost of adding a certified pollution control facility installed to a plant in operation before 1976. A certified pollution control facility was a facility to abate or control water, air pollution, or contamination. If the facility had a useful life of over 15 years, only the basis attributable to the first 15 years could be amortized over the 60-month period, with the rest written off under the regular depreciation system. Regular "C" corporations that place a certified pollution control facility in service had to reduce their basis by 20% before claiming amortization deductions.[262]

The 2005 Energy Tax Act provides that a certified air pollution control facility used in connection with a plant or other property that started operations after 1976 enjoys an 84-month recovery period. In addition, for air pollution control facilities; that are placed in service after April 11, 2005, and used in connection with an electric generation plant or other property that is primarily coal-fired,[263] the Act allows taxpayers to write off the cost of certain certified air pollution control facilities over 84 months, regardless of whether the associated electric plant was in operation before 1976. The Act specifies that, for a facility used in connection with a post-1975 plant or other property, the facility must have

254. I.R.C. §4611(f), *amended by* 2005 Act, §1361.

255. Budget Effects—Tax Incentives Act, *supra* note 28, Provision A-8, F-1.

256. I.R.C. §198(d)(1)(C).

257. *Id.* §198(h), *amended by* 2006 Act, §109(a), (b).

258. Joint Comm. on Taxation, General Explanation of Tax Legislation Enacted in the 109th Congress, JCS-1-07, at 791; Appendix at 800 (Part Nine, 1-A-7), Jan. 12, 2007.

259. White House 2008 Budget Item 40 states the losses at $180 million in 2007-2012.

260. This ignores special rules allowing deferral of gains from the disposition of transmission property to implement FERC restructuring policies (a revenue loss of over $1 billion for the years 2008-2012). *See* Table 19-3 of the February 5, 2007-2008 Budget released by the White House and reported in 2007 Tax Notes Today 25-14 (Feb. 6, 2007).

261. I.R.C. §168(e)(3)(F), (g)(3)(B), *amended by* 2004 Act, §901(b)-(c).

262. *Id.* §291(a)(5).

263. *Id.* §169(d)(5)(A), *amended by* 2005 Act, §1309(a).

been constructed, reconstructed, or erected by the taxpayer after April 11, 2005, or acquired new after that date.[264]

The Act does not change the limitation on amortization for corporate taxpayers or for pollution control facilities with a useful life of over than 15 years and does not affect the treatment of water pollution control facilities. That means the pre-2005 Tax Act provision, allowing new pollution control facilities to be amortized over five years, still applies to air and water pollution control facilities, but only if they are added to plants in operation before 1976.

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2015 are $1.147 billion.[265]

Comment. This provision offers a significant timing advantage for adding pollution control facilities. Why coal-fired facilities and not others are so benefited can only be attributed to the lobbying power of such entities as the Edison Electric Institute. However, the coal-fired electricity generators are the major contributors to acid rain. The question is why the tax system should subsidize to the tune of over one billion dollars to do what they ought to do anyway? Good economics suggest the polluters and their consumers should pay the bill, not U.S. taxpayers as a whole.

C. Fifteen-Year Statutory Write-Offs for Property Used in the Transmission at 69 or More Kilovolts of Electricity for Sale

Summary. The 2005 Energy Act shortens the write-off period from 20 to 15 years for certain assets used in the transmission of electricity for sale and related land improvements. New hardware used in the transmission and sale of even minor electrical output qualifies.

The 2005 Energy Tax Act replaces the former 20-year depreciation life with a 15-year period for hardware (as opposed to real estate)[266] used in the transmission at 69 or more kilovolts (kV) of electricity. The 15-year statutory recovery period[267] excludes initial clearing and grading costs for an electric utility transmission and distribution plant.[268] Sixty-nine kV is minor electrical power.

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2015 are $1.239 billion.[269]

Comment. The provision is a victory for major electrical power producers of all kinds and is a large and inexplicable fiscal gift.

D. Special Loss Carryback Election Period for Investments in Electric Transmission Equipment and Pollution Control Facilities

Summary. Entities with losses from electrical transmission and pollution control facilities installed by an electrical utility can carry their losses five back years against income; potentially yielding a refund check from the Treasury as opposed to being carried back the normal two years. This burst of benefits applies to losses incurred in 2003-2005.[270] Normally, if a business has current losses from its business operations, it can carry the loss for the year back up to two years against the business' taxable income for a tax refund.[271]

The special five-year carryback period applies, at the taxpayer's election, to net operating losses (NOLs) arising in a tax year ending after 2002, and before 2006. The NOL can be carried back to each of the five years preceding the tax year of the loss. For example, an NOL that arose in 2003 can be carried back five years to the tax year ending in 1998, rather than 2001, and potentially earn a refund check from the Treasury Department. This opportunity can be seized in any tax years ending in 2006-2008.[272]

The loss subject to the special carryback period cannot exceed 20% of the sum of the taxpayer's electric transmission property capital expenditures and pollution-control facility (PCF) capital expenditures for the tax year before the tax year in which the election is made.[273]

For example,a taxpayer has a $400 NOL for her tax year ending 2003. She invested $750 in electric transmission equipment in 2005. She can make the five-year carryback election as to the 2003 NOL in 2006, the year following the qualified investment. Based on her qualifying investment of $750, she can elect the five-year carryback for $150 (20% of $750) of the $400 2003 NOL.[274] The key date here is when the taxpayer paid or incurred the capital expenditure, not when the improvement was placed in service.

Electrical transmission property capital expenditures are expenditures the taxpayer made and that are attributable to electric transmission property; the expenditures must be with respect to the transmission at 69 or more kV of electricity for sale.[275] Pollution control facility capital expenditures are capitalized expenditures chargeable to capital account that are:

> (a) made by an electric utility company[276] before August 8, 2005; and
>
> (b) attributable to a facility which qualifies as a certified PCF, as defined under §169(d)(1), relating

264. *Id.* §169(d)(4)(B), *amended by* 2005 Act, §1309(b).

265. BUDGET EFFECTS—TAX INCENTIVES ACT, *supra* note 28, Provision A-8.

266. It includes tangible property (not a building or its structural components) whose basis has been reduced by depreciation or amortization taken for any period during which the property was used as an integral part of furnishing electrical energy. The formal term is "section 1245 property." §1245 property for this purpose is property defined in §§1245(a)(3), 168(e)(3)(E)(vii), *amended by* 2005 Act, §1308(a).

267. *Id.* §168(e)(3)(E)(vii), *amended by* 2005 Act, §1308(a).

268. This is because §168(e)(3)(F) includes that property as 20-year property.

269. BUDGET EFFECTS—TAX INCENTIVES ACT, *supra* note 28, Provision A-7.

270. I.R.C. §172(b)(1)(I)(i), *amended by* 2005 Act, §1311.

271. *Id.* §172.

272. *Id.* §172(b)(1)(I)(i). The election also affects favorably AMT. *See* RIA Complete Analysis of the Energy and Transportation Acts of 2005, §326.

273. I.R.C. §172(b)(1)(I)(i).

274. RIA Complete Analysis of the Energy and Transportation Acts of 2005, §326.

275. I.R.C. §172(b)(1)(I)(vi)(I). This is medium or large sized power output.

276. This term is defined in §2(3) of the Public Utility Holding Company Act (15 U.S.C. §79b(3)) and generally meaning as a company that owns or operates facilities used for the generation, transmission, or distribution of electric energy for sale other than to the tenants or employees.

> to an election to write off such equipment over 60 months, but allowing used equipment to qualify and letting the facility have been operating before 1976.[277]

Revenue Effects. Estimated net revenue losses as a result of this provision in the years 2005-2015 are $52 million.[278]

Comment. This special interest legislation benefits the electrical utility industry with a windfall. There are several troubling issues. First, regulated utilities are commonly protected by their regulators from going broke. The protection comes in the form of approval of rate hikes to consumers. Second, there is no indication in the legislative history of why this special generosity was needed. The windfall is a timing matter for most taxpayers. Normally, they will use their current losses against future income. This provision is extraordinary in that it retroactively extends the carryback period back into extra years. If Congress has been asked for the same money in the form of a direct industry subsidy, it might easily have rejected the request. By burying the subsidy in a tax bill, there was an assurance of little public scrutiny.

VI. Nuclear Electrical Energy Industry

A. Nuclear Decommissioning Rules Relaxed in Favor of Taxpayers

Summary. Congress modified the rules for qualified nuclear decommissioning trust funds by repealing the cost of service requirement for contributions to a qualified fund and by allowing full funding of a qualified nuclear decommissioning fund by permitting transfers of the present value of pre-1984 decommissioning costs (previously excluded) to a qualified fund.

The 2005 Act relaxed the availability of current deductions for nuclear decommissioning expenses expected in future years.[279] This is part of a complicated tax accounting picture. Accountants, whose job it is to measure income accurately for commercial purposes, allow accrual method taxpayers—and virtually all businesses are on the accrual method—to deduct reserves for future expenses, regardless of whether the person sets aside money for the future in the reserve. Congress, needing money, has historically rejected reserve accounting.[280] In turn, taxpayers have lobbied for and sometimes obtained special dispensations. Long ago, operators of nuclear facilities got their dispensation in §468A, which allows them to claim current income tax deductions for payments actually made to special accounts known as qualified nuclear decommissioning funds. These funds are established to pay for the potentially titanic costs of dismantling (actual decommissioning) of nuclear facilities that produce electrical energy. The nuclear facility's operator is eventually taxed on money withdrawn from a tax to pay for decommissioning, but gets an offsetting income tax deduction for decommissioning costs as so-called economic performance (decommissioning) takes place.

Under prior law, there were two major limits to §468A. First, contributions to a qualified fund were deductible only to the extent that they were collected as part of the cost of service to ratepayers (the cost of service requirement). Second, accumulations in a qualified fund were limited to the money needed to fund decommissioning costs of a nuclear power plant. Third, taxpayers had to get a ruling from the IRS as to how much they could deductibly contribute; the amount is known as the ruling amount.

The 2005 Act repealed the requirement that the annual amount a taxpayer can pay into a qualified fund is limited by the taxpayer's cost of service requirement.[281] This means that the amount that a taxpayer can pay in is simply the ruling amount for the year. As a result, all taxpayers, including unregulated taxpayers, will be eligible to claim larger deductible contributions to qualified funds.

The 2005 Act also modified the definition of the ruling amount to limit it to the amount needed to fund the total nuclear decommissioning costs for the power plant over the estimated useful life of the power plant.[282] This eliminates the limitation that a qualified fund could only accumulate an amount large enough to pay for a nuclear power plant's decommissioning costs incurred while the qualified fund is in existence. It retroactively fixes the problem that the qualified fund system began in 1984. However, the catch-up payments must be by level funding (as opposed to huge early-year deductions).[283]

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2015 are $1.293 billion.[284]

Comment. This is a reasonable reform from an accounting perspective, but an expensive one.

B. New Credit for Advanced Nuclear Facilities

Summary. The 2005 Energy Tax expanded the general business credit[285] to include an advanced nuclear power facility credit in the amount of 1.8 cents per kilowatt hour (kwh), but only as to power sold to unrelated persons.[286] The credit applies to electricity produced in the United States or a U.S. possession[287] for the eight-year period beginning when the facility is placed in service. The total annual credit a taxpayer can claim is limited by reference to allocated capacity—a national limitation.

An advanced nuclear power facility is one which the taxpayer owns and which uses nuclear energy to produce elec-

277. I.R.C. §172(b)(1)(I)(vi)(II).

278. Budget Effects—Tax Incentives Act, *supra* note 28, Provision A-10.

279. I.R.C. §468A(b), (f), (d)(2)(A), (d)(1), (E)(2), *amended by* 2005 Act, §1310(a), (b)(1), (2), (c), (e), respectively.

280. *Id.* §461(h).

281. *Id.* §468A(b), *amended by* 2005 Act, §1310(a).

282. *Id.* §468A(d)(2)(A), *amended by* 2005 Act, §1310(b)(2).

283. Energy Tax Incentives Act—JCX-60-05, *supra* note 192, at 10.

284. Budget Effects—Tax Incentives Act, *supra* note 28, Provision A-9.

285. I.R.C. §38.

286. *Id.* §45J(a), *amended by* 2005 Act §1306(a). Rules similar to the §45(e)(4) rules to identify a related person for purposes of the electricity production credit also apply to the advanced nuclear power facility production credit. *Id.* §45J(e). That subject is discussed elsewhere in this article.

287. *Id.* §45J(e).

tricity, and was placed in service after August 8, 2005, but before 2021.[288]

An advanced nuclear facility is any nuclear facility whose reactor design the Nuclear Regulatory Commission (NRC) approved after 1993.[289] It is not a facility for which a substantially similar design for a facility of comparable capacity was approved before 1994.

The national megawatt (MW) capacity limitation is 6,000 MW.[290] As a result of this cap, a taxpayer can only claim tax credit for production of electricity equal to the ratio of the allocated capacity that the taxpayer receives from IRS[291] to the rated nameplate capacity of the taxpayer's facility.[292] For example, if the taxpayer's specific national allocation were 100 MW and the nameplate capacity (its potential output) were 300 MW, then it can only claim one-third of the otherwise available credit.

After the above limit trims down the credit, there is a second mechanical limit under which a taxpayer operating a qualified facility can claim no more than $125 million in tax credits per 1,000 MW of allocated capacity in any one year of the eight-year credit period.[293]

Rules similar to the phaseout rules applicable to the electricity production credit apply for purposes of the advanced nuclear power facility production credit.[294] These rules reduce the 1.8 cents if and to the extent the annual average contract price per kwh of electricity generated from the facility in the prior year exceeds eight cents per kwh.[295] Presumably, this threat will stimulate efficiency. In addition, up to 50%of the advanced nuclear power facility credit is lost where the facility is financed by grants, tax-exempt bonds, subsidized energy financing, and other credits.[296] The credit cannot be carried back to a tax year ending on or before the effective date of the credit.[297] The advanced nuclear power facility production credit is not a qualified business credit; hence, it cannot be used as deduction if it would otherwise expire unused.

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2015 are $278 million.[298]

Comment. This is a generous credit that cannot be evaluated without more information. No new nuclear power plant has been built in the United States for decades. The revenue cost seems highly speculative, and it not clear that tax incentives rather than regulatory changes are what is really needed.

VII. Coal-Based Electric Energy Industry

A. Investment Tax Credit for Investments in Qualifying Advanced Coal Projects

Summary. Congress granted three investment tax credits for clean coal facilities, namely, integrated gasification combined cycle projects, which get a 20% tax credit, other advanced coal-based projects that produce electricity (15%) and industrial gasification projects (20%). Industrial gasification projects are described under the next heading.

Under prior law, the business investment credit[299] consisted of the rehabilitation credit for modernizing and rehabilitating certain older buildings and historic structures and the energy credit for qualified solar[300] and geothermal property.[301] There was no credit for electricity production facilities that use coal as a fuel.

A qualifying advanced coal project credit is now part of the investment credit.[302] The credit is available for projects the IRS certifies in consultation with the U.S. Department of Energy (DOE) that result from competitive bidding.

The credit for any tax year equals: 20% of the qualified investment for the tax year in integrated gasification combined cycle projects plus 15% of the qualified investment for the tax year in projects that use other advanced coal-based generation technologies.[303] Compare this to the 30% credit for qualified solar and geothermal property. There is also a 30% geothermal credit that applies to property up to the electrical transmission stage.

The qualified investment for any tax year is the tax basis of eligible property, usually its purchase price, that the taxpayer placed in service during the year as part of a qualifying advanced coal project whose construction, reconstruction, or erection the taxpayer completed, or which the taxpayer acquired as new property, and for which depreciation (or amortization in lieu of depreciation) is allowable.[304] Among other things, this rules out land acquisition as a base for the credit.[305]

The qualified investment refers to eligible property, which is the following:

> (a) in the case of any qualifying advanced coal project using an integrated gasification combined cycle, any property which is part of the project needed for the gasification of coal, including any coal handling and gas separation equipment; and

288. *Id.* §45J(d)(1)(A)-(B).

289. *Id.* §45J(d)(2).

290. *Id.* §45J(b)(2).

291. IRS must prescribe regulations not later than six months after August 8, 2005, and must provide a certification process under which IRS, after consultation with the Secretary of Energy, will approve and allocate the national megawatt capacity limitation. *Id.* §45J(b)(4).

292. *Id.* §45J(b)(1)(A)-(B). Energy Tax Incentives Act—JCX-60-05, *supra* note 192, at 35.

293. I.R.C. §45J(c)(1)(B).

294. *Id.* §45J(c)(2).

295. The 8 cents price comparison is indexed for inflation. *Id.* §45J(e). Thus, 8 cents is adjusted for inflation §45J(e), as amended my the 2005 Gulf Opportunity Zone Credit. §402(d)(2), a technical correction clarifying that the inflation adjustment, does not apply to the credit rate.

296. Energy Tax Incentives Act—JCX-60-05, *supra* note 192, at 35. This may require a technical correction to be law.

297. *Id.* §39(d).

298. Budget Effects—Tax Incentives Act, *supra* note 28, Provision A-5.

299. I.R.C. §38.

300. This credit is not 30%. *Id.* §48(a)(2)(A)(i).

301. *Id.* §38 (prior to amendment). Generally, energy property consists of equipment that uses solar energy to generate electricity for heating or cooling a structure, providing hot water for use in the structure or providing solar process heat as well as distribution equipment. *Id.* §48(a)(3)(B).

302. *Id.* §46(3), *amended by* 2005 Act §1307(a) (effective after Aug. 8, 2005).

303. *Id.* §48A(a)(2).

304. *Id.* §48A(b)(1)(B).

305. *Id.* §48(a)(3)(A)(iii).

(b) any other qualifying advanced coal project or any property that is part of the project.[306]

A qualifying advanced coal project is located in the United States and:

(a) is determined by the IRS to use advanced coal-based generation technology to power a new electric generation unit, which is any facility where at least half of the annual net output is electrical power, including an otherwise eligible facility used in an industrial application, or to retrofit or repower an existing electric generation unit, including an existing natural-gas-fired combined cycle unit, if the fuel input for the project, when completed, is at least three-fourths coal, anthracite, bituminous coal, subbituminous coal, lignite, or peat, or some combination of these fuels;

(b) the project, consists of at least one electric generation unit at one site, and will have a total nameplate-generating capacity of at least 400 MW;

(c) the applicant shows that most of the output of the project is reasonably expected to be acquired or used; and

(d) the applicant shows ownership or control of a site of large enough to allow the proposed project to be constructed and to operate on a long-term basis.[307]

There are further elaborate administrative details including monitoring the credits with an option on the part to reallocate credits after six years.

The aggregate credit for IRS-certified projects is limited to a notable $1.3 billion. The IRS is authorized to certify $800 million of that amount for integrated gasification combined cycle projects, and $500 million for projects using other advanced coal-based generation technologies.[308] The IRS is supposed to certify roughly an equal amount to bituminous coal, subbituminous coal projects, and projects using lignite as a primary feedstock. This is evidently a political compromise.[309] The IRS is supposed give high priority to projects which include using integrated gas combined cycle technology that sequesters greenhouse gases produced from generating electricity,[310] increased byproduct utilization, and other benefits.[311]

An integrated gasification combined cycle facility is an electric generation unit that produces electricity by converting coal or liquid to synthesis gas (hydrogen and carbon monoxide (CO) into the case of coal) used to fuel a combined cycle plant turbine (including a combustion turbine/fuel cell hybrid) and a steam turbine.[312] The steam turbine process includes a heat recovery steam generator. The combined cycle technology is similar to the technology in modern gas fired plants, but is not fully commercial because it is costly, albeit highly efficient and environmentally desirable.[313] The output is gas plus slag that may be usable as agricultural fertilizer, using solvents or advanced processes.

An electric generation unit uses advanced coal-based generation technology if the unit uses integrated gasification combined cycle technology, or generally has a design net heat rate of 8530 Btu/kwh (40% efficiency), and the unit is designed to certain performance requirements.[314] An article from the International Energy Agency (of which the United States is a member) indicates that the 40% efficiency requirement of the advanced coal-based generation technology is the same practical range of efficiency as an integrated gasification combined cycle plant.[315]

For this purpose, design net heat rate for an electric generation unit is measured in Btu/kwh based on the design annual heat input to the unit and the rated net electrical power, fuels, and chemicals output of the cogeneration of steam by the unit adjusted for the heat content of the design coal to be used by the unit.[316] The calibrations are highly specific. Any electric generation unit in existence on August 8, 2005, uses advanced coal-based generation technology if the unit achieves a minimum efficiency of 35% and an overall thermal design efficiency improvement, compared to a minimum baseline efficiency of the unit as operated.[317]

Revenue Effects. See next heading.

Comment. This is the first time that sequestering greenhouse gases has been a goal of the tax system, and this goal should be applauded. It remains to be seen whether the IRS takes the requirement seriously and to what extent industry can invoke other benefits in place of sequestration. The big picture question is whether coal burning should be encouraged at all. The very argument favoring coal is its abundance, hence, national security value. The counterargument is that burning coal produces abundant CO_2.

This credit is expensive, but it may swing business decisions away from simple, coal-fired plants in favor the preferable gasification technology, which seems worthwhile in spite of its high price tag. At this point even the best coal-fired electricity production process is controversial with respect to global warming unless sequestration is assumed.[318] The amount of the credit, which operates as a refund check from the government, leaves the investor free to fund the project partly with tax savings and a chance to finance much of the balance with debt from third parties. The more gasification plants are built, the weaker the voice of the coal-fired plant

306. *Id.* §48A(c)(3)(B).

307. *Id.* §48A(c), (e).

308. *Id.* §48A(d)(3)(B).

309. *Id.* §48A(e)(3)(A).

310. The reference is to integrated gasification combined cycle technology. *Id.* §48A(c)(5).

311. *Id.* §48(e)(3)(B).

312. *Id.* §48A(c)(7).

313. Maurstad, Overview of Coal-Based Integrated Gasification Combined Cycle Technology (MIT Laboratory for Energy and the Environment 2005).

314. *Id.* §48A(f)(1), *amended by* 2006 Act, §203.

315. International Energy Agency, *Clean Coal Technologies: Integrated Gasification Combined Cycle*, http://www.iea-coal.org.uk/content/default.asp?PageId=74 (last visited Apr. 5, 2007).

316. I.R.C. §48A(f)(2).

317. Seven percentage points for coal of more than 9,000 Btu, 6 percentage points for coal of 7,000 to 9,000 Btu, or 4 percentage points for coal of less than 7,000 Btu.
- if the heat content is less than 13,500 Btu per pound, but greater than 7,000 Btu per pound, according to the following formula: design net heat rate = unit net heat rate x [1-{((13,500 - design coal heat content, Btu per pound)/1,000)* 0.013}], and §48A(f)(2)(C)(i); if the heat content is less than or equal to 7,000 Btu per pound, according to the following formula: design net heat rate = unit net heat rate x [1-{((13,500-design coal heat content, Btu per pound)/1,000)* 0.018}], and corrected for the site reference conditions of: elevation above sea level of 500 feet; air pressure of 14.4 pounds per square inch absolute; temperature, dry bulb of 63/o/F; temperature, wet bulb of 54/o/F; relative humidity of 55%. §48B(f)(2).

operators will be, especially if gasification plants sequester CO_2 emissions.

B. Twenty Percent Tax Credit for Qualifying Gasification Projects

Summary. The 2005 Energy Act added the qualifying gasification project credit as a new component of the investment credit.[319] The credit for any tax year is 20% of the qualified investment for the tax year,[320] except for any qualified investment for which a credit is allowed as an advanced coal project credit. A taxpayer can select which credit to take if both are otherwise available.[321]

The qualified investment for any tax year is the basis of eligible property, property which is part of a qualifying gasification project and is needed for the gasification technology of the project that the taxpayer placed in service during the taxable year and whose construction, reconstruction, or erection the taxpayer completed, or which the taxpayer acquired as new property and for which depreciation (or amortization in lieu of depreciation) is allowable.[322] The investment must be in property associated with the gasification of coal, including any coal-handling and gas-separation equipment. Investments in equipment that could operate by drawing fuel directly from a natural gas pipeline do not qualify for the credit.

A qualifying gasification project is one that uses gasification technology to be used by an eligible entity[323] and any part of whose qualified investment is certified under the qualifying gasification program as eligible for the credit, up to $650 million.[324] The credit limit per project is therefore $130 million, i.e., 20% of $650 million.

Revenue Effects. Total estimated revenue losses as a result of these provisions in the years 2005-2015 are $1.612 billion.[325] The White House estimated revenue losses at $720 million, all from corporations.[326]

Comment. Coal gasification is a promising technology using steam to extract energy from coal by converting the coal to several gases (mainly hydrogen and CO, allowing separation of the greenhouse gases for use as fertilizers, chemicals, and injection of CO_2 for sequestration, with leftover solids returned to the mixture). Coal gasification is roughly equivalent to natural gas in cleanliness and efficiency. This technology may ease the introduction of carbon taxes and other restraints on CO_2 emissions. A broader and simpler solution would be a carbon tax on electricity production. Congress chose the weaker alternative of stimulating more efficient production not calibrated to CO_2 output and highly advanced and very costly advanced production methods that offer to reduce or eliminate CO_2 production. It is unclear to what extent the relatively small additional credit will tease out the superior technology.

The Swedish approach to limiting air pollution is another alternative. Sweden imposes a charge on nitrogen oxide (NO_x) of SEK 40 (US $4.60 at the March 2007 exchange rate) per kilo of NO_x emitted by large electrical, waste incineration, and heat-generating plants, with the revenue distributed among the plants in proportion to their energy production. Thus, plants that produce much energy relative to their total emissions benefit, while those with a low ratio of energy to emissions lose money. Some plants earn money from this system; others underwrite it. The refund assures that the system has an environmental rather then a revenue purpose. One plant reportedly offers its operators a bonus if NO_x emissions are low. There is no regulation. Companies can pick their own best technologies and have a strong incentive to do so. Sweden's concern is with acidification of lakes and forest by NO_x. The tax could be adapted to any large emitter and to other emissions, including CO_2. The Swedish approach seems a more rational approach than handing out credits for installing new technology, and is readily adaptable to outputs of other air pollutants.

C. Application of At-Risk Rules to Credits for Qualifying Advanced Coal Projects or Qualifying Gasification Projects

Summary. Usually, an investment tax credit is not available when a project is funded by money for which the taxpayer claiming the credit is not personally liable. This general rule has been extended to credits for qualifying advanced coal projects or qualifying gasification projects.[327] The new rule applies to periods after August 8, 2005.

Comment. This application is appropriate and unremarkable. It conforms to the usual requirement that tax credits be based on amounts for which the taxpayer is actually at risk. The puzzle is why there are any exceptions.

D. Nonconventional Fuel Credit for Coke and Coke Gas Fuel

Summary. The production credit for using fuel from nonconventional sources now includes coke and coke gas. Coke and coke gas are two types of fuels associated with steel production. Both are byproducts of the coking process.

> The coking process produces coke, coke gas and tar. The main constituents of coke gas are hydrogen, meth-

318. *See, e.g.*, *Environmentalists Cite Sequestions Concerns in Opposing IGCC Plant*, INSIDE EPA §2 (Inside Washington Publishers, Jan. 12, 2007).

319. I.R.C. §§46(4), 48B, *amended by* 2005 Act, §1307(a), (b) (effective for periods after Aug. 8, 2005). It is in turn part of the general business credit.

320. *Id.* §48B(a).

321. *Id.* §48A provides the advanced project credit.

322. *Id.* §48B(b)(1).

323. Any person whose application for certification is primarily intended for use in a domestic (U.S.) project that uses domestic gasification application related to chemicals, fertilizers, glass, steel, petroleum residues, forest products and agricultural dairy operations. *Id.* §48B(c)(7).

324. *Id.* §48B(c)(1)(C). Gasification technology is any process that converts a solid or liquid product from coal (defined as anthracite, bituminous coal, subbituminous coal, lignite, and peat, petroleum residue (defined as the carbonized product of high-boiling hydrocarbon fractions obtained in petroleum processing §48B(c)(8)), biomass, or other materials which are recovered for their energy or feedstock value into a synthesis gas composed primarily of CO and oxygen for direct use or later chemical or physical conversion. Eligible entity is means any person whose application for certification is principally intended for use in a domestic project which employs domestic gasification applications related to chemicals, fertilizers, glass, steel, *id.* §48B(c)(7)(D), petroleum residues, forest products, and agriculture, including feedlots and dairy operations. *Id.* §48B(c)(7).

325. BUDGET EFFECTS—TAX INCENTIVES ACT, *supra* note 28, Provision A-6.

326. White House 2008 Budget, *supra* note 9, Item 20.

327. I.R.C. §49F(a)(1)(C), *amended by* 2005 Act, §1307(c)(1).

> ane and carbon monoxide. The coke gas must be purified to remove the less volatile hydrocarbons that cause condensation before it can be used to fuel a combustion engine.
>
> The coking process involves heating hard coal in an oxygen-deficient atmosphere. The coal is carbonized for slightly longer than 24 hours in the narrow slots of an oven before special machines push the resulting incandescent coke out of the oven. It is then taken to a quench station where water is used to cool it.
>
> The resulting carbonized coal is used principally for the production of pig iron in blast furnaces. The coking process produces coke, coke gas and tar. The main constituents of coke gas are hydrogen, which accounts for about 50 to 60 percent, methane, which makes up about 15 to 30 percent, and carbon monoxide. The coke gas must be purified to remove the less volatile hydrocarbons that cause condensation before it can be used to fuel a combustion engine.[328]

Certain fuels produced from nonconventional sources and sold to unrelated parties are eligible for an elective income tax credit of $3 (adjusted for inflation) per barrel or Btu equivalent. Qualified fuels include oil produced from shale or tar sand; gas produced from geopressured brine, Devonian shale, coal seams, tight formations, or biomass; and liquid, gaseous, or solid synthetic fuels produced from coal (including lignite). The credit for fuels has generally expired except for certain biomass gas and synthetic fuels sold before 2008 and produced at facilities placed in service between 1992 and mid-1998.

The 2005 Act added a production credit of $3 per barrel-of-oil equivalent (indexed for inflation after 2004) for qualified facilities that produce coke or coke gas.[329] Strangely, the credit will apply in the case of a coke- or coke-gas-producing facility that was placed in service before 1993 or between June 30, 1998, and 2010. The amount of coke eligible for the credit at a facility cannot exceed an average barrel-of-oil equivalent of 4,000 barrels a day. A barrel-of-oil equivalent is the amount of the fuel which has 5.8 million Btus of energy. The $3 coke and coke gas credit does not apply to any facility producing qualified fuels for which a credit was available as a fuel from a nonconventional source[330] for the tax year.[331] The 2006 Act gave away some more revenue—how much is unstated—by providing that the phaseout adjustments that apply when the price of oil rises do not apply to coke and coke gas production.[332]

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2015 are $101 million.[333]

Comment. This appears to be an industry victory that serves no national security or environmental purpose. At worst, it is a credit for harvesting this material as a refinery product. The 2006 Act confirmed that petroleum coke is disqualified, perhaps removing an objection to the provision.[334]

VIII. Biodiesel and Ethanol Industries

A. Biodiesel Fuels Income Tax Credits

Summary. Mixers of biodiesel qualify for a $1/gallon credit. The Code has been amended to grant tax relief for biodiesels in two forms: biodiesels qualify for a reduction in the highway tax imposed on diesel fuels, and biodiesel mixers and small biodiesel refiners can qualify for a substantial income tax credit. The price in revenue losses is high, but there are both environmental and energy independence benefits from the credits. This is an obscure subject, but a lot of money is at stake.

First, what is biodiesel? The basic answer is that it is refined oil from vegetables and animal fat, such as cattle tallow or pork lard. In the United States, soybeans provide most of the vegetable oil, while Europe uses rapeseed. Diesel engines can run on these oils in their unrefined form, but unrefined oils tend to injure the engines, hence the need for refining. The tax credit is available only for refined biodiesel. These refined products can be used alone, but they are generally mixed with petroleum-based diesel fuel. The ratio of the biodiesel to regular diesel is usually expressed as a B value. For example, a mixture of 20% biodiesel would be expressed as B20. In a 2002 revenue ruling, the IRS described biodiesels as follows[335]:

> Biodiesel is a liquid composed of monoalkyl esters of long chain fatty acids derived from vegetable oils or animal fats that is covered by ASTM specification D 6751. Biodiesel does not contain any paraffins. Biodiesel is suitable for use as a fuel in a diesel-powered highway vehicle or diesel-powered train and is sometimes delivered directly into the fuel supply tank of a vehicle or train for that use. However, the most common fuel-related use of biodiesel is in the production of a mixture containing 20% biodiesel and 80% diesel fuel.

In practice, there are three kinds of biodiesel:

(a) Biodiesel from farm productions, mainly soybeans;
(b) Recycled grease from restaurants; and
(c) renewable diesel, made from steamed animal parts.

The credit itself has three components, a biodiesel mixture credit, a biodiesel credit,[336] and a small biodiesel refiner credit.

1. The Biodiesel Mixture Credit

This credit is 50 cents per gallon of biodiesel[337] ($1 per gallon for agri-biodiesel)[338] that the taxpayer uses in the pro-

328. GE Energy, *Gases From the Steel Industry*, http://www.ge-energy.Com/prod_serv/products/recip_engines/en/gas_types/coke_gas.htm (last visited Apr. 5, 2007). Coke also comes from petroleum and is often used for, e.g., dry cells and electrodiesel comes from refiners.

329. I.R.C. §45K. The credit cannot be doubled-up by certain coal extracts. *Id.* §45k(g)(2)(C). This is from the 2005 Gulf Opportunity Zone Act, §412(*l*)(2). A former phaseout provision based on reference prices of coke and coke gas was repealed by §211 of the 2006 Act.

330. I.R.C. §29(g).

331. §29(g) provided a credit for specified fuels sold before 2008. This prevents double tax benefit.

332. *Id.* §45K(g)(2)(D). See §45K(b)(1), for phaseout of nonconventional source fuel production.

333. Budget Effects—Tax Incentives Act, *supra* note 28, Provision B-1.

334. I.R.C. §45K(g)(1), *amended by* 2006 Act §211(b).

335. Rev. Rule 2002-76, 2002-2 C.B. 840.

336. The 2004 Jobs Act also adds a new excise tax credit for biodiesel used to make a qualified biodiesel mixture. This requires coordinating the income tax credit and excise tax credit claims to block double tax benefits for the same biodiesel.

337. Notice that "biodiesel" excludes "agribiodiesel" and "renewable diesel." The tax law at §40A(d)(1) defines biodiesel to means the

duction of a so-called qualified biodiesel mixture.[339] For example, if a taxpayer uses 100 gallons of appropriately refined soy oil and 400 gallons of regular diesel, resulting in 500 gallons of B20, the taxpayer is entitled to a $50 credit against its federal income tax liability for the year.

A qualified biodiesel mixture is a mixture of biodiesel and diesel fuel, as defined for purposes of the removal-at-terminal tax rules, as modified by the Jobs Act changes.[340] This is determined without regard to any use of kerosene, which[341] the taxpayer producing the mixture either sells to any person for use as a fuel[342] or uses as a fuel in producing the mixture.[343] Biodiesel used in the production of a qualified biodiesel mixture is taken into account for purposes of the credit only if the sale or use is in a trade or business of the taxpayer.[344] No biodiesel mixture credit is permitted for any casual off-farm production of a qualified biodiesel mixture.[345] The primary beneficiaries of this program are refiners who add biodiesel to their gas or diesel fuel. A credit of $1 per gallon represents an enormous subsidy.

2. The Biodiesel Credit

This credit is 50 cents per gallon of pure biodiesel—$1 per gallon for pure agri-biodiesel[346]—used during the tax year as fuel in a trade or business,[347] that was not sold at retail,[348] or that the taxpayer sold at retail and placed in the buyer's vehicle's fuel tank.[349] Virtually all biodiesel is agri-biodiesel. For example, if the party that mixed the B20 in the previous example also sold 100 gallons of purse biodiesel to a trucker, the party would be entitled to an income tax credit of $50. That is 100 gallons times 50 cents per gallon. The credit would be $100 if the sale were of agri-biodiesel.[350] It seems that the fuel will almost always be agri-biodiesel, so $1 per gallon is really the uniform subsidy.

To obtain the credit, the taxpayer must get a certification from the producer of the biodiesel identifying the product and its percentage of biodiesel and agri-biodiesel.[351]

The credit is computed in a way similar to the foreign tax credit,[352] in that taxpayer must initially include the amount of the biodiesel fuel credit in gross income.[353] For example, if the taxpayer has a pre-tax net income of $100 and a $10 credit, the taxable income would be $110. This will cut back the tax value of the credit, but will not eliminate it.

3. The Small Agri-Biodiesel Producer Credit

As part of the 2005 Energy Tax Act, Congress granted an income tax credit for the refining of agri-biodiesel by smaller firms. This component of the biodiesel fuels credit is available to any eligible small agri-biodiesel producer[354] at a rate of 10 cents for each gallon of qualified agri-biodiesel[355] produced.[356] This creates the possibility of agri-biodiesel with a $1.10-per-gallon subsidy. The qualified agri-biodiesel production[357] of any producer for any tax year cannot exceed 15 million gallons, and the refiner's capacity to produce agri-biodiesel cannot exceed 60 million gallons.[358] In order for the credit to apply, the producer must sell the product to another person, thereby limiting this extra credit to small operators:

> (a) for use by the other person in the production of a qualified biodiesel mixture in the other person's trade or business (other than casual off-farm production);
>
> (b) for use by the other person as a fuel in a trade or business;
>
> (c) for sale at retail to another person and placed in the fuel tank of that other person, or
>
> (d) for use or sale the producer for any purpose described in (a), (b), or (c).[359]

The certification requirement that applies to the biodiesel mixture credit and the biodiesel credit does not apply to the small agri-biodiesel producer credit.[360]

In an attempt to prevent abuse, aggregation rules prevent companies from establishing many small agri-biodiesel firms, each of which could claim the 10-cents-per-gallon credit.[361] The aggregation rules treat all affiliates as one large company that qualifies for one credit.

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monoalkyl esters of long chain fatty acids derived from plant or animal matter which meet §40A(d)(1)(a), containing registration requirements for fuels and fuel additives established by EPA under CAA §211 and the requirements of the American Society of Testing and Materials D6751.

338. Agri-biodiesel is biodiesel derived solely from virgin oils, including esters derived from virgin vegetable oils from corn, soybeans, sunflower seeds, cottonseeds, canola, crambe, rapeseeds, safflowers, flaxseeds, rice bran, mustard seeds, and from animal fats. I.R.C. §40A(d)(2). The noninclusive nature of the list means other sources of a similar type may also qualify.

339. *Id.* §40A(b)(1)(A).

340. *Id.* §4083(a)(3).

341. *Id.* §40A(b)(1)(B).

342. *Id.* §40A(b)(1)(B)(i)

343. *Id.* §40A(b)(1)(B)(ii).

344. *Id.* §40A(b)(1)(C)(i).

345. *Id.* §40A(b)(1)(D). The term casual off-farm production is not defined but seems reasonably self-evident.

346. *Id.* §40A(b)(2)(A).

347. *Id.* §40A(b)(2)(A)(i).

348. *Id.* §40A(b)(2)(B).

349. *Id.* §40A(b)(2)(A)(ii).

350. *Id.* §40A(b)(3).

351. *Id.* §40A(b)(4).

352. *Id.* §78.

353. *Id.* §87, *amended by* 2004 Act §302(c)(1)(A). *See id.* §78 for the foreign tax credit "gross-up."

354. An eligible small agri-biodiesel producer is a person who, at all times during the tax year, has a productive capacity for agri-biodiesel not in excess of 60,000,000 gallons. *Id.* §40A(e)(1). For a facility in which more than one person has an interest, productive capacity is allocated among those persons in the manner that IRS prescribes. *Id.* §40A(e)(4).

355. Again, the product must be from agri-biodiesel, meaning biodiesel derived solely from virgin oils, including esters derived from virgin vegetable oils from corn, soybeans, sunflower seeds, cottonseeds, canola, crambe, rapeseeds, safflowers, flaxseeds, rice bran, and mustard seeds, and from animal fats.

356. *Id.* §40A(b)(5)(A).

357. This term means any agri-biodiesel which is produced by an eligible small agri-biodiesel producer. *Id.* §40A(b)(5)(B), *amended by* 2005 Gulf Opportunity Zone Act, §412(h).

358. *Id.* §40A(b)(5)(C).

359. *Id.* §40A(b)(5)(B)(ii).

360. *Id.* §40A(b)(4), *amended by* 2005 Act, §1345(d)(1).

361. *Id.* §40A(e)(2).

Revenue Effects. The revenue effects for the biodiesel fuels income tax credits are combined with the effects of the excise tax credits for biodiesel used to produce a qualified fuel mix. Total estimated revenue losses as a result of this provision in the years 2005-2014 is $107 million.[362]

This subsidy is not likely to dent U.S. oil consumption anytime soon. A DOE study last year concluded the United States is producing enough oil from plants and animal fats to make 1.6 billion gallons of biodiesel annually—only about 4% of the diesel fuel used on the nation's roads. Presumably its producers will claim their annual $1.6 billion/year credit, less the income tax adjustment. In addition, small refiners will claim the credit up to 15 million barrels of production.[363]

The White House has reported the revenue losses from the small agri-biodiesel producers' credit as $0 from corporations and $540 billion from individuals.[364]

4. Deduction for Unused Credit

The biodiesel fuels credit will be treated as one of the qualified business credits[365] for which a deduction is allowed when such credits have been barred by the general business credit limitation based on tax liability, and the credits remain unused at the expiration of the normal carryover period for unused general business credits. The deduction will be allowed in the first tax year following the end of the carryover.

5. How the Credits Are Claimed

When the biodiesel is sold, it attracts a small excise tax credit, which taxpayers can combine with the biodiesel income tax credits they have generated. Blenders can claim an excise tax credit faster than income tax credits, so taxpayers generally prefer the excise tax system. Furthermore, §6427 allows refunds of excise tax credits. So, while the credits are described in the income tax portion of the Code, and can be used against federal income tax, they are captured primarily by the excise tax procedures.

To prevent abuse, §40A(d)(3) imposes an equitable tax on later separations of biodiesel from the mixture or nonfuel use of the mixture.

6. Lower Excise Tax for Biodiesel

The normal federal excise tax on diesel fuel is 24.4 cents per gallon, compared to 18.4 cents per gallon for gasoline.[366] To put it simply, Congress has reduced the federal excise tax on diesel fuel by 1 cent per percentage point of agri-biodiesel that was mixed into the final gallon of product.[367] In the case of B20 agri-biodiesel, that means the cost of the blend drops by 20 cents per gallon to 4.4 cents per gallon. The biodiesel credits appear to be refundable according to §6427(e)(1), which reads:

> If any person produces a mixture described in section 6426 in such person's trade or business, the Secretary shall pay (without interest) to such person an amount equal to the alcohol fuel mixture credit or the biodiesel mixture credit or the alternative fuel mixture credit with respect to such mixture.[368]

This suggests that even if the credits exceed the tax paid, the taxpayer will be paid the amount of the credit.[369]

7. Increased Excise Taxes on Transmix and Diesel Fuel Blendstocks

Summary. The 2004 Act imposed the removal-at-terminal tax on transmix (mixtures from pipelines) and diesel fuel blendstocks by treating them as diesel fuel for purposes of the tax.[370] Evidently, this is just a revenue raiser.

Revenue Effects. Total estimated revenue gains as a result of this provision in the years 2005–2014 is $1.043 billion.[371]

B. The Small Ethanol Producer Credit Now Covers Producers Layer Capacity

Section 40 of the Code offers a credit of 10 cents per gallon on qualified ethanol fuel production, up to a maximum of 15 million gallons. It is available only to eligible small ethanol producers, formerly meaning persons with not more than a 30 million gallon production capacity through the taxable year. The 2005 Energy Tax Act raised the limit to 60 million gallons.[372] It does not increase the 15 million gallon limit on the amount of qualified ethanol fuel production that can qualify for the small ethanol producer credit; rather, it expands the population of eligible taxpayers.

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005–2015 is $181 million.[373]

Comment. This provision parallels the small agri-biodiesel producers credit, which is discussed above and was presumably granted in the interest of even playing fields.

C. Alcohol Fuels Income Tax Credit Extended

Summary. Under prior law, the credit against income tax for sale or use of alcohols (51 cents per gallon for ethanol for 2005-2007, and 60 cents per gallon for methanol with reduced credits for low-proof alcohols) used—either straight or blended with gasoline or other liquid fuel in internal combustion engines—as motor fuel, and for certain small ethanol producers (10 cents per gallon, collectively the alcohol fuels credit), was scheduled neither to apply to any sale or use after 2007, nor for any period before 2008 when the removal-at-terminal excise tax on gasoline, diesel fuel, and kerosene drops to 4.3 cents per gallon.

The credit had to be reduced to take into account any tax benefit provided by the various excise tax provisions that re-

362. American Jobs Creation Act—JCX-69-04, *supra* note 179, Provision III-A, at 9.

363. I.e., 15,000,000 gallons times 10 cents per gallon.

364. White House 2008 Budget, *supra* note 9, Item 47.

365. I.R.C. §196(c)(11), *amended by* 2004 Act, §302(c)(2).

366. Ann. 97-91, 1997-37 IRB 25; I.R.C. §4081(a)(2).

367. I.R.C. §6426(c).

368. *Id.* §6427(e)(1).

369. *See* 8 Mertens Law of Fed. Income Tax'n §32:94-96.50 (2006).

370. 2004 Act §870(c), *amending* §§4083(a)(3), 7427(h)(2).

371. American Jobs Creation Act—JCX-69-04, *supra* note 179, Provision IV-C, at 20.

372. I.R.C. §40(g), *amended by* 2005 Act §1347(a) (applicable to years ending after Aug. 8, 2005).

373. Budget Effects—Tax Incentives Act, *supra* note 28, Provision D-5.

duced the excise tax rates. The 2004 Jobs Act extended the applicable alcohol fuels income tax credit through the end of 2010,[374] and modified the credit termination rule to provide that the credit does not apply to any sale or use after 2010,[375] or for any period before 2011 when the removal-at-terminal excise tax on gasoline, diesel fuel, and kerosene drops to 4.3 cents per gallon.[376]

The rule coordinating the alcohol fuels income tax credit rules with the excise tax rate reduction rules were modified to reduce any alcohol fuels income tax credit to take into account any tax benefit provided with respect to the alcohol, caused by the excise tax credit for alcohol fuel and biodiesel fuel mixtures, added by the 2004 Jobs Act[377]; and the excise tax refund alternative to the excise tax credit for alcohol fuel and biodiesel mixtures,[378] also added by the 2004 Jobs Act, as well as to remove references to:

- the reduced removal-at-terminal tax excise tax rates for gasoline-alcohol mixtures and diesel-fuel alcohol mixtures,[379] which were eliminated by the 2004 Jobs Act;
- the reduced producers/importers tax rates for aviation fuel-alcohol mixtures,[380] which were also eliminated by the 2004 Jobs Act; and
- the reduced retail excise tax rates for partially exempt methanol or ethanol special motor fuels,[381] referring to fuels which are at least 85% ethanol, methanol, or other alcohol made from natural gas.[382]

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2014 is $34 million.[383]

The White House figures for the alcohol fuels credit are $250 million from corporations from 2006-2012, and $80 million from individuals during the same time period.[384]

Comment. Ethanol enjoys an array of support aside from federal tax credits, such as preferential treatment in procurement, payments geared to output, reduced state retail fuel prices, grants for production facilities, and regulatory exemptions.[385]

The cost and benefits to the nation are hard to assess and quantify, but one thing is certain: ethanol, and now biodiesel, have large constituencies and the lost revenues are substantial. The key question is whether it would be best to influence the entire market with global effect, such as a carbon tax or an oil import fee, to accept this new hodgepodge of relaxations and subsidies, or simply to impose higher excise taxes on gasoline and diesel to increase the attraction of plant-based fuels.

Another question is whether the revenue costs are disproportionate to the benefits. The subject is highly contentious and merits congressional hearings. For example, one source puts the cost of displacing gasoline with ethanol at $1.80 per gallon and $1.25 per gallon for cellulosic ethanol, and claims it costs $500 per metric ton of CO_2-equivalent removed, which is far more than the cost of buying an emissions trading right for the same volume of CO_2.[386] Another study asserts that ethanol requires 25% more energy than it produces, while biodiesel produces 93% more and is preferable in terms of emissions reduction.[387] There is good reason to rethink this entire initiative. Perhaps the best compromise would be a predictably timed withdrawal of the incentives and a careful study of the costs, benefits, and unintended consequences of moving to these fuels.

The United States reportedly imposes tariffs at the rate of 54 cents per gallon on imported ethanol.[388] Brazil claims this anti-competitive tariff is designed to block its exports and keeps ethanol from becoming a standard commodity.[389] Is it possible that the tariff is causing a waste of federal revenues on ethanol that can be imported cheaply? Is it dangerous from a national security standpoint to cut off this source of fuel supplies?

Finally, proponents support biofuels for several reasons, namely, rural development, energy security, and pollution reduction. In principal, because they are renewable, the plants used to produce biofuels should reduce CO_2 emissions. The energy security argument is undermined by the small contribution these fuels are likely to provide in place of imported petroleum. The carbon reduction argument is weakened by the amount of energy used to produce the plants. One critical study suggests that CO_2 reduction is trivial in the sense that it costs $500 to eliminate a ton of CO_2 produced by ethanol fuels, compared to the far lower price for which a ton of CO_2 emissions rights can be purchased on the European carbon exchange.[390]

D. One-Half the Cost of Building a Cellulosic Ethanol Plant Is Immediately Deductible

Summary. Taxpayers who install these advanced ethanol plants can electively claim a 50% bonus depreciation and al-

374. I.R.C. §40(h)(1), *amended by* 2004 Jobs Act, §301(c)(4)(A); *Id.* §40(h)(2), *amended by* 2004 Act §301(c)(4)(B).

375. *Id.* §40(e)(1)(A), *amended by* 2004 Jobs Act, §301(c)(3)(A).

376. *Id.* §40(e)(1)(B), *amended by* 2004 Jobs Act, §301(c)(3)(B).

377. *Id.* §6426.

378. *Id.* §6427(e).

379. *Id.* §4081(c).

380. *Id.* §4091(c).

381. *Id.* §4041(m).

382. *Id.* §40(c), *amended by* 2004 Act, §301(c)(1).

383. Ways and Means Comm., Estimated Budget Effects of the Conference Agreement for H.R. 4520, The American Jobs Creation Act of 2004 (Provision II-A-8), Dec. 7, 2006, *available at* http://waysandmeans.house.gov/media/pdf/hr4520/hr4250confreptrevtable.pdf.

384. White House 2008 Budget, *supra* note 9, Item 17. The explanation given in the Budget seems to say that this combines the income tax and excise tax credits.

385. David Koplow, Biofuels-At What Cost? Government Support for Ethanol and Biodiesel in the United States (Int'l Inst. for Sustainable Dev. 2006) (extensive discussion).

386. *Id.* at 53 et seq.

387. Alexei Barrionuevo, *It's Corn Versus Soybeans in a Biofuels Debate*, N.Y. Times, July 13, 2006, *available at* http://www.nytimes.Com/2006/07/13/business/13ethanol.html?ex=1310443200&en=18b40dd3557837a3&ei=5088&partner=rssnyt&emc=rss. It also reports that the National Academy of Sciences considers the future to lie in cellulosic ethanol.

388. *See* U.S. Fed. News, 2006 WLNR 8314876 (May 8, 2006) (citing statements of Sen. Jon Kyl (R-Ariz.)).

389. Larry Rohter, *With Big Boost From Sugar Cane, Brazil Is Satisfying Its Fuel Needs*, N.Y. Times, Apr. 10, 206, *available at* http://www.Nytimes.com/2006/04/10/world/americas/10brazil.html?pagewanted=1&ei=5088&en=03adc82c67600388&ex=1302321600&partner=rssnyt&emc=rss.

390. Koplow, *supra* note 385.

ternative minimum tax relief for new qualified cellulosic biomass ethanol plant property (QCBEPP) they buy after December 20, 2006, and place in service before 2013.[391] In addition, the usual level of depreciation is allowed on the balance. The property must be used in the United States. This appears in new Code §168(l).

In order to be a QCBEPP, the property must be depreciable and must be used solely to produce cellulosic biomass ethanol, meaning ethanol produced by enzymatic hydrolysis of any lignocellulosic or hemicellulosic matter that is available on a renewable or recurring basis.[392] Examples include bagasse (from sugar cane) and corn stalks. There is no AMT burden to this or any other deprecation with respect to these properties.[393] However, there is a specialized form of depreciation recapture if they are disposed of.[394] The effect is to increase the taxpayer's ordinary income to the extent of the excess of the amount expensed under §179(d) when it was placed in service over the total amount that would have been depreciated.

Revenue Effects. The Joint Committee on Taxation estimates a net revenue loss of $9 million over the 2007-2106 period.[395]

Comment. This is a huge boost for an environmentally superior industry and puts the construction of these plants on tax parity with building new oil refineries. In a better world, there might be no such tax competition from oil refineries.Unfortunately, the revenue projections suggest few such plants are going to be built.

E. Excise Tax Credit or Refund for Alternative Fuels and Alternative Fuel Mixtures Other Than Ethanol, Methanol, and Biodiesel

Summary. Under prior law, an excise tax credit was available against the §4081 removal-at-terminal tax on removal at the terminal or refinery or entry in the United States of taxable fuel. This credit contained only two components: the alcohol fuel mixture credit and the biodiesel mixture credit. As an alternative to this credit, taxpayers could claim an excise tax refund for biodiesel or alcohol used to produce an eligible mixture in an amount equal to the credit.[396] There was no excise tax credit for the sale or use of alternative fuels such as liquefied petroleum gas, liquefied natural gas, or compressed natural gas.[397]

The 2005 Transportation Act created two new excise tax credits and alternative refund rules for alternative fuels and alternative fuel mixtures. For sale or use in any period after September 30, 2006, the law now allows a credit (a) for the total of the alternative fuel credit and the alternative fuel mixture credit against the §4041 retail excise fuels tax, and (b) an amount that is equal to the total of the alcohol fuel mixture credit, the biodiesel mixture credit, and the alternative fuel mixture credit against the §4081 removal-at-terminal tax.[398] This does not change the existing alcohol fuel mixture and biodiesel mixture excise tax credits other than by allowing a taxpayer to aggregate the new credit with any alcohol fuel mixture and biodiesel mixture credit amounts in order to offset the taxpayer's §4081 removal-at-terminal tax liability. The taxpayer must be registered with the IRS under §4101 to claim the credit.[399]

The alternative fuel and alternative fuel mixture credits end as to sales or use after September 30, 2009.[400] The date is September 30, 2014, for any sale or use involving liquefied hydrogen.[401]

The alternative fuel credit equals 50 cents times the number of gallons of alternative fuel, or gasoline gallon equivalents, of a nonliquid alternative fuel that the taxpayer sells for use in a motor vehicle or motorboat, or is so used by the taxpayer.[402] Alternative fuel is defined[403] as:

> (a) liquefied petroleum gas (LPG);
> (b) P Series Fuels,[404] generally meaning renewable nonpetroleum liquid fuel that yields energy security and environmental benefits;
> (c) compressed natural gas or liquefied natural gas;
> (d) liquefied hydrogen;
> (e) any liquid fuel derived from coal (including peat) through the Fischer-Tropsch process[405]; and
> (f) liquid hydrocarbons derived from biomass,[406] that is, any organic material other than oil and natural gas, and coal including lignite.

For these purposes, alternative fuels excludes ethanol, methanol, or biodiesel.[407] Gasoline gallon equivalent, with respect to any nonliquid alternative fuel, refers to the amount of that fuel having a Btu content of 124,800.[408] More generally, it is the amount of the fuel that is required to equal the energy content of one liquid gallon of gasoline.

The alternative mixture credit is 50 cents times the number of gallons of the alternative fuel the taxpayer uses in order to produce an alternative fuel mixture for sale or use in the taxpayer's business.[409] An alternative fuel mixture is defined[410] as a mixture of alternative fuel and a taxable fuel

391. 2006 Act, §209(b).

392. I.R.C. §168(*l*)(3).

393. Joint Comm. on Taxation, Technical Explanation of H.R. 6408, The Tax Relief and Health Care Act of 2006, JCX-50-06, at 64, Dec. 7, 2006 (as introduced in the House).

394. Rules similar to the rules under I.R.C. §179(d)(10) apply. Joint Comm. on Taxation, Technical Explanation of H.R. 6408, The Tax Relief and Health Care Act of 2006, JCX-50-06, at 64-65, Dec. 7, 2006 (as introduced in the House).

395. Joint Committee on Taxation, General Explanation of Tax Legislation Enacted in the 109th Congress, JCS-1-07, Appendix at 800 (Item II-I, 51-06), Jan. 12, 2007.

396. See heading IX.E., for a description ion of the removal-at-terminal tax.

397. See I.R.C. §4041, for changes to the retail excise fuels tax with respect to alternative fuels.

398. *Id.* §6426(a).

399. *Id.*

400. *Id.* §6426(d)(4), *amended by* 2005 Transportation Act, §1113(b)(2).

401. *Id.* §6426(e)(3).

402. *Id.* §6426(d)(1).

403. *Id.* §6426(d)(2).

404. Defined by the Secretary of Energy under 42 U.S.C. §13211(2). These are blends of natural gas, ethanol, and a certain co-solvent.

405. This is a long-standing method for making synthetic fuels, starting with coal or wood.

406. As it is defined in I.R.C. §45K(c)(3) under the nonconventional source fuel income tax credit.

407. I.R.C. §6426(d)(2).

408. *Id.* §6426(d)(3).

409. *Id.* §6426(e)(1), *amended by* 2005 Transportation Act, §11113(b)(2).

410. *Id.* §6426(e)(2).

(generally, gasoline, diesel fuel or kerosene)[411] that is sold by the taxpayer who produces the mixture to any person for use as a fuel, or is used as a fuel, by the taxpayer who produces the mixture.

The 2005 Transportation Act expanded the previous excise tax refund rules for alcohol and biodiesel mixtures to include alternative fuel mixtures. The same Act also allows claims for payment to be made with respect to alternative fuels. Thus, if someone sells or uses an alternative fuel in a motor vehicle or motorboat in their business, the Treasury will pay that person an amount equal to the alternative fuel credit,[412] provided the person is registered under §4101.[413] These provisions apply to any sale or use after September 30, 2006.[414] These payment rules end as to alternative fuel or alternative fuel mixture (other than one involving liquefied hydrogen) that is sold or used after September 30, 2009,[415] and end as to alternative fuel or alternative fuel mixture that involves liquefied hydrogen sold or used after 2014.[416]

Revenue Effects. Estimated net revenue losses (there were gains in years 2009-2015) as a result of this provision in the years 2005-2015 is $44 million.[417]

Comment. This tax credit parallels the bio-diesel and alcohol fuels credits.

F. Reduced Retail Excise Tax Rates for Qualified Methanol and for Retail Sales Tax Rates Qualified Ethanol Fuels Reduced Extended to the End of 2008

Summary. Prior law was partly reversed by extending the reduced retail sales tax rates for qualified methanol and ethanol fuels through the end of 2008. These are essentially liquids, at least 85%of which consist of methanol, ethanol, or other alcohol produced from coal or peat for use as a fuel in a motor vehicle or motorboat.

The reduced rate for qualified methanol fuel is 12.35 cents per gallon, consisting of the otherwise applicable regular retail excise tax rate of 18.3 cents per gallon[418] minus the sum of (a) the excise tax of 6 cents per gallon and (b) the LUST tax of .05 cents per gallon. In contrast, the reduced rate for qualified ethanol fuel is 13.25 cents per gallon, consisting of the otherwise applicable regular retail excise tax rate of 18.3 cents per gallon (1) less, for sales or uses for calendar years 2001-2007, 10% of the alcohol fuel credit blender amount for the calendar year of the sale or use, and (2) plus the special LUST tax rate of .05 cents per gallon.[419]

Revenue Effects. Declining excise tax receipts should result in about $19 billion in revenue losses.

Comment. This is an unsurprising extension of prior law, but the revenue cost is enormous and needs to be reconsidered as part of the basic question of which and to what extent renewable resources should be subsidized.

IX. Transportation Industry

A. Highway or Surface Freight Transfer Facility Bonds Get Tax-Exempt Facility Bond Status

Summary. Section 103 of the Code grants an income tax exemption for interest paid on various state and local bonds, subject to a variety of restrictions found in §141 et seq. that are designed to assure the exemption is not abused. The 2005 Transportation Act provides that bonds issued after August 10, 2005, include those to finance qualified highway or surface freight transfer facilities as qualified exempt facility bonds and can, therefore, pay tax-exempt interest.[420] This will cost substantial federal revenues.

These facilities are intermodal transfer stations where containers are loaded from trucks to trains and vice-versa. A qualified highway or surface freight transfer facility is defined as a surface transportation project which gets federal assistance under use Title 23, regarding highways,[421] as well as any project for an international bridge or tunnel for which an international entity authorized under federal or state law is responsible, and which receives assistance under Title 23, or a facility for the transfer of freight from truck to rail or rail to truck (including any temporary storage facilities directly related to such transfers) which receives federal assistance under either Title 23 or Title 49 (relating to transportation).[422]

The aggregate amount the Secretary of Transportation can allocate to qualified highway or surface freight transfer facilities cannot exceed $15 billion.[423] There are limited restrictions on refunding bonds[424]; however, these bonds are exempt from the volume cap limitations on the amount of private activity bonds states and their political subdivisions can issue in any one year.[425]

To qualify, at least 95% of the net proceeds of the bond issue must be spent for qualified highway or surface freight transfer facilities within the five-year period from the date of issuance, but even if this test is not met, an issue still qualifies if the issuer uses all unspent proceeds of the issue to redeem bonds of the issuer within 90 days after the end of that five-year period.[426] The Secretary of the Treasury can extend the five-year period if the issuer shows that the failure to meet that time requirement is caused by circumstances beyond its control.[427]

411. As it is defined in *id.* §4083(a)(1)(A)-(C).

412. *Id.* §6427(e)(2), *amended by* 2005 Transportation Act, §11113(b)(3)(C)(iii).

413. *Id.* §6427(e)(4).

414. The 2005 Transportation Act, §11113(d).

415. *Id.* §6427(e)(5)(C).

416. *Id.* §6427(e)(5)(D).

417. Joint Comm. on Taxation, Estimated Budget Effects of the Conference Agreement for Title XI of H.R. 3, Highway Reauthorization and Excise Tax Simplification, JCX-61-05 (Provision A-3), July 29, 2005.

418. *See* I.R.C. §4041(a)(2).

419. *Id.* §4041(b)(2)(C)-(D), *amended by* 2006 Act, §208(a)-(b).

420. *Id.* §142(a)(15), *amended by* 2005 Act, §11143(a).

421. As in effect on August 10, 2005.

422. I.R.C. §142(m)(1).

423. *Id.* §142(m)(2)(A) The Secretary of Transportation must allocate this amount among qualified highway or surface freight transfer. *Id.* §142(m)(2)(C).

424. *Id.* §142(m)(4).

425. *Id.* §146(g)(3), *amended by* 2005 Act, §11143(c).

426. *Id.* §142(m)(3).

427. *Id.*

Revenue Effects. The White House estimate of revenue losses from 2006-2012 is $145 million from corporations and $395 million from individuals.[428]

Comment. This tax subsidy is primarily designed to help finance intermodal freight transfer facilities. Its implications for energy and the environment are fairly remote. It is a modest victory for freight haulers.

B. Highway Use Tax Extended to Late 2011

There is an annual excise tax based on weight on a highway motor vehicle with a GVWR of at least 55,000 lbs. The highway tax was scheduled to expire for use after September 2006. The 2005 Transportation Act extended the tax (and exemptions) through September 30, 2011.[429]

Revenue Effects. There does not appear to be an estimate.

Comment. Congress was not willing to release heavy vehicles from this tax.

C. Excise Tax on Trucks Modified

Under prior law, there was a 12% excise tax on the first retail sale of certain trucks and trailers, as highway tractors in combination with a trailer or semi trailer, with an exemption for trucks with a GVWR of 33,000 lbs. or less, and on trailers with a GVWR of 26,000 lbs. or less. This means that highway tractors in combination with a trailer or semi trailer were subject to the 12% retail excise tax, whatever their weight. The 2005 Transportation Act liberalized the weight-based exclusion. Specifically, the 12% retail excise tax does not apply to tractors of the kind chiefly used for highway transportation in combination with a trailer or semi trailer if the tractor weighs not over 19,500 lbs. and the tractor-trailer combination weighs not over 33,000 lbs.[430]

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2015 are $31 million.[431]

Comment. A small victory for smaller trucks.

D. Gas Guzzler Tax Pushed Back for Limousines

Summary. The gas guzzler tax applies to the sale, or initial lease, of an automobile whose fuel economy fails to meet certain minimum fuel economy standards. An automobile, generally means any four-wheeled passenger vehicle manufactured primarily for use on public streets, roads, or highways, and rated at not over 6,000 lbs. unloaded GVWR.

Automobiles with a fuel economy of under 22.5 mpg are subject to the tax, in graduated amounts, ranging from $1,000 to $7,700 per automobile, depending on fuel economy.

Under prior law, limousines were simply included within the definition of an automobile for gas guzzler tax purposes without regard to the 6,000-lb. weight limit.[432] The 2005 Transportation Act deleted limousines from the definitions of passenger automobiles if they weigh at least 6,000 lbs. The stated congressional justification is that limousines are vital to commerce.[433]

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2015 are $46 million.[434]

Comment. A striking lobbying triumph for the limousine industry, and evidence that Congress is not taking energy and the environment issues seriously.

E. Diesel-Water Fuel Emulsions Taxed at Reduced Removal-at-Terminal Excise Tax Rate

Summary. Diesel water emulsions now enjoy a reduced excise tax rate to accommodate the addition of water to a volume-based tax. Unless it is dyed, diesel fuel is subject to the removal-at-terminal excise tax. This tax applies upon the removal from a terminal or refinery, entry into the United States, at time of sale to any person who is not registered under §4101 (unless at an earlier time there was a removal or entry of the fuel that was taxable).[435] The idea is to levy the tax at choke points in the distribution of liquid fuels by capturing the revenue on import or production and expect the tax to be passed on to the ultimate consumer. The tax rate on diesel fuel is 24.4 cents per gallon. It consists of a diesel fuel tax rate of 24.3 cents per gallon, plus the 0.1 cents per gallon tax that funds the LUST Trust Fund (LUSTTF). Under previous law, this rate was scheduled to drop to 4.3 cents per gallon and the LUSTTF tax was scheduled to expire after September 30, 2005. These actions have been postponed until after September 30, 2011. The 2005 Energy Act delays the reduction of the rate of the regular diesel fuel excise tax from October 1, 2005, until October 1, 2011.[436]

The Act reduces the removal-at-terminal excise tax rate for diesel-water fuel emulsions. The removal-at-terminal rate for a diesel-water fuel emulsion that is at least 14% water is now 19.7 cents per gallon, reduced from 24.3 cents per gallon, beginning in 2006.[437] The emulsion additive must be registered by a U.S. manufacturer with EPA as required in §211 of the CAA.[438] The 0.1 cents per gallon LUSTTF tax will also apply, for a total tax of 19.8 cents per gallon. This is referred to as the incentive tax rate. The reduced rate does not apply to the removal, sale, or use of diesel-water fuel emulsion unless the person so acting is registered under §4101.[439] For those not registered, the regular rate of 24.4 cents per gallon will apply.

428. White House 2008 Budget, *supra* note 9, Item 83.

429. I.R.C. §4483(h), *amended by* 2005 Act, §11101(b)(2).

430. *Id.* §4051(a)(4), *amended by* 2005 Transportation Act, §1112.

431. Highway Reauthorization and Excise Tax Simplification, JCX-61-05 (Provision A-2), July 29, 2005.

432. I.R.C. §4064(b)(1)(A) (before amendment by 2005 Act §11111(a)).

433. Joint Comm. on Taxation, General Explanation of Tax Legislation Enacted in the 109th Congress, Part Six: Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (Pub. L. No. 109-59, JSC-1-07 (enacted on Jan. 17, 2007) (reauthorization of Trust Fund Taxes., effective Oct. 1, 2005).

434. Joint Comm. on Taxation, Estimated Budget Effects of the Conference Agreement for Title XI of H.R. 3, Highway Reauthorization and Excise Tax Simplification, JCX-61-05 (Provision A-1), July 29, 2005.

435. I.R.C. §4081(a)(2)(D).

436. *Id.* §4041(a).

437. *Id.* §4081(a)

438. 42 U.S.C. §§7521 et seq. (as in effect on Mar. 31, 2003).

439. I.R.C. §4081(a)(2)(D).

A refund is available for tax-paid diesel fuel that was used to produce a qualifying emulsion diesel fuel. The Treasury will pay the difference between the regular tax rate and the incentive tax rate for any diesel fuel that had the removal-at-terminal tax imposed on it at the regular tax rate, so long as the fuel was used to produce a diesel-water fuel emulsion that qualifies for the special incentive rate of 19.7 cents per gallon. The fuel must be sold or used in that person's trade or business to qualify for the refund.[440]

Any person who separates the diesel fuel from the diesel-water fuel emulsion which had a reduced rate of tax is treated as a refiner of the fuel.[441] The refiner is then liable for any difference between the amount of tax on the latest removal of the separated fuel and the amount of tax that had been imposed upon the pre-mixture removal.[442]

Revenue Effects. The Joint Committee on Taxation has estimated the budget effects of this provision to be a loss of less than $500,000 in each of the years 2006 through 2015.

Comment. The reduction in tax is reasonable, given that it is prorated to the addition of water. Moreover, the emulsion reportedly has environmental benefits.

F. Change in Ownership Will Require Re-Registration of Persons Connected to Fuel Excise Taxes

Summary. The 2005 Transportation Act[443] mandates that when a change in ownership of a registrant occurs, the registrant must re-register with the IRS. Specifically, a person is required to re-register under the fuel excise tax provisions if, after the transaction, more than 50% of the ownership interests in or assets of that person are held by persons other than those who held 50% of the ownership interests or assets before the transaction. The re-registration requirement does not apply to companies whose stock is regularly traded on an established securities market.[444] The civil penalty for failure to register now applies to a failure to re-register.[445] The additional nonassessable penalty of $10,000 now also applies to a failure to re-register.[446] Likewise, the criminal penalty for failure to register, falsely representing oneself to be registered, or willfully making a false statement on the registration application also now applies to a failure to re-register.[447]

Comment. An appropriate administrative expansion.

G. Deep-Draft Ocean-Going Vessels, Except Those Used to Enter Taxable Fuel Transferred in Bulk, Must Register for Fuel Excise Tax Purposes

Summary. Any person operating a vessel within the bulk transfer/terminal system must register with the IRS for purposes of certain excise taxes on fuels. Registration is not required if the vessel operator uses the vessel exclusively for the purpose of the entry of taxable fuel into the United States for consumption, use, or warehousing. The operators of these vessels do not have to be registered to be exempt under the bulk transfer rules.[448] Under prior law, an operator of a deep-draft ocean-going vessel[449] was not required to register.

Comment. An appropriate administrative expansion.

X. Mining and Miscellaneous Extractive Industries

A. New Credit for Production of Refined Coal From Facilities Placed in Service Before 2009

Summary. The 2004 Jobs Act, grants an alternative credit for the production of refined coal, as a component of the §38 general business credit, and adds a further credit of over $4 per ton (now $5.679 per ton thanks to inflation adjustments) which declines as coal prices rise. Refined coal is a fuel that[450]:

> (a) is in a liquid, gaseous, or solid form[451];
> (b) produced from coal (including lignite) or high carbon fly ash, and fuel used as a feedstock[452];
> (c) sold by the taxpayer with the reasonable expectation that it will be used for the purpose of producing steam[453];
> (d) certified by the taxpayer as resulting (when used in the production of steam) in a qualified emission reduction[454]; and
> (e) is produced in a manner that results in an increase of at least 50% in the market value of the refined coal (excluding any increase caused by materials combined or added during the production process), as compared to the value of the feedstock coal,[455] i.e., it sells at prices at least 50% greater than the prices of the feedstock coal or comparable coal.

Qualified emission reduction means a reduction of at least 20% of the emissions of nitrogen oxide and either sulfur dioxide or mercury released when burning the refined coal as compared to the emissions released when burning the feedstock coal or comparable coal predominantly available in the marketplace as of the beginning of 2003.[456] A feedstock is any raw material used in a manufacturing process to produce another product. So, a qualified refined coal

440. *Id.* §6427(m)(1). This refund is available unless the excise tax overpayment must be recovered by a credit against income tax rather than an excise tax refund, as §6427(k) provides.

441. *Id.* §4081(c).

442. *Id.*

443. Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users, Pub. L. No. 109-59, 119 Stat. 1144 (Aug. 10, 2005).

444. I.R.C. §4101(a)(4).

445. *Id.* §6719.

446. *Id.* §7272(a).

447. *Id.* §7232.

448. *Id.* §4081(a)(1)(B), *amended by* 2005 Transportation Act, §11166(a)-(b)(1).

449. A "deep-draft ocean-going vessel" is defined as any vessel designed primarily for use on the high seas that has a draft of more than 12 feet. *Id.* §4042(c)(1).

450. *Id.* §45(c)(7)(A), *amended by* 2004 Act, §710(a).

451. The 2004 Jobs Act required the fuel to be "synthetic." The 2005 Gulf Opportunity Zone Act, §403(t) removed that requirement. This eliminates the need for chemical change.

452. I.R.C. §45(c)(7)(A)(i).

453. *Id.* §45(c)(7)(A)(ii).

454. *Id.* §45(c)(7)(A)(iii).

455. *Id.* §45(c)(7)(A)(iv).

456. *Id.* §45(c)(7)(B).

facility is one that burns coal to produce a lower emission, higher value coal to be burned to produce steam that generates electricity.

The $4.375 per ton credit applies to qualified refined coal that is[457] produced by the taxpayer at a refined coal production facility during the 10-year period beginning on the date the facility is originally placed in service.[458] A refined coal production facility is a facility that is placed in service between October 22, 2004, and 2009 that makes refined coal.[459] It seems the taxpayer for these purposes could be a lessee or operator, as long as the taxpayer is the person producing and selling the refined coal and the facility is placed in service between October 22, 2004 and 2009. The coal must be sold by the taxpayer[460] to an unrelated person[461] during that 10-year period.[462]

Rules requiring production to be in the United States, computation of inflation adjustment and reference prices, definition of production attributable to the taxpayer, treatment of related persons, pass-through of credits for estates and trusts, and coordination with the credit for fuel produced from a nonconventional source,[463] apply for purposes of determining the amount of any increase in the credit for refined coal production facilities.[464]

Revenue Effects. The Joint Committee on Taxation bundled the revenue effects of this provision into a package of electricity production credits costing $2.278 billion over the 2005-2014 period.[465] This is unfortunate because the public deserves official figures as to how much tax revenue is surrendered to alternative energy, and within that category, how much is real and how much is an industry subsidy for extracting and refining a particular class of coal.

Comment. This new provision is complex and questionable, especially in that it may go to taxpayers who already receive royalties from coal mining that they can treat as producing capital gains.[466] Apparently Congress does not have the stomach for a tax on dirty coal.

B. Nonconventional Fuel Production Credit Upgraded to an Elective General Business Credit

Summary. Certain fuels produced from nonconventional sources within the United State and sold to unrelated parties qualify for an income tax credit. Under pre-2005 Act law, the nonconventional fuel production credit was not part of the general business credit.[467] As a result, the credit could not exceed regular tax liability minus the tentative minimum tax for AMT purposes.[468] The rule was softened by a proviso that to the extent this rule limited the nonconventional fuel production credit, the AMT allowable in future years rose by the disallowed amount. Also, under pre-2005 Act law, unused nonconventional fuel production credits could not be carried forward or carried back to other tax years.

With no particular explanation other than that Congress believed the carryback and carryforward rules should apply to the nonconventional fuel production credit, the 2005 Congress elevated the nonconventional fuel production credit to the list of general business credits.[469] Although this generally helps taxpayers, it prevents some taxpayers from enjoying full use of the credit to reduce their tax liabilities in the tax year they claim the credit.

The largesse was limited in that carrybacks of the credit under the new law do not go back to before 2006.[470] Also, the nonconventional fuel production credit is not a qualified business credit under §196(c), which means that taxpayers cannot deduct under §196 any nonconventional fuel production credits disallowed limitation (based on tax liability) and that are unused at the end of the 20-year carryforward period.[471] The nonconventional fuel production credit is elective.[472] If a taxpayer has oil production that qualifies for the marginal well production credit under §45I and the nonconventional fuel production credit, the taxpayer cannot claim the marginal well production credit unless it foregoes electing the nonconventional fuel production credit, and vice versa.

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2015 are $88 million.[473]

Comment. A modest revenue loss in a hypertechnical area of the Code. The credit is oriented towards extracting energy from unusual sources. In light of high petroleum prices, the need for this credit has eroded. An oil import fee that sets a high base (say, $60/barrel) for petroleum would likely eliminate the justification for the credit and allow market forces to dictate the behavior of individual firms as to whether they want to pursue nonconventional fuels.

XI. Timber Industry

A. Capital Gains on Sales of Standing Timber Expanded

Summary. The 2004 Jobs Act added a new provision to the effect that outright sales of timber automatically qualify for capital gains treatment under existing §631(b) for sales

457. *Id.* §45(e)(8)(A), *amended by* 2004 Act, §710(b)(2). This $4.375 is indexed for inflation. *Id.* §45(b)(2).

458. *Id.* §45(e)(8)(A)(i).

459. *Id.* §45(d)(8), *amended by* 2004 Act, §710(b)(1).

460. *Id.* §45(e)(8)(A)(ii).

461. *Id.* §45(e)(8)(A)(ii)(I).

462. *Id.* §45(e)(8)(A)(ii)(II).

463. *Id.* §29.

464. *Id.* §45(e)(8)(C).

465. American Jobs Creation Act—JCX-69-04, *supra* note 179, Provision VII-10.

466. I.R.C. §631(c). White House 2008 Budget Item 16 buries the loss within the $5.530 billion loss over 2008-2012 for a mass of what it calls "new technologies."

467. The general business credit appears in *id.* §38.

468. *Id.* §53(d)(1)(B).

469. *Id.* §38(b)(22;545;545), *amended by* 2005 Act, §1322(a)(2). It also redesignates the credit from §29 to §45K.

470. *Id.* §39(d).

471. *Id.* §38(c).

472. Now it is automatic unless the taxpayers elect out of §45K(a), as amended by 2005 Gulf Opportunity Zone Act §402(m)(1). In effect, that makes it elective.

473. Joint Comm. on Taxation, Estimated Revenue Effects of the Conference Agreement for Title XIII of H.R. 6, The Energy Policy Tax Incentives Act of 2005, JCX-51-05 (Provision B-2), July 27, 2005.

474. 2004 Act §315(a).

after 2004.[474] This is an astonishing change, explained on the basis of trying to encourage improved timber management practices.

Under prior law, §631(b) let a taxpayer elect to treat the gain from a disposal of timber as a proceeds from a sale of trade or business property under §1231, provided the taxpayer owned the timber for more than a year and was paid by the timber harvester on a royalty basis. Section 1231 is a remarkably generous provision in that it treats gains as favorably taxed,[475] long-term capital gains and losses as ordinary losses that offset regular income. Absent this new law, an outright sale of timber might or might not qualify for capital gains treatment, generally depending on whether the taxpayer sold the timber in a bulk sale (making the gain a long-term capital gain taxable at not over 15% more likely) or as a dealer[476] (making the gains ordinary income taxable at higher rates).

This new boon for timber owners comes with an added tax benefit; the income so earned will not be treated as self-employment income (as dealer profits might be) and therefore are free from federal self-employment taxes.[477]

Revenue Effects. The Joint Committee on Taxation has estimated the revenue effects of this provision to be negligible.[478] The White House places the lost revenue at about $187 million per year.[479] However, the White House Budget seemingly includes pre-existing special opportunities for timber royalties to be taxed as capital gains.

Comment. The stated congressional rationale is that a seller of timber will let a timber cutter operating on a royalty basis damage the rest of the owner's timber, but not if the owner sold the timber outright. A buyer of standing timber ripe for cutting will have no more interest in protecting the seller's unwanted timber than the seller who allows cutting in exchange for a royalty. In both cases the seller's protection from such damage is to write a tough contract with the buyer and monitor the operations for compliance.[480] It is not clear why a dealer in timber should be favored over dealers in other assets, such as land, by being allowed to pay a mere 15% tax on selling timber in the course of his business, although an argument can be made for allowing an inflation adjustment to the basis of timber and repealing this provision along with §631, which freely allows capital gains on harvesting timber.

B. Reforestation Deductions

Summary. The opportunity to deduct the cost of planting trees has been greatly expanded. Prior law allowed taxpayers to elect[481] to deduct the cost of planting timber[482] in the United States[483] over seven years under §194, but never more than $10,000 of reforestation expenditures per year. Thanks to the 2004 Act, the 10,000 limitation applies to each timber property.[484] Because the dollar limitation applies to each qualified timber property, taxpayers can benefit from owning or leasing multiple properties and may even strain to engage in artificial separations by deeds, leases, and so forth to multiply the opportunities to rapidly write off the costs of planting.

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2014 are $64 million.[485] The White House estimation for the years 2006-2012 are $0 from corporations (because corporations do not benefit from capital gains) and $1.17 billion from individuals.[486]

Comment. The original system of credit-and-deduction for planting trees was explained as a way to reforest idle farm land productively. The new law dramatically changes the beneficiaries to large-scale timber operators, many of whom are duty-bound to reforest and for whom this is just a gift. Small entities lost the credit, subverting the original purpose of these tax provisions. The result is likely a lot of wasted tax revenue. The real winners appear to be individuals with large timber acreage who can take advantage of the combination of hefty deductions for planting timber, gently taxed (rates not over 15%) capital gains on harvesting timber, and capital gains for bulk sales of timber.

C. Repeal of the Credit for Planting Timber

The 2005 Act repealed the reforestation credit for expenditures paid or incurred after October 22, 2004.[487] Under prior law, taxpayers were allowed a 10% credit for reforestation and afforestation expenses in tandem with the accelerated deduction for timber planting.

Revenue Effects. Not stated.

Comment. A minor situation explicable on the basis of symmetry. This was eliminated as a simplification measure in connection with the previous provision.

475. The general long-term capital gain tax rate is 15%. I.R.C. §1(h)(1)(C). It does not benefit corporations.

476. *See, e.g.*, Crosby v. United States, 414 F.2d 822 (5th Cir. 1969) (dealer status found).

477. *See* IRS Pub. No. 533, at 7 (2004).

478. American Jobs Creation Act—JCX-45-04, *supra* note 174, Provision II-H, at 3.

479. White House 2008 Budget, *supra* note 9, Item 36.

480. Joint Comm. on Taxation, Description of H.R. 4520, The American Jobs Creation Act of 2004, JCX-41-04, at 42, June 10, 2004 (scheduled for markup by the House Committee on Ways and Means).

481. See I.R.C. §194(b)(1)(A), for the election.

482. The election reaches so-called reforestation expenditures, meaning direct costs incurred in connection with afforestation or reforestation by planting or artificial or natural seeding, including costs for the preparation of the site; of seeds or seedlings; and for labor and tools, including depreciation of equipment such as tractors, trucks, tree planters, and similar machines used in planting or seeding, but not expenditures for which the taxpayer has been reimbursed under any government reforestation cost-sharing program unless the amounts reimbursed were subject to income taxes. *Id.* §194(c)(3).

483. The planning had to be on qualified timber property, meaning a woodlot or other site located in the U.S. that will contain trees in significant commercial quantities and that is held by the taxpayer for the planting, cultivating, caring for, and cutting of trees for sale or use in the commercial production of timber products. *Id.* §194(c)(1).

484. *Id.* §194(b)(1)(A). Applicable to expenditures paid or incurred after October 22, 2004. 2004 Act §322(e). See I.R.C. §194(a)(1)(A), for the deduction.

485. Budget Effects—Tax Incentives Act, *supra* note 28, Provision A-9.

486. White House 2008 Budget Item 37. This presumably includes the effect of the repeal of the timber credit.

487. I.R.C. §§46(3), 48(a)(5), 50(c)(3), *amended by* 2004 Act, §322.

D. Elimination of Air Passenger Tax From Fixed-Wing Flights in Timber Operations

Before passage of the 2005 Transportation Act, there was no air passenger tax on helicopters used in timber operations.[488] The 2005 Transportation Act extended the exemption to fixed-wing aircraft.[489]

Revenue Effects. Not stated.

Comment. A trivial issue.

E. Coordination of Specified Business Energy Credits With Alternative Minimum Tax

The credits that comprise the general business credit have only a limited ability to offset a taxpayer's regular income tax liability, and are unavailable to offset the taxpayer's AMT liability. Specifically, except for the empowerment zone employment credit and the New York Liberty Zone business employee credit, for which separate limitations apply, the general business credit (the sum of the current year, carryforward, and carryback credit amounts) for any tax year is subject to a limit based on the taxpayer's regular income tax liability.

The practical meaning of the new rule is that unlike most other general business credits, specified energy credits can be used against the AMT. Specifically, the 2004 Jobs Act provides that the §38(c) limitation based on a taxpayer's tax liability and the carryback and carryforward rules[490] applies separately to the specified energy credits.[491] As a result, when applying the limitation based on a taxpayer's tax liability, the tentative minimum tax is deemed to be zero, and the limitation based on a taxpayer's tax liability (as modified by above) declines by the credit allowed under §38(a) for the tax year, aside from the specified energy credits.[492]

For this purpose, specified energy credits include the credit for electricity produced from certain renewable sources, to the extent attributable to (a) electricity or refined coal produced[493] at a facility which is originally placed in service after October 22, 2004, and during the four-year period starting when the facility was first placed in service; and (b) the alcohol fuel credit under §40.[494]

Revenue Effects. The Joint Committee on Taxation has estimated that there will be no revenue effect from this provision.[495]

Comment. A small gift for energy companies and the alcohol fuel industry.

488. *Id.* §4261(f).

489. *Id.* §421(f), *amended by* 2005 Transportation Act, §1121(c). The basic tax is 7.5% of the ticket plus $3.20 per flight segment.

490. *Id.* §39.

491. *Id.* §38(c)(4)(A)(i), *amended by* 2004 Act, §711(a).

492. *Id.* §38(c)(4)(A)(ii)(II).

493. *Id.* §45.

494. *Id.* §38(c)(4)(B)(i).

495. American Jobs Creation Act—JCX-45-04, *supra* note 174, Provision II-E-1.

XII. Electricity From Renewable Sources

A. Credit Halved for Electricity Produced and Sold From Selected Environmentally Friendly Facilities After 2004

The Code grants a 10-year income tax credit for electricity produced at a qualified facility, basically meaning a facility that uses renewables for fuel. It is part of the §38 general business credit, and before amendment, the credit lasted for a decade in the taxpayer's hands. The credit is 1.5 cents/kwh, now indexed for inflation to around 1.9 cents/kwh. Before the amendments in the 2004 Jobs Act the production credit was available for:

> (a) qualified wind facilities originally placed in service after 1993 and before 2006;
> (b) qualified closed-loop biomass facilities placed in service after 1992 and before 2006; and
> (c) qualified poultry waste facilities originally placed in service after 1999 and before 2006.

The 2004 Act made two major changes: it expanded the kinds of renewable resources that could attract a credit for electrical production, but tightened up as to solar power as a fuel, because Congress gave solar power a 30% investment tax credit for installing solar electric equipment.

Thanks to the 2004 Act, qualified facilities now comprise wind energy facilities, closed-loop biomass facilities, open-loop biomass (including agricultural livestock waste nutrients) facilities, geothermal energy facilities, solar energy facilities, small irrigation power facilities, landfill gas facilities, and trash combustion facilities. In addition, an income tax credit is allowed for the production of refined coal.[496]

Solar power is a special case. Congress provided that a solar facility is one that uses solar energy to produce electricity, and that was placed in service after October 22, 2004, and before January 1, 2006. If the facility was placed in service on or before August 8, 2005, it can only qualify for one-half the usual electricity production credit because the credit period is only 5 years, rather than the usual 10 years. That is reasonable, given that the solar facility was not installed in order to get the credit. As to post-2005 solar installations, there can be no production credit, but instead there is a 30% investment tax credit, obviously a political compromise.[497] The same halving is true of geothermal, small irrigation power, open-loop biomass, and solid waste.[498] This affects new facilities placed in service after October 22, 2004, and before 2006. Again, this halving is performed by imposing a 5-year period beginning on the date the facility was originally placed in service instead of the usual 10-year period.[499]

Revenue Effects. The revenue effect of this provision is not detectable because it is bound in with other credits. See below.

Comment. This is political compromise understood only by insiders.

496. I.R.C. §45.

497. *Id.* §48(a)(2)(A).

498. *Id.* §45(b)(4)(A), *amended by* 2004 Act, §710(c).

499. *Id.* §45(b)(4)(B)(i).

B. Modification of Reduction of Credit for Electricity Produced From Renewable Resources for Grants, Tax-Exempt Bonds, Subsidized Energy Financing, and Other Credits in Case of Some Closed-Loop Biomass

The 2004 Jobs Act reduced the percentage by which the credit declines for grants, tax-exempt bonds, subsidized energy financing, and other credits, to the lesser of the fraction under prior law, or one-half[500] with respect to electricity produced and sold after October 22, 2004, in tax years ending after October 22, 2004. Under prior law, the credit for electricity produced from renewable resources was part of the general business credit under §38, but the credit declined proportionately (not dollar-for-dollar) to the extent a facility was financed with governmental grants, tax-exempt bonds, subsidized financing, or other credits.[501] Under the new law, for all qualifying facilities other than closed-loop biomass facilities modified to co-fire with coal and/or other biomass, any reduction in credits by reason of grants, tax-exempt bonds, subsidized energy financing, and other credits cannot exceed 50%.

This tax relief does not extend to certain closed-loop biomass facilities owned by the taxpayer, placed in service before 2006, and modified to use closed-loop biomass to co-fire with coal and/or other biomass.[502]

Revenue Effects. Not detectable because its revenue effects are combined with other tax modification with respect to energy from renewable sources. See below.

Comment. A modest change, presumably designed as a selective incentive.

C. Expansion of Credit for Electricity Produced From Closed-Loop Biomass Includes Facilities Co-Fired With Coal, With Other Biomass, or Both Combined

The 2004 Act extended the credit for electricity produced from closed-loop biomass to include electricity production from facilities that co-fire coal, with other biomass, or both combined. Before enactment of the 2004 Jobs Act, the credit for electricity from renewable resources applied to electricity produced from qualified wind, closed-loop biomass,[503] and poultry waste facilities and sold to unrelated persons during the tax year.[504]

The credit is 1.5 cents/kwh, indexed for inflation. It applied to qualified wind facilities originally placed in service after 1993 and before 2006, and qualified closed-loop biomass facilities originally placed in service after 1992 and before 2006. Under pre-2004 Act law, the credit was 1.5 cents/kwh, indexed for inflation for qualified poultry waste facilities placed in service after 1999 and before 2006.

The 2004 Act confirmed that qualified energy resources include closed-loop biomass[505] and that, for a facility using closed-loop biomass to produce electricity, a qualified facility is any facility[506]:

> (a) owned by the taxpayer that is originally placed in service after 1992 but before 2009[507]; or
>
> (b) owned by the taxpayer, which before 2009, was, and originally placed in service and modified to use closed-loop biomass to co-fire with coal, with other biomass, or with both combined, provided the modification is approved under the Biomass Power for Rural Development Programs or is part of a pilot project of the Commodity Credit Corporation as described in the Federal Regulations.[508]

For a qualified facility that is modified to co-fire closed-loop biomass with coal, with other biomass, or with both, the following rules apply[509]:

> (a) the 10-year period for which the credit is allowable after a facility is originally placed in service is treated as beginning no earlier than October 22, 2004[510];
>
> (b) the credit for the facility equals the amount determined[511] multiplied by the ratio of the thermal content of the closed-loop biomass used in the facility to the thermal content of all fuels used in the facility[512]; and
>
> (c) if the owner of the facility is not the producer of the electricity, the person eligible for the credit is the lessee or the operator of that facility.[513] The person who actually produces the electricity from closed-loop biomass co-fired with coal, other biomass, or both is entitled to the credit.

Revenue Effects. Not detectable, because revenue effects from this provision are combined with other tax modifications for energy from renewable sources. See below.

Comment. This provision is a vestige of an experimental project to test co-firing biomass and coal. It offers minuscule energy and environmental benefits.

D. Credit for Electricity Produced From Renewables Expanded to Include Electricity Produced From Open-Loop Biomass, Including Agricultural Livestock Waste Nutrients

The 2004 Jobs Act provided that for purposes of the credit for electricity produced from renewables, qualified energy

500. *Id.* §45(b)(3), *amended by* 2004 Act, §710(f)(1).

501. *Id.*

502. *Id.* §45(d)(2)(A)(ii), (b)(3).

503. Closed-loop biomass is plant matter, where the plants are grown for the sole purpose of being used to generate electricity. Closed-loop biomass includes waste materials (e.g., scrap wood, manure, and municipal or agricultural waste). *See* RIA FTC 2d ¶ L-17771USTR ¶ 454 Tax Desk ¶ 384,054.1.

504. The credit, which was allowable for production during the ten-year period after a facility is originally placed in service, is part of the §38 general business credit. Closed-loop biomass is plant matter, grown for the sole purpose of being used to generate electricity but not waste materials (e.g., scrap wood, manure, and municipal or agricultural waste). The credit is unavailable to taxpayers who use standing timber to produce electricity.

505. I.R.C. §45(c)(1)(B), *amended by* 2004 Act §710(a).

506. *Id.* §45(d)(2)(A), *amended by* 2004 Act §710(b)(1).

507. *Id.* §45(d)(2)(A)(i). The 2006 Act changed the dates to "before 2009" from "before 2006."

508. *Id.* §45(d)(2)(A)(ii). *See* 65 Fed. Reg. 63052.

509. *Id.* §45(d)(2)(B).

510. *Id.* §45(d)(2)(B)(i).

511. *Id.* §45(d)(2)(B)(ii).

512. *Id.*

513. *Id.* §45(d)(2)(B)(iii).

resources include open-loop biomass.[514] The Act does so by expanding the definition of qualified facility to include facilities using open-loop biomass to produce electricity, owned by the taxpayer, and originally placed in service before 2009.[515] For this purpose, open-loop biomass means[516] any agricultural livestock waste nutrients,[517] or any solid, nonhazardous, cellulosic waste material or any lignin material that is segregated from other waste materials and is derived from[518] any of these forest-related resources:

> (a) mill and harvesting residues, precommercial thinnings, slash, and brush[519];
>
> (b) solid wood waste materials, including waste pallets, crates, dunnage, manufacturing and construction wood wastes (but not pressure-treated, chemically treated, or painted wood wastes), and landscape or right-of-way tree trimmings, but not municipal solid waste, gas derived from the biodegradation of solid waste, or paper that is commonly recycled[520]; or
>
> (c) agriculture sources, including orchard tree crops, vineyard, grain, legumes, sugar, and other crop by-products or residues.[521]

Open-loop biomass excludes closed-loop biomass or biomass co-fired with fossil fuel beyond the fossil fuel required for startup and flame stabilization.[522] Agricultural livestock waste nutrients means agricultural livestock manure and litter, including wood shavings, straw, rice hulls, and other bedding material for the disposal of manure.[523] Agricultural livestock includes cattle, pigs, poultry, and sheep.[524] This renders poultry waste a renewable resource a form of open-loop biomass, rather than a separate category of renewable resources, as under prior law.

For a facility using open-loop biomass to make electricity, qualified facility means any facility the taxpayer owns that,[525] in the case of a facility using agricultural livestock waste nutrients,[526] is originally placed in service after October 22, 2004, and before 2006,[527] with a nameplate capacity rating[528] of not less than 150 kw[529]; and in the case of any other facility, is originally placed in service before 2009.[530]

Revenue Effects. Not detectable, because these revenue effects are combined with other tax modifications for energy from renewable sources. See below.

514. *Id.* §45(c)(1)(C), *amended by* 2004 Act, §710(a).
515. Originally 2007, but moved by the 2006 Act, §201.
516. I.R.C. §45(c)(3)(A).
517. *Id.* §45(c)(3)(A)(i).
518. *Id.* §45(c)(3)(A)(ii).
519. *Id.* §45(c)(3)(A)(ii)(I).
520. *Id.* §45(c)(3)(A)(ii)(II).
521. *Id.* §45(c)(3)(A)(ii)(III).
522. *Id.* §45(c)(3)(A).
523. *Id.* §45(c)(3)(B)(i).
524. *Id.* §45(c)(3)(B)(ii).
525. *Id.* §45(d)(3)(A), *amended by* 2004 Act, §710(b)(1).
526. *Id.* §45(d)(3)(A)(i).
527. *Id.* §45(d)(3)(A)(i)(I). The 2006 Act moved the date from pre-2008 to pre-2009. 2006 Act, §201.
528. "Nameplate capacity" is undefined in the tax law but in the industry means instantaneous maximum power output of the plant in megawatts.
529. *Id.* §45(d)(3)(A)(i)(II).
530. *Id.* §45(d)(3)(A)(ii).

Comment. The pattern of spasmodic cutoff dates complicates planning investment in this environmentally friendly technology.

E. Credit for Electricity Produced From Wind Energy Applies to Pre-2006 Qualified Facilities

Congress extended the placed-in-service date by two years (initially through 2007) for these qualifying facilities: wind, closed-loop biomass, geothermal, small irrigation power, landfill gas, and trash combustion. The placed-in-service dates for solar facilities and refined coal facilities were left unchanged. The law added hydropower and Indian coal as new qualifying energy resources. Qualifying facilities receive credits per kwh for electricity produced during a 10-year period.

An income tax credit is allowed for electricity produced at a qualified facility, including from a qualified wind facility, and sold to an unrelated person during the tax year. The credit is 1.5 cents/kwh, indexed for inflation, and is available for a decade for qualified facilities originally placed in service between 1993 and 2008.[531] It is part of the §38 business credit.

For a facility using wind to produce electricity, a qualified facility is any facility owned by the taxpayer and originally placed in service after 1992 and before 2009.[532]

Revenue Effects. Not detectable because these revenue effects are combined with other tax modifications for energy from renewable sources. See below.

Comment. This provision helpful from an environmental and national security perspective and deserves a permanent place in the credit structure, not threats of sunsets.

F. Credit for Electricity Produced From Renewable Resources Covers Small Irrigation Power Facilities

The 2004 Act expanded the credit for electricity produced from renewable resources, part of the §38 general business credit, to cover electricity made from small irrigation power.[533] Like the other renewable electricity credits, this one is handed out at 1.9 cents per kwh (adjusted for inflation) for a decade. Small irrigation power is power generated without any dam or impoundment of water through an irrigation system canal or ditch,[534] and with a nameplate capacity rating not less than 150 kw but less than 5 MW.[535]

For a facility using small irrigation power to make electricity, a qualified facility is any facility owned by the taxpayer, originally placed in service after October 22, 2004, and before 2009.[536]

531. *Id.* §45(d)(1), *amended by* 2006 Act, §201.
532. *Id.* §45(d)(1), *amended by* 2004 Act, §710(b)(1). In the case of a qualified open-loop biomass facility, if the owner of the facility is not the producer of the electricity, then the person eligible for the credit allowable is the lessee or the operator of the facility. *Id.* §45(d)(3)(B). Someone who merely owns the property and is not involved in the electricity production does not qualify for the credit. The 2006 Act, §201 moved the date up to 2009.
533. I.R.C. §45(c)(1)(F), *amended by* 2004 Jobs Act, §710(a).
534. *Id.* §45(c)(5)(A).
535. *Id.* §45(c)(5)(B).
536. *Id.* §45(d)(5) (as most recently amended by 2006 Act, §201).

Revenue Effects. Not detectable because they are combined with other tax modifications for energy from renewable sources. See below.

Comment. This may prove to be a useful and environmentally friendly way to generate rural electricity. Congress should monitor the program to evaluate the impact of the credit and perhaps adjust the rate.

G. Credit for Electricity for Produced From Renewable Resources Includes Electricity From Landfill Gas and Trash

The 2004 Act expands the credit for electricity produced from renewable resources, part of the §38 general business credit, to include electricity made from municipal solid waste.[537] Municipal solid waste has the same meaning as the term solid waste as defined in §2(27) of the Solid Waste Disposal Act.[538] Two different qualifying facilities use municipal solid waste as a qualifying resource, namely landfill gas facilities and trash combustion facilities.[539] Landfill gas is methane gas derived from the biodegradation of municipal solid waste. A qualified facility in this case means any facility owned by the taxpayer which is originally placed in service before 2009.[540] The credit is available at the usual 1.9 cents/kwh for electricity the taxpayer produced from qualified energy facilities. The credit lasts for a decade and is subject to various phaseouts. In order for a trash combustion facility to be a qualified facility, the facility must be owned by the taxpayer and originally placed in service and before 2009.[541]

Revenue Effects. Not detectable because it is combined with other energy production tax credits for using renewable resources. See below.

Comment. Trapping and burning methane at garbage dumps to produce electricity is to be applauded. A longer time horizon and larger credit seem to be in order. However, the trash burning credit can be doled out for burning toxic wastes[542] and may impede recycling.

H. Renewable Resources Energy Production Credit Expanded to Include Electricity From Geothermal Energy

Under prior law, the electricity production credit from renewable resources applied to electricity from qualified wind, closed-loop biomass, and poultry waste facilities, provided the electricity was sold to an unrelated person during the year. The credit was granted at 1.5 cents/kwh, indexed for inflation. The credit generally lasted a decade.

The 2004 Jobs Act expanded the credit to include electricity produced from geothermal energy.[543] For a facility using geothermal energy or solar energy to produce electricity, a qualified facility is any facility owned by the taxpayer, originally placed in service after October 22, 2004, and before 2006 (extended to before 2009 by the 2006 Act),[544] but not an energy credit property,[545] the basis of which is taken into account by the taxpayer for purposes of determining the energy credit.[546] This limit prevents double-dipping.

Revenue Effects. The Joint Committee in 2005 reported the total revenue losses from all of §45 credits (which includes all the credits for producing energy from renewable resources and the credits for producing clean coal and Indian coal) as $2.747 billion for 2005-2015.[547] The White House Budget[548] assigned a far higher number in its Tax Expenditures analysis, but that analysis includes existing tax benefits. Specifically, the White House estimate describing the new technology credit from 2006-2012 is $6.34 billion from corporations and $390 million from individuals.

Comment. There seems to be little to complain about regarding including geothermal energy in the package of electrical energy-production credits. Solar energy production does not benefit from the production credit, but it does get an investment credit for construction and installation. This probably makes sense because of the small scale of solar facilities. However, large scale solar facilities should perhaps get both credits in light of the superiority of the technology. No-

537. *Id.* §45(c)(1)(G), *amended by* 2004 Jobs Act, §710(a).

538.

> [A]ny garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility, and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 1342 of title 33, or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended.

Id. §45(c)(6), *amended by* 2004 Jobs Act, §710(a). The cited provision is 42 U.S.C. §6903, ELR STAT. RCRA §1004.

539. Trash combustion facilities are described as facilities that burn municipal garbage to produce steam to drive a turbine for the production of electricity. JOINT COMM. ON TAXATION, GENERAL EXPLANATION OF TAX LEGISLATION ENACTED IN THE 108TH CONGRESS, PART SEVENTEEN: AMERICAN JOBS CREATION ACT OF 2004 (Pub. L. No. 108-357), JCS-5-05, at 338, May 2005. In fact, the facilities can burn almost anything.

540. I.R.C. §45(d)(6), *amended by* 2004 Act, §710(b)(1). These are complicated earliest dates.

541. *Id.* §45(d)(7) (as most recently amended by 2006 Act, §201). These are complicated earliest dates.

542. The definition of municipal solid waste from purposes of §45 relies on the definition in 42 U.S.C. §6903(27), which refers to:

> any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 1342 of title 33, or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended.

See David Koplow, *Section 45(c) Tax Credits to Certain "Renewable" Energy Resources* (Earth Track, Inc. 2004).

543. General effective for electricity produced and sold after October 22, 2004 in tax years ending after October 22, 2004. I.R.C. §45(c)(1)(D), *amended by* 2004 Act §710(a).

544. 2006 Act §201, *amending* I.R.C. §45.

545. I.R.C. §48(a)(3).

546. *Id.* §45(d)(4), *amended by* 2004 Jobs Act, §710(b)(1).

547. BUDGET EFFECTS—TAX INCENTIVES ACT, *supra* note 28, Item A-1.

548. White House Budget, *supra* note 9, Item 16.

tice how wind power does get the production credit, which makes sense in light of the larger scale of many wind power facilities such as wind farms.

It is unfortunate that the coal production figures are "fifth column." They should be backed out of the revenue estimates because they are falsely categorized as renewable resources, yet they are likely to garner a hefty share of the tax subsidies.

I. Thirty Percent Credit for Qualified Fuel Cell and Microturbine Power

Congress granted a 30% business energy credit for buying qualified fuel power plants for business use, and a 10% credit for purchase of qualifying stationary microturbine power plants. The credit was supposed to expire at the end of 2007, but was extended through the end of 2008.[549] The U.S. House of Representatives report describes the fuel cell and microturbine credit as follows:

> A nonrefundable, 10-percent business energy credit is allowed for the cost of new property that is equipment (1) that uses solar energy to generate electricity, to heat or cool a structure, or to provide solar process heat, or (2) used to produce, distribute, or use energy derived from a geothermal deposit, but only, in the case of electricity generated by geothermal power, up to the electric transmission stage.
>
> The business energy tax credits are components of the general business credit [Sec. 38(b)(1)]. The business energy tax credits, when combined with all other components of the general business credit, generally may not exceed for any taxable year the excess of the taxpayer's net income tax over the greater of (1) 25 percent of net regular tax liability above $25,000 or (2) the tentative minimum tax. An unused general business credit generally may be carried back one year and carried forward 20 years (Sec. 39).
>
> A taxpayer may exclude from income the value of any subsidy provided by a public utility for the purchase or installation of an energy conservation measure. An energy conservation measure means any installation or modification primarily designed to reduce consumption of electricity or natural gas or to improve the management of energy demand with respect to a dwelling unit (sec. 136).
>
> There is no present-law credit for fuel cell power plant or microturbine property.
>
> The Committee believes that investments in qualified fuel cell power plants represent a promising means to produce electricity through nonpolluting means and from nonconventional energy sources. Furthermore, the on-site generation of electricity provided by fuel cell power plants, as well as that by microturbines, will reduce reliance on the United States' electricity grid. The Committee believes that providing a tax credit for investment in qualified fuel cell and microturbine power plants will encourage investments in such systems. . . .
>
> The provision grants a 30 percent business energy credit for the purchase of qualified fuel cell power plants for businesses. A qualified fuel cell power plant is an integrated system comprised of a fuel cell stack assembly and associated balance of plant components that converts a fuel into electricity using electrochemical means, and which has an electricity-only generation efficiency of greater than 30 percent and generates at least 0.5 kilowatts of electricity using an electrochemical process. The credit for any fuel cell may not exceed $500 for each 0.5 kilowatts of capacity.
>
> Additionally, the provision provides a 10 percent credit for the purchase of qualifying stationary microturbine power plants. A qualified stationary microturbine power plant is an integrated system comprised of a gas turbine engine, a combustor, a recuperator or regenerator, a generator or alternator, and associated balance of plant components which converts a fuel into electricity and thermal energy. Such system also includes all secondary components located between the existing infrastructure for fuel delivery and the existing infrastructure for power distribution, including equipment and controls for meeting relevant power standards, such as voltage, frequency and power factors. Such system must have an electricity-only generation efficiency of not less that 26 percent at International Standard Organization conditions and a capacity of less than 2,000 kilowatts. The credit is limited to the lesser of 10 percent of the basis of the property or $200 for each kilowatt of capacity.
>
> The credit is nonrefundable. The taxpayer's basis in the property is reduced by the amount of the credit claimed.[550]

Revenue Effects. The Joint Committee on Taxation has estimate the revenue effects of this provision in the years 2005-2015 at $223 million.[551] The White House estimates are slightly higher.[552]

Comment. The fuel cell credit may prove to be a useful addition to the arsenal of environmentally friendly and cost-effective sources of renewable energy. It is unclear from the vapid legislative history why a gas-powered microturbine merits help, unless, for example, it runs on methane from garbage.

J. Coordinating of the Credit for Electricity Produced From Renewable Resources With the Credit for Production Using Fuel From Nonconventional Sources

The renewable energy production credit was generally allowable for production during the ten-year period after a facility was placed in service. The 2004 Act prevents double-dipping by stating that the term qualified facility, for purposes of the credit for electricity produced from renewable resources, excludes any facility, the production from which is allowed for that tax year or any earlier tax year.[553]

K. Tax Credit for Clean Renewable Energy Bonds

Congress invented a new type of tax-exempt bond known as Clean Renewable Energy Bonds (CREBs). CREBs are used to finance capital expenditures incurred for facilities quali-

549. I.R.C. §48(c)(2)(E), *amended by* 2006 Act, §207.

550. Energy Policy Tax Policy Act of 2001, H.R. REP. No. 107-157, at 55-56, July 24, 2001.

551. BUDGET EFFECTS—TAX INCENTIVES ACT, *supra* note 28, Provision C, at 6.

552. White House 2008 Budget, *supra* note 9, Item 31. From 2006-2012, the loss from corporations is estimated at $240 million; from individuals during the same time period, $80 million.

553. Applicable to electricity produced and sold after October 22, 2004, in tax years ending after October 22, 2004. I.R.C. §45(e)(9), *amended by* 2004 Act, §710(d).

fying for tax credits under §54. CREBs holders get income tax credits at rates determined by the Treasury.

Section 103 and associated Code sections grant tax-exempt status to interest on various bonds issued by state and local governments. More recently, the federal government has offered income tax credits to holders of a small group of bonds, such as those issued in connection with rehabilitating lower New York after the events of September 11, 2001. These bonds do not pay interest; rather, they pay federal tax credits. They must be issued before 2009.[554]

The credit is similar to the foreign tax credit in that the credit is added to the recipient's income as interest, but then becomes available to offset federal income taxes, including the AMT.[555] The credit is nonrefundable, but is available to the owners of pass-through entities such as partnerships.[556]

The credit is computed and doled out every three months to the holders[557] on the basis of a credit rate as of the sale date.[558] The rate is supposed to be fixed so that the bond can be issued without a discount, at premium interest cost to the issuer.[559] The amount of the credit allowed for any tax year is limited to the taxpayer's regular tax liability plus the AMT minus most tax credits.[560]

A CREB is defined as any bond or obligation issued as part of an issue if:

> (a) the bond is issued by a qualified issuer under an IRS allocation to the issuer of part of the national CREB limitation;
>
> (b) 95% or more of the proceeds are to be used for capital expenditures incurred by qualified borrowers for one or more qualified projects[561];
>
> (c) the qualified issuer designates the bond as a CREB;
>
> (d) the bond is registered (which assures that ownership is not concealed);
>
> (e) the maturity of the bond does not exceed the maximum determined for that bond;
>
> (f) the bond issue provides for an equal amount of principal to be paid each calendar year; and
>
> (g) the issuer satisfies the arbitrage requirements of §148 for the proceeds of the issue of which the bond is a part.[562]

A qualified project can be refinanced with proceeds of a CREB.[563] A CREB can be issued to reimburse a qualified borrower for amounts paid after August 8, 2005, for a qualified project, but only if various conditions are met.[564]

A qualified issuer is any of the following:

> (a) a CREB lender, meaning a coop owned by, or has outstanding loans to, 100 or more cooperative electric companies, and that was in existence on February 1, 2002, including any affiliated entity controlled by that lender;
>
> (b) a cooperative electric company, either a mutual or cooperative electric company, or a not-for-profit electric utility that got a loan or loan guarantee under the Rural Electrification Act; or
>
> (c) any state, territory, U.S. possession, the District of Columbia, Indian tribal government, or any political subdivision thereof.[565]

A qualified borrower entitled to use the proceeds of CREBs is either of the last two classes of entities above.[566] A qualified project that may be financed with the proceeds of a CREB is any qualified facility owned by a qualified borrower. In addition to Indian coal production facilities, qualified facilities comprise wind energy, closed-loop biomass, open-loop biomass (including agricultural livestock waste nutrients), geothermal energy, solar energy, small irrigation power, landfill gas, and trash combustion.[567]

Originally, the CREB issuance limitation was $1.2 billion,[568] with a requirement that the IRS allocate this pool among qualified projects, but never allocating more than $750 million of the national CREB limitation to finance qualified projects of governmental bodies.[569] The 2006 Act authorized an extra $400 million in CREBs through the end of 2008.[570]

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2015 are $411 million.[571] White House figures are similar.[572]

554. *Id.* §54(m), *amended by* 2006 Act, §202 (extending the date by a year and adding an extra $400 million of CREB bonding authority).

555. *Id.* §54(g), (c)(1). Under the 2005 Act, the credit could be treated as a payment of estimated taxes. *Id.* §54(*l*)(5). Later legislation eliminated that feature. 2005 Gulf Opportunity Act, §402(c)(1).

556. *Id.* §54(*l*)(3)(A).

557. The credits are granted on the "credit allowance date": March 15, June 15, September 15, December 15 and the last day on which the bond is outstanding. *Id.* §54(b)(4).

558. *Id.* §54(b)(2).

559. *Id.* §54(b)(3).

560. *Id.* §54(c)(1). This is defined in §26(b) as all of the taxes imposed by Chapter 1 of Subtitle A of the Code, *id.* §§1-1400L, but not including the alternative minimum tax (AMT) imposed by §55, or taxes imposed by specified other provisions, the sum of the credits allowed under Part IV of subchapter A (*id.* §§21-53, allowing credits against tax), but disregarding refundable credits.

561. A qualified project for purposes of the CREB credit is any qualified facility owned by a qualified borrower (basically meaning mutual or cooperative electric companies and government units). Qualified facilities are wind energy facilities, closed-loop biomass facilities, open-loop biomass (including agricultural livestock waste nutrients) facilities, geothermal energy facilities, solar energy facilities, small irrigation power facilities, landfill gas facilities, trash combustion facilities and qualified hydropower facilities. *See id.* §54(d)(2)(A); Energy Tax Incentives Act—JCX-60-05, *supra* note 192.

562. I.R.C. §54(d)-(i).

563. *Id.* §54(d)(2)(B). This is possible only if the debt being refinanced was originally incurred by a qualified borrower after August 8, 2005.

564. *Id.* Before the payment of the original expenditure, the qualified borrower declared its intent to reimburse that expenditure with the proceeds, and not later than 60 days after payment of the original expenditure, the qualified issuer adopts an official intent to reimburse the original expenditure with those proceeds, and the reimbursement is made not later than 18 months after the date the original expenditure was paid.

565. *Id.* §54(j).

566. *Id.* §54(j)(5)(B).

567. As a practical matter it means facilities that are eligible for the tax credit for producing electricity from certain renewable resources, other than Indian coal production facilities, and ignoring placed-in-service date requirements.

568. *Id.* §54(f)(1).

569. *Id.* §54(f)(2).

570. 2006 Act §202.

571. Joint Comm. on Taxation, Estimated Revenue Effects of the Conference Agreement for Title XIII of H.R. 6, The Energy Policy Tax Incentives Act of 2005, JCX-51-05 (Provision A-2), July 27, 2005.

572. White House 2008 Budget Item 20 (credit for holding clean renewable energy bonds).

Comment. This may be a helpful way to assist with a long-term switchover from imported oil to domestic renewable energy, but the inclusion of coal is obviously questionable from a global warming standpoint unless the coal goes to advanced facilities that can sequester or convert CO_2. As usual, it is part of a quilt of tax incentives adding even more complexity to the Code.

XIII. Energy Industries Generally

A. Tax Credit for Research Costs of an Energy Research Consortium

Congress changed the 20% research and development tax credit by allowing credit equal to 20% of all expenditures for qualified energy research undertaken by an energy research consortium. This applies to all such expenditures, not just those in excess of a base amount as with tax regular reusable credit. It expired at the end of 2005, but was extended through 2007 by §104 of the 2006 Act.

Prior law granted a research expense credit equal to: 20% of the qualified research expenses for the tax year minus a base amount (unless the taxpayer instead elected the alternative incremental credit); plus 20$ of the basic research payments, known as the university basic research credit.

The basic research payments taken into account for the university basic research credit are these payments minus a qualified organization base period amount. Qualified research expenses are amounts the taxpayer pays or incurs during the tax year in carrying on any trade or business for either in-house research or contract research. The qualified organization base period amount is the sum of the minimum basic research amount in excess of the maintenance of effort amount.[573]

Thanks to the new law, contract research expenses[574] now include 75% of the amount a taxpayer pays or incurs to a qualified research consortium for the performance of qualified research on behalf of the taxpayer and one or more unrelated taxpayers.[575] A qualified research consortium is a tax-exempt nonprofit scientific research organization that is either a tax-exempt organization with a charitable, scientific, religious, or educational[576] purpose, or is a tax-exempt organization, such as chamber of commerce or business league, that is organized and operated primarily to conduct scientific research,[577] and is not a so-called private foundation.

The 2005 Energy Tax Act expanded the research expense credit with a credit of 20% business payments incurred (including contributions) to an energy research consortium. This new credit applies to all such expenditures, not just those in excess of a base amount. An energy research consortium is any exempt organization which is formed and operated primarily to conduct energy research,[578] or primarily to conduct energy research in the public interest and which is not a private foundation.[579] At least five unrelated persons[580] must have incurred expenditures during the calendar year in which the tax year of the organization begins for amounts to the organization for energy research, and no single person may have paid or incurred during the calendar year at least a stated amount. Also, to be a qualified research consortium, no single person can pay or incur more than one-half of the total amounts by the research consortium during received the calendar year.[581]

An organization cannot be both a qualified research consortium and an energy research consortium under §41(f)(6)(A).[582] Research credits cannot be double-counted.[583] The payee must be an eligible small business an institution of higher education, or a federal laboratory.[584]

Qualified energy research expenditures must otherwise qualify for the research credit under pre-2005 Energy Tax Act law and relate to the production, supply, and conservation of energy, including otherwise qualifying research expenditures related to alternative energy sources or the use of alternative energy sources, e.g., qualifying research relating to hydrogen fuel cell vehicles or research undertaken to improve the energy-efficiency of lighting.[585]

An eligible small business is a small business for which the taxpayer does not own[586] 50% or more of: in the case of a corporation, the outstanding stock of the corporation (by vote or value); and in the case of an unincorporated small business, the capital and profits interests.[587] A small business is any person if the annual average number of employees during either of the two preceding calendar years was 500 or fewer.[588]

Revenue Effects. Total estimated revenue losses as a result of this provision in the years 2005-2015 are $92 million.[589]

573. I.R.C. §41(e)(3).

574. For purposes of this credit, a qualified research consortium does not include an energy research consortium. *Id.* §41(b)(3)(C)(ii).

575. To be qualified, they must be for credit conducted in the United States, Puerto Rico, and U.S. Possessions. *Id.* §41(f)(6)(C). This is the same rule as for other research that qualifies for the credit.

576. *Id.* §501(c)(3).

577. *Id.* §501(c)(6).

578. *Id.* §41(f)(6)(A)(i)(I).

579. *See id.* §509(a)(b) for the definition of a "private foundation."

580. All persons treated as a single employer under §52(a) a controlled group of corporations for purposes of the work opportunity credit or §52(b) employees of trades or businesses that are under common control for purposes of the work opportunity credit, are treated as related persons for purposes of §41(f)(6)(A)(iii) and as a single person for purposes of §41(f)(6)(A)(iv). *Id.* §41(f)(6)(B).

581. *Id.* §41(f)(6)(A)(iv).

582. *Id.* §41(b)(3)(C)(ii), *amended by* 2005 Act §1351(a)(3).

583. *Id.* §41(f)(D) (as added by the Gulf Opportunity Zone Act, §402(*l*)(1)).

584. This term is defined in the Stevenson-Wydler Technology Innovation Act of 1980, as in effect on Aug. 8, 2005. I.R.C. §41(b)(3)(D)(iv) defines a federal laboratory as a laboratory, any federally funded research and development center, a Cooperative Research Center, or a National Science Foundation Cooperative Research Center, that is owned, leased, or otherwise used by a federal agency and funded by the federal government.

585. Energy Tax Incentives Act—JCX-60-05, *supra* note 192, at 92.

586. Ownership is determined within the meaning of §318, dealing with the attribution rules for constructive ownership of stock.

587. I.R.C. §41(b)(3)(D)(ii).

588. For this purpose, a preceding calendar year is taken into account only if the person was in existence throughout the year. As to start-ups, rules similar to §220(c)(4)(B) (Archer medical savings accounts) apply as §220(c)(4)(D) (dealing with Archer medical savings accounts apply for purposes of §41(b)(3)(D)(iii)(II)). All persons treated as a single under §414(b), (c), (m), and (o) (employee benefit plans) deemed as one employer. For purposes of the definition of a small employer, an employer includes any predecessor of the employer.

589. Joint Comm. on Taxation, Estimated Revenue Effects of Title XV of H.R. 6, The Energy Policy Tax Incentives Act of 2005, JCX-51-05 (Provision V-2), June 28, 2005 (as passed by the Senate).

The White House asserts revenue losses from 2006-2012 are $3.87 billion from corporations and $580 million from individuals.[590]

Comment. This provision was saved by the 2006 Act, without which it would have expired. It is very difficult for businesses to plan their research and development activities in such a disjointed environment. As usual, the deeper question is whether the income tax system should be the tool of choice, or whether market forces should prevail. In any case this may be a useful tool for encouraging energy research.

XIV. General Observations

So what does the new energy legislation tell us about the forces at play in Washington? The numbers reveal part of the story. Taking the numbers shown under the previous headings and aggregating them over a convenient 10-year period, the winners are, in descending order, using Joint Committee figures and not incorporating the 2006 Act extenders:

(a) Petroleum industry: $2.458 billion, arguably offset by diesel fuel tax increases, LUST tax and Oil Spill Liability tax summing to $3.9 billion, some or all of which are borne by customers[591];

(b) Coal industry: $1.713 billion, including benefits of coal as a renewable resource[592];

(c) Automobile and other vehicles industries: $1.686 billion[593];

(d) Natural gas industry: $1.969 billion[594];

(e) Nuclear industry: $1.293 billion[595];

(f) Electricity industry: $ 2.438 billion[596];

(g) Building industry: $271 million[597];

(h) Timber owners benefitting from capital gains rates: $129 million[598];

(i) Agri-biodiesel: $107 million plus

(j) Ethanol industry: $224 million[599];

(k) Consumers with energy-efficient housing: $587 million[600];

(l) Renewable energy providers, treating production and desulphurization of coal as coal industry benefits: $2.970 billion[601];

(m) Investors and utilities—CREB bond financing for electricity from renewable sources: $493 million;

(n) Appliance manufacturers: $190 million; and

(o) Transport industry: $542 million.[602]

These numbers are necessarily controversial. They are based on revenue estimates that are inherently uncertain. Some taxes can be shifted to consumers, some estimates are bundled (such as the inclusion of coal as a renewable resource), and there are other taxes that are not considered. Still, one feature of the big picture is clear: everyone came to the trough and the focus was not on true renewable energy.

This recent legislation is not impressive, but also not surprising in light of the Byzantine nature of the American political system.[603] Perhaps the most obvious feature is that, taken as a whole, the legislation consists entirely of carrots without a single stick. The only exception is the appropriate reinstatement of the preexisting LUSTTF and Oil Spill Liability Trust financing rates, which merely reflect prior tax policy. The extreme examples are tragic-comic, such as the release of limousines from the gas guzzler tax and a tax credit for adding some plant material to a coal-fired generator. Others are inexcusable, such as retroactive tax credits which are no more than disguised checks from the Treasury, and expanding the small refiner exception for claims of percentage depletion for oil and gas on top of the existing AMT exemption for oil and gas depletion in excess of basis, all in the midst of an oil boom. Others seem dominated by industry interests, such as limiting the credits for advanced propulsion for vehicles to new manufactured ones, as opposed to those that were retrofitted. Giving everyone something is good politics, but rarely good public policy.

Another key feature is the failure to harness broad market forces to drive firms and consumers. For example, an oil import fee could stabilize the price of petroleum at not less than a floor amount (say $60 per barrel indexed to inflation), thereby giving oil companies, alternative energy providers, and the automobile industry a steady price signal that they could factor into their long-term planning. Instead, Congress has provided a hodgepodge of incentives, with narrow bore and often conflicting justifications, including improving air quality, supporting rural economies, and enhancing energy independence. The result is good politics, since every constituent likes a tax subsidy, but no effort to implement even a ghost of a polluter pays principle or any assurance of follow-up studies to determine the effectiveness of the changes in the tax law. The result is a cacophony.

That leads to the next point. There is no fundamental framework which could generate a serious hierarchy for ranking the value of tax giveaways. For example, it should be possible to develop a set of factors, such as energy security, employment, global warming avoidance, health benefits, and so forth that Congress can apply to evaluate every tax incentive or disincentive in the energy and environment sphere.

590. White House 2008 Budget, *supra* note 9, Item 10.

591. Refueling stations, marginal production credit, Alaska credit, percentage depletion expanded, diesel-water emulsions, refinery depreciation, low sulfur refining, nonconventional fuel credit as general business credit, brownfields expansion.

592. Advanced project credits, coke credit, not counting refined coal and Indian coal characterized in Code as renewables but undifferentiated in multibillion renewables credit.

593. Alternative vehicles credits.

594. This consists of pipeline depreciation, grading write-offs.

595. Accounting changes and electricity output credit.

596. Pollution control facilities, depreciation, and special net operating loss deduction.

597. Accelerated deprecation and building credit.

598. Reforestation deductions and capital gains from sales.

599. Small producer credit, extension of income tax credit, cellulosic, disregarding lost excise taxes $19 billion approximately from White House Budget in lost revenues.

600. Efficiency credit for homes.

601. Treating refined coal and Indian coal as renewable resources. Includes fuel cells and microturbines.

602. Limousines, truck excise tax, exempt facility bonds.

603. The legislative history is, as usually the case, purely technical in nature, providing no serious insight into what Congress was really wrestling with, and it avoids setting any priorities. *See, e.g.*, 151 CONG. REC. S9117 (July 27, 2005), containing the Technical Explanation of H.R. 6.6, quoted above. This obscurity makes it almost impossible to get to the bottom of the legislation without the benefit of a small army of researchers.

The new legislation dodges global warming. Only one minor provision—partially conditioning credits for advanced coal projects on using technologies that include sequestration of greenhouse gases as a factor in allocating credits for advanced coal projects—directly addresses the issue. Much of the legislation pulls in the opposite direction. For example, the petroleum industry gets a 50% immediate write-off for building a new oil refinery, expanded depletion deductions, a new credit for marginal production, and faster depreciation of gas pipelines and rights of way, inviting further capital flows in favor of oil and gas.

There is a dilemma here for the coal industry, even though it captured a huge share of the tax preferences in the later laws, including astounding credits for providing clean coal. Highly advanced coal gasification processes are clearly the best technologies from the point of view of climate change and at the same time take advantage of America's huge coal supplies with a vital promise of energy independence, yet if a carbon tax is ultimately enacted, gasification may turn out to be cheap. In the meantime, power producers have to move forward, drawn by credits that encourage electricity output that produces vast amounts of CO_2, such as the 15% credit for advanced coal-based technology. This credit encourages cleaner, more efficient usage of coal, but exposes the firm to a later carbon tax. At the same time, to the extent power companies select this technology, their political resistance to a carbon tax will be all the fiercer in the future. It is not a good picture. One solution would be to increase the spread of the coal power plant credits, increasing credits for implementing the best technology and dropping them for inferior technologies. The result could be a serious gain with respect to energy independence and the slowing of global warming.

Another problem is the lack of precise, meaningful explanations for the legislation. For example, why is solar electric power set so far down the list of tax beneficiaries when it is so clearly a supremely desirable technology? The public deserves an explanation. Worse, there is no coherent system to evaluate whether the legislation effects changes. For example, does expanding the availability of percentage depletion for oil and gas really result in more production? As everyone in the tax field is aware, the lack of follow-up studies is rampant in the field of tax legislation. It is unacceptable, as is the occasional lack of refinement of revenue estimates, such as the failure to isolate the revenue losses associated with genuine use of renewable resources to produce electricity as compared to the subsidies passing for extracting clean coal. The best approach of all would be to include revenue estimates directly in the legislative history of each tax law change, as opposed to placing them in appendices. Readers could then immediately gauge the revenue implication of each initiative.

Another concern is the chronic pattern of sunsets and reinstatements of legislation. How can Congress expect that a tax benefit will tease out a new technology and offer time to facilitate economies of scale if the time horizon of the tax benefit is shrouded in uncertainty? On the other hand, it is an unfortunate truth that it is generally easier for legislators to extract money for constituents by getting them tax benefits because tax benefits are far less visible than direct grants, hence subject to less scrutiny and criticism. Getting Congress to enact a favorable tax law subject to a sunset can be a useful strategy because it opens the door to later pressing to extend that law just before sunset.