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

Richard A. Westin

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

Richard A. Westin\*

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As of this writing oil prices are well above \$50 per barrel, global warming has become an increasing subject of discussion and the politics of the Middle East are disturbingly unstable. Due to the United States' dependence on Middle Eastern oil an oil cutoff could deeply imperil the US economy. The past two years have witnessed significant federal tax legislation, a good part of which is directed towards energy independence and the environment, without mentioning the dreaded words "global warming." The first piece of major legislation is the American Jobs Creation act of 2004,<sup>1</sup> and the second is the Energy Tax Incentives Act of 2005 (referred to as the "2005 Energy Tax Act").<sup>2</sup> The third is the Safe, Accountable, Flexible, Efficient Transportation Equity

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1. Pub. L. No. 108-357 [H.R. 4520] Oct. 22, 2004, 118 Stat. 1418. Hereinafter section references are to the Internal Revenue Code of 1986, unless otherwise indicated.

2. Pub. L. No. 109-58 August 8.

Act: A Legacy for Users (referred to as the “2005 Transportation Act”).<sup>3</sup> On top of that the Gulf Opportunity Zone Act of 2005,<sup>4</sup> the Tax Increase Prevention and Reconciliation Act of 2005<sup>5</sup> and the Tax Relief and Health Care Act of 2006<sup>6</sup> amended the foregoing Acts in modest ways.<sup>7</sup> At the heart of the legislation lie several themes: (1) the need for independence from foreign oil and gas sources; (2) a desire for more domestic production to meet the growing demand for oil and gas, and; (3) 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 what general direction Congress is moving in. It is not a commentary on whether the entire system is right or wrong and it is not entirely comprehensive. It is necessarily selective; because so many tax issues affect energy and the environment, making a complete catalog is unrealistic meaning that some arbitrary choices had to be made. For example, the tax deferrals allowed in connection with restructuring the energy industry were ignored.<sup>8</sup>

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 case revenues estimates from Congress and excellent staff on the Joint Committee on Taxation the White House Tax Expenditures Budget<sup>9</sup> that was delivered on February 5, 2000,<sup>10</sup> are included and are followed by a brief policy discussion.

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3. Pub. L. No. 109-59, August 10.

4. Pub. L. No. 109-135, Dec. 21, 2005, H.R. 4440.

5. Pub. L. No. 109-222, H.R. 4297.

6. Pub. L. No. 109-432, H.R. 6111, Dec. 20 Tax Relief and Health Care Act of 2006 [henceforth “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 Staff Of 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 § 451(i).

9. The Budget Document describes tax expenditures as follows on the first page of the document: The Congressional Budget Act of 1974 (Public Law 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 which 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.”

10. Tax Expenditures, White House Fiscal 2008 Budget, February 5, 2007, reproduced in 2007 Tax Notes Today 25-14, Tax Analysts (February 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 thirty percent credit for a variety of advanced energy-saving initiatives for periods before 2009.<sup>11</sup> 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.<sup>12</sup> This is a new credit and is allowed for amounts spent on “qualified photovoltaic property,”<sup>13</sup> “qualified solar water heating property,”<sup>14</sup> and “qualified fuel cell property”<sup>15</sup> used in personal homes. It is a non-refundable credit—meaning it can reduce one’s taxes to zero, but not provide a subsidy beyond what it is available for property placed in service<sup>16</sup> after 2005 and before 2009.

The annual credit is allowed for thirty percent 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 not over \$600), 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.<sup>17</sup> Expenditures for labor, piping and wiring are included when

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11. The original expiration date was extended from 2008 to 2009 by § 206 of the 2006 Act.

12. Section 25D as added by the Energy Policy Act of 2005 § 1335.

13. The term “qualified photovoltaic property expenditure” means an expenditure for property which 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. § 25D(d)(2). It can include solar panels that form part of a roof. *Id.*

14. 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* § 25D(d)(1).

15. The term “qualified fuel cell property expenditure” means an expenditure for qualified fuel cell property (as defined in section 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 section 121) by the taxpayer. *See* § 25D(d)(3).

16. 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 (4<sup>th</sup> Cir. 1965) (depreciation available when placed in service, meaning ready for assigned use).

17. Section 25D(b). An average house uses one kilowatt [www.ceert.org.faq.html](http://www.ceert.org.faq.html). Fuel cells for houses are sold by at least one manufacturer.

calculating the credit.<sup>18</sup> To qualify for the credit, the property cannot be used to heat swimming pools or hot tubs.<sup>19</sup> Also, in order for a solar water heating property expenditure to qualify it must be certified for performance by either the non-profit Solar Rating Certification Corporation or a comparable entity endorsed by the government of the state where the property is installed.<sup>20</sup>

Expenditures are considered made at the completion of the original installation or, if it is in connection with the structure's construction or reconstruction, when the taxpayer's original use of the structure (as modified) began.<sup>21</sup>

The credit declines to the extent the taxpayer's use of the item is for business purposes. If over twenty percent of its use is for business purposes, then only the non-business portion can be used to calculate the credit. If it is twenty percent or less, the taxpayer can claim the credit for the entire expenditure.<sup>22</sup> 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.<sup>23</sup> Expenditures made from "subsidized energy financing" are not creditable.<sup>24</sup> 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.<sup>25</sup>

This credit will not affect any carry forward of certain unused personal credits, namely the adoption credit,<sup>26</sup> the mortgage credit certificate credit,<sup>27</sup> and the credit for first-time homebuyers in Washington, D.C.<sup>28</sup>

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18. Section 25D(e)(1).

19. Section 25D(e)(3).

20. Section 25D(b)(2).

21. Section 25D(e)(8). *See* § 24D(e)(4), as amended by § 402(m)(1) of the 2005 Gulf Opportunity Zone Act, for the treatment of units with multiple occupants.

22. 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). § 25D(e)(7); § 25D(e)(4).

23. Section 25D(e)(5).

24. 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* § 48(a)(4)(C).

25. Section 25D(f).

26. Section 23(c) as amended by 1335(b)(1) of the Energy Policy Act of 2005.

27. Section 25(e)(1)(C) as amended by 1335(b)(2) of the Energy Policy Act of 2005.

28. § 1400C(d) as amended by 1335(b)(3) of the Energy Policy Act of 2005. 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. § 25D(b)(1) as amended by Gulf Opportunity Zone Credit § 402(i)(1). It applies to property placed in service after 2005.



**Revenue Effects:** The Joint Committee on Taxation has estimated the revenue impact as follows: no estimate for 2005; loss of two million dollars in 2006; loss of thirteen million dollars in 2007; loss of sixteen million dollars in 2008; and no estimates for 2009-2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is estimated at thirty one million dollars and the same for 2005-2015.<sup>29</sup> 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 as follows,<sup>30</sup> showing losses in millions of dollars:

Individuals

2006	2007	2008	2009	2010	2011	2012	2008-12
10	10	10	--	--	--	--	10

**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, pollution avoidance and help with climate change. 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.

2. Credit for Certain Non-Business Energy Property Installed at Home

**Summary:** There is a small temporary credit for energy efficiency improvements added to existing homes. This ten percent 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, or oil furnaces or hot water boilers, and other energy efficient property. The credit goes to consumers as to their primary residences in the United States and is capped at five hundred dollars per taxpayer.

The Energy Policy Act of 2005 granted individual taxpayers a new

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29. Staff Of Joint Comm. On Taxation, Estimated Budget Effects Of The Conference Agreement For Title XIII Of H.R. 6, The "Energy Tax Incentives Act Of 2005," As Passed By The Senate On July 27, 2005, JCX-59-05 (Provision C., 5) (July 27, 2005).

30. White House 2008 Budget Item 30.

personal tax credit known as the non-business energy property credit<sup>31</sup> for the installation of “qualified energy efficient property”<sup>32</sup> in their principal residences. Up till then, no credit was allowed for existing homes. The new credit is only available for new property placed in service in the years 2006 and 2007.

The credit has several parts,<sup>33</sup> namely (1) ten percent of the amount paid or incurred for the installation of energy efficient improvements during the year, plus (2) a credit of fifty dollars for any “advanced main air circulating fan,” (3) one hundred and fifty dollars for any “qualified natural gas, propane, or oil furnace or hot water boiler,” and (4) three hundred dollars for any item of “energy-efficient building property,”<sup>34</sup>

31. Section 25C as added by the Energy Policy Act of 2005 § 1333(a).

32. “Qualified energy efficiency improvements” means any energy efficient building envelope component which meets the prescriptive criteria for such component established by the 2000 International Energy Conservation §, as such § (including supplements) is in effect on the date of the enactment of this section (or, in the case of a metal roof with appropriate pigmented coatings which 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 section 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.

§ 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.

25C(c)(2).

33. Section 25C(a) and (b)(1) and (b)(3).

34. 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,

basically 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 than two percent of the total energy use of the furnace.<sup>35</sup> 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 ninety-five.<sup>36</sup>

The total credit cannot exceed five hundred dollars for all taxable years and of that not more than two hundred dollars can be for expenditures attributable to windows.<sup>37</sup> The qualified energy property must meet quality and performance standards<sup>38</sup> and any certification requirements that may be set by Treasury Regulations. The applicable standards are those in effect on completion of construction, reconstruction, or erection of the property, or when 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.<sup>39</sup> 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.<sup>40</sup> If more than twenty percent of an item’s use is for business purposes, then only the part that is used for non-business purposes is creditable, but if the item’s business use is not over twenty percent then the taxpayer can claim the credit for the entire expenditure.<sup>41</sup> If the credit is allowed for an expenditure, the basis increase of the property that would otherwise result declines by the

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(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.

§ 25C(d)(3).

35. Section 25C(d)(5).

36. Section 25C(d)(4). The law does not explain what this efficiency rating refers to.

37. Section 25C(b)(1)-(2).

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

39. 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. § 25C(d).

40. Section 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.

41. Section 25C(e)(1). These rules are similar to those that apply under § 25D(e)(7) as amended by § 1335 of the Energy Policy Act of 2005.

amount of the credit that is allowed.<sup>42</sup>

**Revenue Effects:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: Loss of fifty-five million dollars in 2006; loss of two hundred and seventy-five million dollars in 2007; loss of two hundred and twenty-five million dollars in 2008. Total estimated revenue losses as a result of this provision in the years 2005-2010 is estimated at \$556 million.<sup>43</sup> The White House figures are comparable but distributed over different years.<sup>44</sup>

**Comment:** Congress evidently believes this small credit will stimulate purchases amounting to about two dollars per citizen. It 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 consumers' decisions to 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 washer and refrigerators are briefly entitled to tax credits for their production.

This temporary credit is only available to makers of these classes of appliances. The 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

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42. Section 25C(f).

43. Joint Committee 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-59-05 (Provision C-3), July 27, 2005.

44. White House 2008 Budget Item 28, in millions of dollars: \$230 loss in '06, \$380 loss in '07, \$150 loss in '08 and \$150 loss in '012.

energy conservation standards promulgated by the Department of Energy 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.<sup>45</sup>

There are further intricacies not worth detailing here.

**Revenue Effects:** The Joint Committee anticipated losses of one hundred and seventeen dollars in 2006 and sixty three million dollars in 2007.<sup>46</sup> The White House reports the following anticipated losses in millions of dollars:<sup>47</sup>

Corporations							
2006	2007	2008	2009	2010	2011	2012	2008-12
120	80	--	--	--	--	--	--

**Comment:** Why manufacturers would not manufacture energy-efficient appliances anyway is unclear, given that they can provide dollars and cents explanation of 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

45. S. Conf. Rep. 108-54, S. Rep. No. 54, 108th Cong., 1st Sess. Pp. 28-29 (May 23, 2003) to accompany S.1149.

46. Joint Committee 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 A-9), July 27, 2005.

47. White House 2008 Budget Item 29.

## Buildings

**Summary:** The Code now allows a deduction for the cost of “energy efficient commercial building property” placed in service during the tax year.<sup>48</sup> The Code grants a maximum deduction of \$1.80 per square foot, minus any deductions taken in prior years.<sup>49</sup> The deduction is only available for property installed in 2006, 2007, and 2008.<sup>50</sup>

A threshold to the availability of this deduction is that the property fall under the definition of “energy efficient commercial building property.”<sup>51</sup> 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<sup>52</sup>, that is part of interior lighting, hot water systems, heating, cooling, ventilation, or the building envelope.<sup>53</sup> 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<sup>54</sup> and meet the certification requirements to be promulgated by the Treasury Secretary.<sup>55</sup> 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 an individual component that works to reduce the total annual energy and power costs of the building.<sup>56</sup> 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.<sup>57</sup> There is also a special section devoted to lighting systems, but only under the partial deduction provision.<sup>58</sup>

**Revenue Effects:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: no estimate for 2005; loss of eight one million dollars in 2006; loss of one hundred and forty one million dollars in 2007; loss of forty eight million dollars in

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48. See I.R.C. § 179D(a) (2006).

49. See *id.* § 179D(a)(b).

50. See *id.* § 179D(h).

51. See *id.* § 179D(c)(1).

52. 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).

53. See *id.* § 179D(c)(1).

54. See *id.*

55. See *id.* § 179D(d)(6).

56. See *id.* § 179D(d).

57. See *id.* § 179D(d)(1)(A)(ii).

58. See *id.* § 179D(f).

2008; gain of six million dollars in 2009; gain of five million dollars in 2010; gain of five million dollars in 2011; gain of four million dollars in 2012; gain of four million dollars in 2013; gain of three million dollars in 2014; and gain of three million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is estimated at \$263 million and \$279 million for 2005-2015.<sup>59</sup> The White House estimate of revenue loss is as follows in millions of dollars<sup>60</sup>

Allowance of deduction for certain energy efficient commercial building property:

Corporations							
2006	2007	2008	2009	2010	2011	2012	2008-12
60	140	130	70	20	-10	-10	200

  

Individuals							
2006	2007	2008	2009	2010	2011	2012	2008-12
20	50	40	20	10	--	--	70

**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 an ore 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 building energy efficient homes located in the United States.<sup>61</sup> 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 fifty percent or greater reduction in energy usage or

59. Staff of Joint Committee on Taxation, Estimated Budget Effects of the Conference Agreement for Title XIII of HR 6, "The Energy Tax Incentive Act of 2005," as passed by the Senate on July 17, 2005, JCX 59-05 (Provision C-1) (July 27, 2005).

60. White House 2008 Budget Item 26.

61. Section 45L(g), as amended by 2006 Act § 205.

\$1,000 for a thirty percent or greater (but less than fifty percent) reduction in energy usages. The 2006 Act extended the credit for another year so as to apply to qualified new energy efficient homes acquired before 2009. It can extend to vacation homes, trailers, condos, co-ops and other habitable properties.

**Revenue Effects:** The Joint Committee on Taxation estimated the effects of the credit as follows: 2006 loss of six million dollars; 2006 loss of six million dollars; 2007 loss of nine million dollars; 2008 loss of five million dollars; 2009 loss of three million dollars; 2010 loss of three million dollars; 2011 loss of two million dollars; 2012 loss of two million dollars; 2013 loss of one million dollars; 2014-2015 negligible loss; 2005-2015 loss of twenty-eight million dollars.<sup>62</sup> According to the White House the revenue losses are as follows, in millions of dollars:<sup>63</sup>

Credit for construction of new energy efficient homes

Corporations

2006	2007	2008	2009	2010	2011	2012	2008-12
10	20	20	20	10	--	--	50

Individuals

2006	2007	2008	2009	2010	2011	2012	2008-12
--	--	10	--	--	--	--	10

**Commentary:** Once again, the revenue losses are modest, but it is not clear why this provision is necessary because presumably shrewd buyers will pay more for a more efficient home.

62. Joint Committee on Taxation, *Estimated Budget Effects of The Conference Agreement For Title XIII. Of H.R. 6, The "Energy Tax Incentives Act of 2005,"* JCX-59-05 (Provision B., 8), July 27, 2005.

63. White House 2008 Budget Item 27.



## 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.<sup>64</sup> This credit has four different components, the new qualified fuel cell motor vehicle credit, the new advanced lean burn credit, the new qualified hybrid motor vehicle credit, and the new qualified alternative fuel motor vehicle credit. The notably missing vehicle 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 two billion dollars seems 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.<sup>65</sup> 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 truck, received a certificate that it meets or exceeds the Bin 5 Tier II emission levels established in EPA regulations under § 202(i) of the Clean Air Act<sup>66</sup>, and (3) 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 its weight class. For the tax year, the credit is:

(a) \$8,000 if the GVWR of the vehicle is no more than a hefty 8,500 pounds, 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 pounds but no more than 14,000 pounds,

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64. Section 30B as added by § 1341(a) of the Energy Policy Act of 2005.

65. Section 30B(b)(3).

66. 42 U.S.C. 7521 *et seq.*

(c) \$20,000 if the GVWR of the vehicle (a truck or bus by inference) is more than 14,000 pounds but no more than 26,000 pounds, and

(d) \$40,000 if the GVWR of the vehicle is more than 26,000 pounds.

The amount of 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 truck. The fuel efficiency is what is often referred to in the automobile industry as the rated fuel economy. The 2002 model year city fuel economy is the estimated lifetime fuel savings of a qualifying vehicle compared to a comparable 2002 model year vehicle.<sup>67</sup> The credit for fuel economy is as follows:

(a) \$1,000 if the vehicle achieves one hundred and fifty percent but less than one hundred and seventy five percent of the “2002 model year city fuel economy” (2002 MYCFE),<sup>68</sup> as that term is defined in the tables below,

(b) \$1,500 if the vehicle achieves one hundred and seventy five percent but less than two hundred percent of the 2002 MYCFE,

(c) \$2,000 if the vehicle achieves two hundred percent but less than two hundred and twenty five percent of the 2002 MYCFE,

(d) \$2,500 if the vehicle achieves two hundred and twenty five percent but less than two hundred and fifty percent of the 2002 MYCFE,

(e) \$3,000 if the vehicle achieves two hundred and fifty percent but less than two hundred and seventy five percent of the 2002 MYCFE,

(f) \$3,500 if the vehicle achieves two hundred and seventy five percent but less than three hundred percent of the 2002 MYCFE, and

(g) \$4,000 if the vehicle at least achieves three hundred percent of the 2002 MYCFE.<sup>69</sup>

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67. 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. See MISSISSAUGA NEWS, December 13, 2006, section 4. It uses a Ballard fuel cell.

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

69. Section 30B(b)(2)(A).

The 2002 MYCFE for a passenger car<sup>70</sup> is:

If vehicle inertia weight class <sup>71</sup> is:	The 2002 model year city fuel economy is:
1,500 or 1,750 lbs . . . . .	45.2 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 truck<sup>72</sup> is:

If vehicle inertia weight class is:	The 2002 model year city fuel economy is:
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

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70. Section 30B(b)(2)(B)(i).

71. The term "vehicle inertia weight class" has the same meaning as when defined in regulations prescribed by the Administrator of the Environmental Protection Agency for purposes of the administration of title II of the Clean Air Act (42 U.S.C. 7521 et seq.). § 30B(b)(2)(C).

72. Section 30B(b)(2)(B)(ii).

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 that is placed in service after 2005<sup>73</sup> and does not apply to any property bought after 2014.<sup>74</sup> As in all cases, Congress may later extend 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.<sup>75</sup> An "advanced lean burn technology motor vehicle" is a passenger automobile or a light 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 one hundred and twenty five percent of the 2002 model year city fuel economy<sup>76</sup> (2002 MYCFE), and (d) meets other conditions. The amount of the credit is much lower than for a fuel cell vehicle.

These other conditions include a requirement for 2004 and later model vehicles that they have received a certificate that the vehicle meets or exceeds:

(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<sup>77</sup> 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. . . .<sup>78</sup>

A qualifying advanced lean burn technology vehicle must also be new, have been acquired for use or lease and not for resale, and made by a manufacturer must have made the vehicle.<sup>79</sup>

The credit is as follows:

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73. Section 1341(c) of the Energy Policy Act of 2005.

74. Section 30B(j)(1). It is not clear to the author how one converts fuel cell mileage efficiency to gasoline mileage efficiency.

75. Section 30B(c).

76. A vehicle's 2002 MYCFE is determined on a gasoline gallon equivalent basis as it is determined by the Administrator of the Environmental Protection Agency using the tables provided in § 30B(b)(2)(B). § 30B(c)(2)(A)(ii).

77. 42 U.S.C. §7521 *et seq.*

78. Section 30B(c)(3)(A).

79. Section 30B(c)(3)(B)-(D).

- (a) four hundred dollars for a vehicle that achieves one hundred and twenty five percent but less than 150 percent 2002 MYCFE,
- (b) eight hundred dollars for a vehicle that achieves one hundred and fifty percent but less than one hundred and seventy five percent 2002 MYCFE,
- (c) \$1,200 for a vehicle that achieves one hundred and seventy five percent but less than two hundred percent 2002 MYCFE,
- (d) \$1,600 for a vehicle that achieves two hundred percent but less than two hundred and twenty five percent 2002 MYCFE,
- (e) \$2,000 for a vehicle that achieves two hundred and twenty five percent but less than two hundred and fifty percent 2002 MYCFE, and
- (f) \$2,400 for a vehicle that achieves at least two hundred and fifty percent.<sup>80</sup>

The credit may be further increased by a conservation credit amount that is determined based on a vehicle's "lifetime fuel savings."<sup>81</sup> Where a vehicle's lifetime fuel savings is:

- (a) at least 1,200 gallons but less than 1,800 gallons, the credit is two hundred and fifty dollars,
- (b) at least 1,800 gallons but less than 2,400 gallons, the credit is five hundred dollars,
- (c) at least 2,400 gallons but less than 3,000 gallons, the credit amount is seven hundred and fifty dollars, and
- (d) at least 3,000 gallons the credit is \$1,000.<sup>82</sup>

The credit is thus the sum of the amount determined for fuel efficiency and additional amount for conservation. The credit is

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80. Section 30B(c)(2)(A)(i).

81. 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.

§ 30B(c)(4).

82. Section 30B(c)(2)(B).

available for vehicles placed into service after 2005<sup>83</sup> and before December 31, 2010.<sup>84</sup>

#### 4. New Qualified Hybrid Motor Vehicle Credit

The third component of the new alternative motor vehicle credit is the “new qualified hybrid motor vehicle”<sup>85</sup> credit. A “qualified hybrid motor vehicle” is a vehicle that draws propulsion energy from onboard sources of stored energy which includes both an internal combustion or heat engine using consumable fuel<sup>86</sup> and a rechargeable energy storage system (i.e., battery).<sup>87</sup> 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 Clean Air Act and must meet or exceed the equivalent qualifying California low emission vehicle standard<sup>88</sup> for that make and model year plus:

(a) for vehicles with a gross vehicle weight rating (GVWR) of 6,000 pounds or less, the Bin 5 Tier II emission standard established in EPA regulations under § 202(i) of the Clean Air Act<sup>89</sup> must be met, or

(b) for vehicles with a GVWR of greater than 6,000 pounds but less than 8,500 pounds, the Bin 8 Tier II emission standard.<sup>90</sup>

Apparently to prevent granting credits for minor battery power, qualifying hybrid motor vehicle must also have a maximum available power<sup>91</sup> from the rechargeable energy storage system of:

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83. Section 1341(c) of the Energy Policy Act of 2005.

84. Section 30B(j).

85. Section 30B(d).

86. The term “consumable fuel” means any solid, liquid, or gaseous matter which releases energy when consumed by an auxiliary power unit. § 30B(d)(3)(B).

87. Section 30B(d)(3)(A)(i).

88. Section 243(e)(2) of the Clean Air Act (42 U.S.C. 7521 *et seq.*).

89. 42 U.S.C. § 7521 *et seq.*

90. Section 30B(d)(3)(A)(ii).

91. 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

- (a) at least four percent for passenger automobiles and light trucks,
- (b) at least ten percent for vehicles with a GVWR of more than 8,500 pounds but no more than 14,000 pounds, or
- (c) fifteen percent for vehicles with a GVWR in excess of 14,000 pounds.<sup>92</sup>

If the vehicle is not a passenger automobile or light truck, it must have an internal combustion or heat engine that has received a certificate of conformity under the Clean Air Act for meeting the emission standards set in the regulations prescribed by the Administrator of the EPA for model years 2004 through 2007 diesel heavy duty engines or ottocycle heavy duty engines.<sup>93</sup>

In all cases the taxpayer must be the vehicle's first user,<sup>94</sup> the vehicle must have been acquired for use or lease and not for resale by the taxpayer,<sup>95</sup> and the vehicle must have been made by a manufacturer.<sup>96</sup> A "qualified hybrid motor vehicle" does not include a vehicle that has a GVWR of less than 8,500 pounds if that vehicle is not a passenger automobile or light truck.<sup>97</sup> This apparently excludes vehicles like ATV's.

The credit for a passenger automobile or light truck with a GVWR of no more than 8,500 pounds is the sum of (a) a fuel economy credit,<sup>98</sup> meaning the amount that would be determined for an advanced lean burn technology motor vehicle (treated as if the vehicle were an advance lean burn technology motor vehicle), plus (b) a conservation credit,<sup>99</sup> meaning the amount of conservation credit which would be allowed for the vehicle treating the vehicle under the hybrid vehicle rules as if it were an advance lean burn technology motor vehicle.<sup>100</sup> 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.

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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.

§ 30B(d)(3)(C).

92. Section 30B(d)(3)(A)(iii).

93. Section 30B(d)(3)(A)(iv).

94. Section 30B(d)(3)(A)(v).

95. Section 30B(d)(3)(A)(vi).

96. Section 30B(d)(3)(A)(vii).

97. Section 30B(d)(3)(A). This cuts out motorcycles and presumably ATV's.

98. Section 30B(d)(2)(A)(i). See § 30B(c)(2)(A).

99. Section 30B(d)(2)(A)(ii).

100. Section 30B(c)(2)(B).

The credit for other motor vehicles that are qualified hybrid motor vehicles is the amount equal to the “applicable percentage” of the “qualified incremental hybrid cost” of the vehicle.<sup>101</sup> The applicable percentage is:

- (a) twenty percent if the vehicle gets an increase in city fuel economy relative to a comparable vehicle<sup>102</sup> of at least thirty percent but not over forty percent,<sup>103</sup>
- (b) thirty percent if the vehicle achieves an increase of at least forty percent but not over fifty percent,<sup>104</sup> and
- (c) forty percent if the vehicle achieves an increase of at least fifty percent.<sup>105</sup>

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 pounds,
- (b) \$15,000 if the vehicle has a GVWR of more than 14,000 pounds but not over 26,000 pounds, and
- (c) \$30,000 if the vehicle has a GVWR of over 26,000 pounds.<sup>106</sup>

The manufacturer certifies the vehicle’s qualified incremental hybrid cost, using IRS guidance. This IRS guidance will provide procedures and methods for calculating fuel economy savings and incremental hybrid costs.<sup>107</sup>

For a new qualified hybrid motor vehicle that is sold during the “phase out period,” only the “applicable percentage” of the credit is allowed.<sup>108</sup> The phase-out turns on the sale of a particular manufacturer’s hybrids cumulatively. The phase out period is “the

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101. Section 30B(d)(2)(B)(i).

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

103. Section 30B(d)(2)(B)(ii)(I).

104. Section 30B(d)(2)(B)(ii)(II).

105. Section 30B(d)(2)(B)(ii)(III).

106. Section 30B(d)(2)(B)(iii).

107. Section 30B(d)(2)(B)(v).

108. Section 30B(f)(1).



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.”<sup>109</sup> The applicable percentage is

- (a) fifty percent for the first two calendar quarters of the period,
- (b) twenty five percent for the third and fourth calendar quarters of the period, and
- (c) zero percent for each calendar quarter after.<sup>110</sup> Toyota and Lexis have already reached the limit.

The credit is applicable to any property that is placed into service after 2005.<sup>111</sup> The credit for hybrid vehicles that are passenger automobiles or light trucks will only apply to property that is purchased before December 31, 2011.<sup>112</sup> For all other motor vehicles that qualify as hybrid vehicles, the credit will only apply to purchases before 2010.<sup>113</sup>

##### 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”<sup>114</sup> 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,<sup>115</sup> and that is acquired for use or lease, but not for resale by the taxpayer.<sup>116</sup> An alternative fuel is compressed natural gas, liquefied natural gas, liquefied petroleum gas, hydrogen, and any liquid that is at least 85 percent methanol.<sup>117</sup>

The credit allowed equals the “applicable percentage” of the “incremental cost” of the vehicle.<sup>118</sup> The applicable percentage for a new

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109. Section 30B(f)(2).

110. Section 30B(f)(3). *Automotive World*, August 23, 2006.

111. Section 1341(c) of the Energy Policy Act of 2005.

112. Section 30B(j).

113. Section 30B(j)(2).

114. Section 30B(e).

115. Section 30B(e)(4)(A)(i).

116. Section 30B(e)(4)(A).

117. Section 30B(e)(4)(B). A methanol car seems improbable except for a race car.

118. Section 30B(e)(1).

qualified alternative fuel vehicle is:

(a) fifty percent,<sup>119</sup> plus

(b) thirty percent if the vehicle has (1) received a certificate of conformity through the Clean Air Act<sup>120</sup> and the vehicle meets or exceeds the most stringent standard available (other than zero emissions) under the Clean Air Act for the make and model year of the vehicle,<sup>121</sup> 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<sup>122</sup> for that make and model.<sup>123</sup>

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.<sup>124</sup> Incremental costs cannot exceed:

(a) \$5,000 if the GVWR of the vehicle is not more than 8,500 pounds,<sup>125</sup>

(b) \$10,000 if the gross vehicle weight rating (GVWR) of the vehicle is over 8,500 pounds but no more than 14,000 pounds,<sup>126</sup>

(c) \$25,000 if the GVWR of the vehicle is more than 14,000 pounds but not over than 26,000 pounds,<sup>127</sup> and

(d) \$40,000 if the GVWR of the vehicle is over 26,000 pounds.<sup>128</sup>

A reduced credit is also available for “mixed-fuel vehicles” placed in service during the tax year.<sup>129</sup> 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 (weight class) of more than 14,000 pounds, that

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119. Section 30B(e)(2)(A).

120. 42 U.S.C. § 7521 *et seq.*

121. Section 30B(e)(2)(B)(i).

122. As enacted under a waiver granted by § 209(b) of the Clean Air Act (42 U.S.C. 7521 *et seq.*).

123. Section 30B(e)(2)(B)(ii).

124. Section 30B(e)(3).

125. Section 30B(e)(3)(A).

126. Section 30B(e)(3)(B).

127. Section 30B(e)(3)(C).

128. Section 30B(e)(3)(D).

129. Section 30B(e)(5)(A).

(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 (1) an order of conformity under the Clean Air Act or (2) 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) and is for use or lease, but not resale by the taxpayer.<sup>130</sup>

The reduced credit for mixed-fuel vehicles is: (1) seventy percent 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,"<sup>131</sup> and (2) ninety percent of the credit that would have been allowed for a "90/10 mixed-fuel vehicle."<sup>132</sup> A 75/25 mixed-fuel vehicle is one that operates on least seventy five percent alternative fuel and not over twenty five percent petroleum-based fuel.<sup>133</sup> A 90/10 mixed fuel uses at least ninety percent alternative fuel and not over ten percent petroleum-based fuel.<sup>134</sup> The credit is effective for property that is placed in service after August 8, 2005<sup>135</sup> and ends for any property bought after 2010.<sup>136</sup>

#### 6. Other Rules for the Alternative Motor Vehicle Credits

A taxpayer can always elect not to take the credit,<sup>137</sup> but the taxpayer must reduce the basis of the property by the credit allowed.<sup>138</sup> 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).<sup>139</sup> The rest of the credit is allowable to the extent of the excess of the regular tax<sup>140</sup> (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

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130. Section 30B(e)(5)(B)(i)-(v).

131. Section 30B(e)(5)(A)(i).

132. Section 30B(e)(5)(A)(ii).

133. Section 30B(e)(5)(C).

134. Section 30B(e)(5)(D).

135. Section 1531(c) of the Energy Policy Act of 2005.

136. Section 30B(j)(3).

137. Section 30B(h)(9).

138. Section 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.

139. Section 30B(g)(1); § 38(b)(25) as amended by § 1341(b)(1) of the Energy Policy Act of 2005.

140. As defined in § 26(b).

taxable year.<sup>141</sup> 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.<sup>142</sup>

The credit is not allowed for the portion of the cost of any property that is taken as deduction under the business property expensing election in § 179.<sup>143</sup>

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.<sup>144</sup>

For a motor vehicle that is 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 it self as long as it discloses to the entity at the time of sale the amount of the allowable credit.<sup>145</sup> No credit will be granted for vehicles used predominantly outside the US.

**Revenue Effects:** The Joint Committee on Taxation has estimated the revenue effects of these provision to be as follows: Loss of three million dollars in 2005; loss of four hundred and twenty eight million dollars in 2006; loss of three hundred and sixty two million dollars in 2007; loss of three hundred and ninety five million dollars in 2008; loss of four hundred and twenty million dollars in 2009; loss of nineteen million dollars in 2010; loss of eleven million dollars in 2011; loss of ten million dollars in 2012; loss of thirteen million dollars in 2013; loss of seventeen million dollars in 2014; and loss of eight million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is estimated at \$1.628 billion. Total estimated revenue losses as a result of this provision in the years 2005-2015 is estimated at \$1.686 billion.<sup>146</sup> The White House combined these vehicle credits and the fueling stations credit and came up with the following losses in millions of dollars (negative numbers indicate revenue gains):<sup>147</sup>

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141. Section 30B(g)(2)(B), as amended by the 2005 Gulf Opportunity Zone Act § 412(d).

142. Section 30B(h)(8).

143. Section 30B(h)(7). See § 50(b)(1).

144. Section 30B(h)(5)(B).

145. Section 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. § 30B(b)(6) as amended by the 2005 Gulf Opportunity Zone Act § 402(j). See § 50(b)(3)-(4).

146. Joint Committee on Taxation, *Estimated Revenue Effects of Title XV. of H.R. 6, The "Energy Policy Tax Incentives Act of 2005," as Passed by the Senate on June 28, 2005*, JCX-51-05 (Provision IV-1), June 28, 2005.

147. White House 2008 Budget Item 18.

## Corporations

2006	2007	2008	2009	2010	2011	2012	2008-12
40	30	--	-30	-30	-40	-50	-150

## Individuals

2006	2007	2008	2009	2010	2011	2012	2008-12
70	230	150	160	10	-10	-10	300

**Comment:** Why is the manufactured hybrid vehicle credit 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 even, by switching tanks, on natural gas.<sup>148</sup> The cost of the conversion is under \$1,000.<sup>149</sup> 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 U.S.? Surely the outcome is perverse. Finally, the cut-off date of the end of 2010 may hinder long-term planning for the credit.

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

**Summary:** There is now a thirty percent credit for installing alternative fuel dispensing pumps and equipment that dispense ethanol, compressed hydrocarbon gases and hydrogen or bio-diesel mixed with

148. CHRISTIAN SCI. MON., October 7, 2005 ed; *Brazil Fights Oil Prices with Alcohol*, <http://www.csmonitor.com/2005/1007/pSs01-woam.html>.

149. The authors 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 sells adaptor for gasoline to E-85 (85%) ethanol for \$500-\$700. <http://domesticfuel.com/?p.620> and [www.flextec.net](http://www.flextec.net) The President of Flex Tec informed the author by telephone that installation costs \$400-\$300 and that the kit allows cars to run on 100% ethanol.

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<sup>150</sup>:

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.

The 2005 Congress granted a generous credit to taxpayers who install pumps and rechargers to dispense alternative fuels and to recharge electric vehicles. Taxpayers have to hurry because it expires in 2008. The 2005 provision lets a taxpayer take a credit against his or her income tax liability for the particular tax year equal to thirty percent of the cost of any “qualified alternative fuel vehicle refueling property”<sup>151</sup> (QAFVR

150. Description and on February 21, 2006 Technical Explanation of the Conference Agreement of H.R. 6, Title XIII, “Energy Tax Incentives Act of 2005,” Joint Comm. on Tax’n, 151 Cong. Rec. S 9117 (July 27, 2005).

151. “Qualified alternative fuel vehicle refueling property” has the meaning given to such term by section 179A(d), but only with respect to any fuel—

- (A) at least 85 percent 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 section 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 percent biodiesel.

See § 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

property) 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, even for a pump or recharger at a residence up to \$1,000. The credit cannot exceed \$30,000 (evidently, at each location) for depreciable QAFVR property and the credit for any other QAFVR property cannot exceed \$1,000.<sup>152</sup> The tax basis of the QAFVR property declines by credit.<sup>153</sup>

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.<sup>154</sup> For that QAFVR property that does not fit in under the general business credit provision, the credit cannot exceed (1) the regular tax<sup>155</sup> reduced by the sum of (nonrefundable personal credits), the foreign tax credit, (electric vehicle credit), and § 30B (the alternative motor vehicle credit), over (2) the tentative minimum tax for the taxable year.<sup>156</sup>

If tax-exempt entities, governmental units or certain foreign persons or entities,<sup>157</sup> QAFVR property buy, 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; also the credit is subject to the limits applicable to the general business credit.<sup>158</sup> The credit only applies to property used in the United States.<sup>159</sup> A taxpayer can elect not to take the credit,<sup>160</sup> and if the

U.S.C. 7545), and

(B) the requirements of the American Society of Testing and Materials D6751. § 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.

152. Section 30C(b).

153. Section 30C(e)(1).

154. See § 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 produce a negative credit.

155. 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).

156. Section 30C(d)(2).

157. See § 50(b)(3) and (4).

158. Section 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.

159. Section 30C(e)(3).

property ceases to be “qualified clean-fuel vehicle refueling property” the benefit of the deduction is recaptured<sup>161</sup> as income for the year in which the recapture occurs. This credit ends as to property placed in service after 2009, except for property that relates to hydrogen, as to which the credit terminates after 2014.<sup>162</sup>

**Revenue Effects:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: Loss of two hundred and eighty three million dollars in 2006; loss of two hundred and fifty four million dollars in 2007; loss of one hundred and forty two million dollars in 2008; loss of one hundred and ten million dollars in 2009; loss of nineteen million dollars in 2010; loss of twelve million dollars in 2011; loss of eleven million dollars in 2012; loss of fifteen million dollars in 2013; loss of nineteen million dollars in 2014; and loss of ten million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is \$807 million. Estimated net revenue losses (there were gains in the years 2014-2015) as a result of this provision in the years 2005-2015 is \$874 million.<sup>163</sup>

**Comment:** Because the credit is limited to \$30,000 per year the major beneficiaries are both the huge conglomerates and independently-owned gas stations that add new pumps and chargers along into private dispensers such as cab fleets that buy fuel at wholesale. It will also help individuals who recharge electric cars and presumably gas-electric hybrids. Because there has to be an eighty-five percent or more blend of methanol, ethanol, other alcohol or either, bio-diesels 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.

### III. Persons Involved in CERCLA Litigation: Facilitating CERCLA Settlements

The Tax Increase Prevention Reconciliation Act of 2005<sup>164</sup> treats temporarily CERCLA<sup>165</sup> funds established under consent decrees for the sole purpose of resolving CERCLA claims as being beneficially owned

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160. Section 30C(e)(4).

161. Section 30C(e)(5).

162. Section 30C(g).

163. Joint Committee 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-59-05 (Provision D-1), July 27, 2005.

164.

165. Comprehensive Environmental Response, Compensation and Liability Act of 1980 42 U.S.C. § 9601 *et seq.*



by the federal government,<sup>166</sup> hence not subject to federal income taxation. The new provision applies to funds established after May 17, 2006 and ends as to funds established after 2010.<sup>167</sup> 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 the EPA for the cleanup of Superfund hazardous waste sites and reduce the ultimate amount of funds available for the sites' cleanup.

**Revenue Effects:** Negligible according to the Joint Committee on Taxation.<sup>168</sup>

**Comment:** The practical effect is a loss of federal revenues. Whether it 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.<sup>169</sup> 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 phase-out 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 <sup>170</sup> and qualified natural gas <sup>171</sup> production
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166. 468B(g), 2006 Act § 201(a), effective for accounts and funds established after May 17, 2006.

167. 468B(g)(3).

168. Joint Committee 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), June 22 (Items III-B-8, 9, October 7, 2004).

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

170. 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.

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

The key term “credit amount”<sup>172</sup> refers to three dollar per barrel (as adjusted for inflation after 2005) of qualified crude oil production and fifty cents per 1,000 cubic feet of qualified natural gas production.<sup>173</sup> These hydrocarbons must come from a qualified marginal well meaning:

- located in the United States,
- whose production during the tax year is treated as marginal production under the percentage depletion rules of § 613A(c) (6),
- having an average daily production of not more than twenty-five barrel-of-oil equivalents and producing water at a rate at least ninety-five percent 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 (i.e., 365 days x 25 bbls./day) barrels or barrel equivalents. 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 (i.e., property which has average daily production of fifteen or less 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 (i.e., a property that substantially all the production of which is heavy oil—any domestic crude oil produced from any property if the crude oil had a weighted average gravity of twenty degrees API or less).<sup>174</sup>

Because the new credit<sup>175</sup> largely incorporates the definition of marginal property<sup>176</sup> that is used for purposes of the increased percentage depletion that applies when the reference price of crude oil is less than twenty dollars, any property that will qualify for this new marginal production credit may also qualify for increased percentage depletion.

The credit is subject to a phase-out which reduces the credit as domestic unregulated oil and gas prices (the “reference prices” in the tax law’s parlance) increase. The credit will not be available to production

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171. Section 451(b)(1)(A), § 451(b)(2)(C)(i), and § 451(c)(2)(A).

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

173. Section 45I(b)(1)(B). See § 43(b)(3)(B) for the computation.

174. See § 613A(c)(6)(F).

175. Section 45I(c)(3)(A)(i)

176. The same definition of marginal property also applies for purposes of the exception to the 100 percent-of-taxable income limitation relating to depletion for oil and gas produced from marginal properties. See § 613A(c)(6).

when the reference price of oil exceeds eighteen dollars (two dollars for natural gas), and the credit declines proportionately in the \$15-\$18.00 range, but this is partly offset by an inflation adjustment for purposes of the phase-out of the enhanced oil recovery credit.<sup>177</sup> 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:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: Loss of thirty-one million dollars in 2004; loss of forty-seven million dollars in 2005; and loss of sixteen million dollars in 2006. Total estimated revenue losses as a result of this provision in the years 2004-2009 is ninety-four million dollars.<sup>178</sup>

**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 so as to be able 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 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 seventy dollars, 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 fifty dollars, then the fee would be twenty dollars. The revenues would go the Treasury but would be borne by US consumers. Domestic oil prices would never be less than the floor price because no US 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 enhanced oil recovery (EOR) credit to construction costs of certain enormous Alaska gas treatment plants that were paid or incurred in taxable years beginning after 2004.<sup>179</sup> The credit is fifteen percent of qualified enhanced oil

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177. Section 45I(b)(2)(B).

178. Joint Committee on Taxation, *Estimated Revenue Effects of H.R. 4520, The "American Jobs Creation Act of 2004," as Passed by the House of Representatives*, JCX-45-04 (Provision IV-12), June 22, 2004.

179. Section 43(c)(1)(D) and [c](5), as amended by 2004 Act 707(a).

recovery costs, including costs of depreciable tangible property that form part of an EOR project, intangible drilling and development costs with respect to an EOR project,<sup>180</sup> and tertiary injectant expenses incurred with respect to an EOR project. 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 of the U.S.<sup>181</sup> lying north of sixty four degrees North latitude that prepares Alaska natural gas (this excludes ANWR gas) for transportation through a pipeline with a capacity of at least two trillion BTU of natural gas per day and produces carbon dioxide which is injected into hydrocarbon-bearing geological formations.<sup>182</sup>

**Revenue Effects:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: There is no effect listed for 2005-2007; loss of thirty-two million dollars in 2008; loss of ninety-one million dollars in 2009; loss of one hundred and one million dollars in 2010; loss of sixty-one million dollars in 2011; loss of twenty-three million dollars in 2012; gain of one million dollars in 2013; and gain of eleven million dollars in 2014. The total estimated revenue losses as a result of this provision in the years 2005-2009 is one hundred and twenty three million dollars. The total estimated revenue losses as a result of this provision in the years 2005-2014 is two hundred and ninety five million dollars.<sup>183</sup>

**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<sup>184</sup> can be written off from fifteen years to

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180. Section 263[c] defines intangible drilling development costs. Basically, they are the "soft cost" (not hardware) expended in drilling a well. This allows a current deduction for the soft costs (e.g., rig workers' wages) of drilling wells.

181. 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.

182. Section 43(c)(1)(D).

183. Joint Committee 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.

184. "Alaska natural gas pipeline" means the natural gas pipeline system located in the State of Alaska which: has a capacity of more than 500,000,000,000 (i.e. 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

seven.<sup>185</sup>

Qualifying pipelines include the pipe, trunk lines, related equipment, and appurtenances used to carry natural gas, but does not include any gas processing plant.<sup>186</sup> Because the accelerated depreciation only applies after 2013, this is a most curious provision.

**Revenue Effects:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: There is no effect listed for 2005-2013, but they do list a loss of one hundred and fifty million dollars in 2014. There is no total estimated revenue loss as a result of this provision in the years 2005-2009. Total estimated revenue losses as a result of this provision in the years 2005-2014 is one hundred and fifty million dollars.<sup>187</sup>

**Comment:** This seems to be pure special interest legislation, which, when combined with the Alaska mega project credit represents a huge 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 annually claim the higher of cost or percentage depletion deductions.<sup>188</sup> 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 independent producer or royalty owner exemption only if, on any day of the tax year, the taxpayer's refinery runs of the taxpayer and that person never exceeded 50,000 barrels.<sup>189</sup>

The 2005 Energy Tax Act raised the 50,000-barrel-per-day

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(but after 2004), elects such treatment. § 168(i)(16)(B)(ii). There are some further details.

185. Section 168(e)(3)(C)(iii), as amended by 2004 Act § 706(a).

186. Section 168(i)(16).

187. Joint Committee 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-6), Oct. 7, 2004.

188. Section 611(a).

189. Section 613(A)(d)(4), before amendment.

limitation to 75,000,<sup>190</sup> and added a further relaxation in that for purposes of the 75,000 barrel limit average daily refinery runs for any tax year now are computed by dividing the total refinery runs for the tax year by the number of days in the tax year.<sup>191</sup> This changes the refinery limitation from one 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 just apply 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 in making a decision to go forward with the hunt for new oil or gas.<sup>192</sup> A pre-existing tax expenditure item allows an immediate deduction for the soft costs of drilling a well.

**Revenue Effects:** The Joint Committee on Taxation has estimate the revenue effects of this provision to be as follows: loss of two million dollars in 2005; loss of fourteen million dollars in 2006; loss of fourteen million dollars in 2007; loss of fifteen million dollars in 2008; loss of fifteen million dollars in 2009; loss of fifteen million dollars in 2010; loss of sixteen million dollars in 2011; loss of sixteen million dollars in 2012; loss of sixteen million dollars in 2013; loss of seventeen million dollars in 2014; and a loss of eighteen million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is seventy five million dollars. Total estimated revenue losses as a result of this provision in the years 2005-2015 is one hundred and fifty-eight million dollars,<sup>193</sup> but the overall revenues loss from allowing percentage depletion to exceed costs is for 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 as to future prices when making decisions about exploration and development of domestic oil and gas. This change

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190. Section 613A(d)(4), as amended by 2005 Act § 1328(a). It is for tax years ending after August 8, 2005 (2005 Act § 1328(b)).

191. Section 613A(d)(4)

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

193. Joint Committee on Taxation, *Estimated Budget Effects of The Conference Agreement For Title XIII. Of H.R.6, The "Energy Tax Incentives Act of 2005,"* JCX-59-05 (Provision B., 8), July 27, 2005.

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 they can now claim depletion deductions in excess of their basis (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). The sin is that it permits deductions in excess of basis, something otherwise unheard of in the Code and costly in terms of lost revenue.<sup>194</sup> The right answer has long been to drop cost depletion, adopt percentage depletion deductions alone, and limit depletion deductions to basis.<sup>195</sup>

#### 5. Refiners Get Immediate Write-Off for Half the Costs of Property Installed Before 2012 that is Part of a New Refinery or Increases 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 ten year recovery period.<sup>196</sup> On the other hand, § 179, lets businesses expense (write off at once) 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 phase-out, 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":<sup>197</sup>

- which is new;<sup>198</sup>
- is placed in service after August 8, 2005 and before 2012;<sup>199</sup>

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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.

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

196. See § 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 Committee 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 p. 42, July 28, 2005.

197. Section 179C(c)(1).

198. Section 179C(c)(1)(A).

- if the cost relates to only part of a refinery, that part meets the requirements for increased output or throughput<sup>200</sup>
- which meets all applicable environmental laws in effect on the date the portion of the refinery was placed in service.<sup>201</sup>

A “qualified refinery” is one located in the United States and that is designed to serve the primary purpose of either processing liquid fuel from crude oil or “qualified fuels,”<sup>202</sup> or else a facility that processes coal gas into liquid fuel.<sup>203</sup> The refinery can be obtained under a leaseback.<sup>204</sup> 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 five percent by volume on an average daily basis, or enable the existing qualified refinery to process at least twenty five percent or more “qualified fuels” throughput on an average daily basis.<sup>205</sup> 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.<sup>206</sup> For example, a scrubber, even if installed as part of a larger project is disqualified if the scrubber does not increase throughput or increase capacity to accommodate qualified fuels and needed to comply with the Clean Air Act.<sup>207</sup> Presumably, the new rule, like § 179, does not attract an Alternative Minimum tax

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199. Section 179C(c)(1)(B), § 179(c)(1)(F)(ii) provides an alternative period.

200. Section 179C(c)(1)(C).

201. Section 179C(c)(1)(D). A Clean Air Act 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; and § 179C(c)(1)(D),(E).

202. Section 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. Joint Committee 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 p. 42 -43, July 28, 2005.

203. Joint Committee 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 p. 42 FN 55, July 28, 2005.

204. Section 179(c)(2).

205. Section 179C(3)(1)-(2).

206. Section 179C(f)(2).

207. Joint Committee 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 p. 43, July 28, 2005.



adjustment.<sup>208</sup>

The election is available to cooperatives.<sup>209</sup>

**Revenue Effects:** The “Estimated Budget Effects of the Conference Agreement for Title XIII. of H.R. 6, The ‘Energy Tax Incentives Act of 2005’” refers to a “Temporary fifty percent expensing for equipment used in the refining of liquid fuels” that sunsets at the end of 2011. This is assumed to be the “immediate write-off for half the cost of property installed before 2012.” The Joint Committee on Taxation has estimate the revenue effects of this provision to be as follows: there is no estimate for 2005; loss of twelve million dollars in 2006; loss of thirty-one million dollars in 2007; loss of one hundred and nineteen million dollars in 2008; loss of two hundred and thirty-eight million dollars in 2009; loss of two hundred and fifty-nine million dollars in 2010; loss of one hundred and eighty-three million dollars in 2011; gain of forty-nine million dollars in 2012; gain of one hundred and fifty-six million dollars in 2013; gain of one hundred and twenty-six million dollars in 2014; and a gain of one hundred and five million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is \$659 million. Total estimated revenue losses as a result of this provision in the years 2005-2015 is four hundred and six million dollars.<sup>210</sup> The White House tax expenditure estimate in millions of dollars is much higher.<sup>211</sup>

#### Corporations

2006	2007	2008	2009	2010	2011	2012	2008-12
10	30	120	240	260	180	-50	750

#### Individuals [\$0]

**Comment:** This offers a huge tax boost for building a new refinery or enhancing an older one’s output. America needs new refineries because refining capacity is reportedly declining, but the constraints have not been financial but instead environmental. Oil companies are awash

208. 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 § 56(a)(1).

209. Section 179C(g)(1).

210. Joint Committee on Taxation, *Estimated Budget Effects of The Conference Agreement For Title XIII. Of H.R.6, The “Energy Tax Incentives Act of 2005,”* JCX-59-05 (Provision B., 3), July 27, 2005.

211. White House 2008 Budget Item 23.

in cash. Exxon-Mobile was recently reported to have over thirty billion dollars.<sup>212</sup> 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.<sup>213</sup> Apparently, 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 the Code (§ 168) to allow initial grading and clearing costs for gas utility property to be written off over fifteen years<sup>214</sup> on the theory is that these costs are part of the cost of acquiring and installing the pipelines.

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.<sup>215</sup>

**Revenue Effects:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: gain of thirteen million dollars in 2005; gain of thirty-one million dollars in 2006; gain of fifty-three million dollars in 2007; gain of seventy-two million dollars in 2008; gain of eighty-five million dollars in 2009; gain of ninety-six million dollars in 2010; gain of one hundred and six million dollars in 2011; gain of one hundred and fifteen million dollars in 2012; gain of one hundred and eighteen million dollars in 2013; and gain of one hundred and eighteen million dollars in 2014. Total estimated revenue gains as a result of this provision in the years 2005-2009 is two hundred and fifty-three million dollars. Total estimated revenue gains as a result of this provision in the years 2005-2014 is \$806 million.<sup>216</sup>

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

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212. See FORTUNE, *Exxon's Challenge: Topping Itself* (April 2006).

213. See Pro Tec Fuel Management, Fuel Outlook Winter 2006/2007 (June 26, 2006). [www.protechfuel.com/images/pdfs/winter\\_06-07\\_Hedge\\_Programs.pdf](http://www.protechfuel.com/images/pdfs/winter_06-07_Hedge_Programs.pdf).

214. Section 168(g)(3)(B), as amended by 2004 Act § 901(c).

215. Section 162(a).

216. Staff of the Joint Committee on Taxation, Estimated Budget Effects of Conference Agreement for H.R. 4520, The American Jobs Creation Tax Act of 2004," JCX-69-04 (Provision VIII-D., 21) (Oct. 7, 2004).

### 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 fifteen years if placed in service after April 11, 2005.<sup>217</sup> This shortens the write-off period by five years. Under pre-2005 Energy Tax Act law, natural gas distribution pipelines were assigned a twenty year recovery period.<sup>218</sup> Also, 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”<sup>219</sup> placed in service after April 11, 2005 gets a seven-year life for depreciation purposes,<sup>220</sup> like Alaska natural gas pipelines. The new rule is not retroactive, so tax litigation now pending can go forward as to lines placed in service before April 12, 2005. The stated legislative purposes are: to provide clarity and certainty in this litigious area<sup>221</sup> regarding the recovery period of natural gas gathering lines; 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.<sup>222</sup> In addition, natural gas gathering lines are exempt from the AMT depreciation adjustment.<sup>223</sup>

**Revenue Effects:** The Joint Committee on Taxation has estimate the revenue effects of this provision to be as follows: loss of one million dollars for 2005; loss of thirteen million dollars in 2006; loss of forty-

217. Section 168(e)(3)(E)(viii), as amended by 2005 Act 1325(a).

218. Joint Committee 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 p. 3, July 28, 2005.

219. 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.

168(i)(17) as amended by 2005 Act § 1326(b).

220. Section 168(e)(3)(C)(iv), as amended by 2005 Act § 1326(a).

221. Rev. Proc. 87-56, 1987-2 C.B. 674 is the source of the problem, creating ambiguity as to whether to use 7 or 15 years as the recovery period. *Compare* Clajon Gas Co. v. Commissioner, 119 TC 197 (2003), *rev’d* 354 F3d 786 (8<sup>th</sup> Cir. 2004) *with* Duke Nat. Gas Corp. v. Commissioner, 172 F3d 1255 (10<sup>th</sup> Cir. 1999), *rev’g* 109 TC 416.

222. H. Rep. 109-45 related to HR 1541.

223. Section 56(a)(1)(B), as amended by 2005 Act § 1326(d).

three million dollars in 2007; loss of seventy-eight million dollars in 2008; loss of one hundred and ten million dollars in 2009; loss of one hundred and thirty-nine million dollars in 2010; loss of one hundred and fifty-two million dollars in 2011; loss of one hundred and thirty-seven million dollars in 2012; loss of one hundred and twenty million dollars in 2013; loss of one hundred and fourteen million dollars in 2014; and a loss of one hundred and twelve million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is three hundred and eighty-four million dollars. Total estimated revenue losses as a result of this provision in the years 2005-2015 is \$1.019 billion.<sup>224</sup>

**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 by its status as a regulated industry for the most part, although deregulation is in progress with associated challenges.<sup>225</sup>

#### 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 fifteen percent of revenues from a well. For miners, percentage depletion cannot exceed fifty percent of the net income from the property, but oil and gas producers are generously limited to one hundred percent of the income from a well.<sup>226</sup> The 2006 Act extended the rule that in the case of marginal wells independent producers are exempt from even the one hundred percent limit through 2007, retroactive to the beginning of 2006, when it was set to expire.<sup>227</sup>

**Revenue Effect:** The Joint Committee on Taxation has estimated the revenue effects of this provision, as extended in 2006, to be as follows: loss of thirty-one million dollars in 2004; loss of forty-seven million dollars in 2005; loss of sixteen million dollars in 2006 for a total 2004-2009 loss of ninety-four million dollars.<sup>228</sup>

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224. Joint Committee on Taxation, *Estimated Budget Effects of The Conference Agreement For Title XIII. Of H.R. 6, The "Energy Tax Incentives Act of 2005,"* JCX-59-05 (Provision B., 5), July 27, 2005.

225. See, e.g., [www.answers.com/topic/natural-gas-distribution](http://www.answers.com/topic/natural-gas-distribution).

226. Section 613(a).

227. 2006 Act, § 118.

228. Joint Committee on Taxation, *Estimated Revenue Effects of H.R. 4520, The*

**Comment:** Another lopsided victory for the oil industry.

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

**Summary:** Non-integrated oil and gas companies can now write these costs off over two years, a big improvement. Ordinarily, such expenditures have to be capitalized.<sup>229</sup>

The 2005 Energy Tax Act generously allowed oil and gas companies to write off all their geological and geophysical (“G&G”) exploration expenses in the search for domestic oil and gas off over two years.<sup>230</sup> Shortly thereafter, the 2005 Tax Increase Prevention Act<sup>231</sup> shortened the period to two years for certain integrated oil and gas producers. Five-year amortization applies to 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 one billion dollars in the last taxable year ending during calendar year 2005, and an ownership interest in a crude oil refiner of fifteen percent or more.<sup>232</sup>

**Revenue Effect:** The White House estimates the revenue losses from the accelerated 24 deductions as follows:<sup>233</sup>

Corporations							
2006	2007	2008	2009	2010	2011	2012	2008-12
10	50	70	60	30	10	10	180
Individuals							
2006	2007	2008	2009	2010	2011	2012	2008-12
--	10	20	10	10	--	--	40

**Comment:** The two and five year rules are both generous

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*“American Jobs Creation Act of 2004,” as Passed by the House of Representatives, JCX-45-04 (Provision IV-12), June 22, 2004.*

229. Rev. Rul. 77-188, 1977-1 C.B. 76.

230. 2005 Act § 1329(c).

231. 2005 Act § 503(b).

232. Section 167(h).

233. White House 2008 Budget Item 25.

compared to the I.R.S. position<sup>234</sup> that G&G expenses must be capitalized into the depletable basis of particular areas of geological interest. 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<sup>235</sup> diesel fuel production credit<sup>236</sup> of five cents per gallon of low sulfur diesel fuel up to a maximum of twenty five percent of the refiner's investment, needed to comply with the EPA's low sulfur rules.<sup>237</sup> The explanation, Congress was worried that the cost of complying with the Highway Diesel Fuel Sulfur Control Requirements of the Environmental Protection Agency might force some small refiners out of business.<sup>238</sup>

"A small business refiner's" status is determined annually and means a refiner of crude oil with not over 1,500 individuals engaged in the refinery operations of the business on any day during the tax year and whose average daily domestic refinery run or average retained production for all of the taxpayer's facilities for the year ending December 31, 2002 was not over 205,000 barrels.

The total low sulfur diesel fuel credit for any tax year for any facility is capped at twenty five percent of the qualified capital costs the small business refiner incurred for the facility, reduced by<sup>239</sup> the aggregate low sulfur diesel fuel credits for all earlier tax years for the facility.<sup>240</sup> In other words, the sum of the annual credits is limited to twenty five percent of qualified capital costs.<sup>241</sup> For a small business

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234. Rev. Rul. 77-188. 1977-1.6.B.76.

235. Low sulfur diesel fuel means diesel fuel with a sulfur content of 15 parts per million (ppm) or less. § 45H(c)(5).

236. 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 twenty-year carryforward period under § 196.

237. Sections 45H, 38(b)(18), 280C(d), 1016(a)(31) and 196(c)(12) as amended by 2004 Act § 339(a), (b), (c) and (d) (e) respectively.

238. Senate Report No. 107-140, March 1, 2002, Energy Tax Incentives Act of 2002, p. 34.

239. Section 45H(b)(1)(A).

240. Section 45H(b)(1)(B).

241. Section 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 count. § 45H(e).

refiner whose average daily domestic refinery runs for the year ending December 31, 2002 exceeded 155,000 barrels, the twenty five percent declines<sup>242</sup> as daily production approaches 205,000 barrels.

Qualified capital costs are those paid or incurred for a facility during the applicable period<sup>243</sup> to comply with the EPA's Highway Diesel Fuel Sulfur Control Requirements of the EPA. These include 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 (including tankage, catalyst, and power supply), engineering, construction period interest, and site work.<sup>244</sup>

No credit will be allowed unless, within thirty months after the first day of the first tax year in which the credit is otherwise available, the refiner gets a certification from IRS that its qualified capital costs for the facility comply with those EPA regulations.<sup>245</sup> There are detailed application requirements and a special extension of the statute of limitation to accommodate the extended administration called for by the credit.<sup>246</sup> In addition, the tax basis<sup>247</sup> of a facility for which a low sulfur diesel fuel production credit was allowed, declines by the amount of the credit.

**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 demonstrably 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 an actual shutdown.

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242. Section 45H(b)(2).

243. 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. § 45H(c)(4).

244. Section 45H(c)(2).

245. Section 45H(f)(1).

246. Section 45H(f)(4).

247. See § 1001 and § 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.

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

**Summary:** The 2004 Act retroactively<sup>248</sup> added new § 179B, the heart of which is that small oil refiners can immediately write off seventy five percent of the cost of complying with EPA requirements relating to diesel fuel sulfur content.

Normally, the write-offs would be over much longer depreciation periods. The benefit is available to so-called “small business refiners”<sup>249</sup> meaning processors of up to 205,000 barrels per day, meaning 74,825,000 barrels per year which elect to apply § 179B to the “qualified capital costs”<sup>250</sup> they paid or incurred by during the tax year.<sup>251</sup> Deductions the taxpayer claims under § 179B reduce the basis of the property,<sup>252</sup> as is true of all depreciation deductions. The percentage is generally seventy five percent of the costs paid or incurred for the purpose of complying with the Highway Diesel Fuel Sulfur Control Requirements of the Environmental Protection Agency. This seventy five percent 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 (i.e., 75) declines pro rata between 155,000 barrels and 205,000 barrels per day, at which

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248. 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.

249. 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.

250. 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. § 179B(a).

251. Section 179B(a), as amended by 2004 Act § 338(a).

252. Section 179B(c)(1). There some other details. § 263A (uniform capitalization rules) were amended to provide that the uniform capitalization is inapplicable to any cost allowable as a deduction under § 179B. § 263A(c)(3). In determining corporate earnings and profits, amounts deductible under § 179B is ratably deducted over 5 years § 312(k)(3)(B). Section 280B (capitalization of demolition costs) is inapplicable to costs under § 179B. § 179B(d).



point § 179B becomes unavailable.

**Revenue Effects:** The Joint Committee on Taxation estimated the effects of this provision and the credit for low sulfur diesel refining in heading IV.A.9 to be as follows: loss of sixteen million dollars for 2005; loss of eight million dollars in 2006; loss of twelve million dollars in 2007; loss of twenty-eight million dollars in 2008; loss of fifty-three million dollars in 2009; loss of twenty-one million dollars in 2010; gain of three million dollars in 2011; gain of four million dollars in 2012; gain of five million dollars in 2013; and a gain of six million dollars in 2014. Total estimated revenue losses as a result of this provision in the years 2005-2009 is one hundred and seventeen million dollars. Total estimated revenue losses as a result of this provision in the years 2005-2014 is one hundred and nineteen million dollars.<sup>253</sup> The White House figures are higher.<sup>254</sup>

**Comment:** 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 in order 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 IV.9 (the credit for low sulfur refining of diesel fuel).

### 3. Leaking Underground Storage Tanks Trust Fund "Financing Rate" Reinstated

**Summary:** Congress reinstated this dormant tax.

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 U.S.; and
- sale to any person who is not properly registered, absent a prior taxable removal or entry of the fuel.<sup>255</sup>

The purpose of the tax is to provide a fund available for removing and cleaning up leaking petroleum product storage tanks where there is not a

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253. Joint Committee on Taxation, *Estimated Budget Effects of The Conference Agreement For H.R.4520, The "American Jobs Creation Act of 2004,"* JCX-69-04 (Provision III-B., 8), Oct. 7, 2004.

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

255. Section 4081(d)(3), as amended by 2005 Act 1362(a).

solvent person who is available to pay for the project.<sup>256</sup> The 2005 Energy Act extended the tax from September 30, 2005 to September 30, 2011.

The same Act repealed the LUST tax as to exported dyed diesel and kerosene, and at the same time 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.<sup>257</sup> It is part of an exceptionally complicated system of excise taxes.

**Revenue Effects:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: Gain of thirty-three million dollars in 2006; gain of thirty-four million dollars in 2007; gain of thirty-four million dollars in 2008; gain of thirty-five million dollars in 2009; gain of thirty-five million dollars in 2010; gain of thirty-five million dollars in 2011; gain of thirty-five million dollars in 2012; gain of thirty-five million dollars in 2013; gain of thirty-six million dollars in 2014; and gain of thirty-six million dollars in 2015. Total estimated revenue gains as a result of this provision in the years 2005-2010 is one hundred and seventy-one million dollars. Total estimated revenue gains as a result of this provision in the years 2005-2015 is three hundred and forty-nine million dollars.<sup>258</sup>

**Comment:** This tax provides an appropriate way to spread the cost of necessary environmental remediation. It needs to be reinstated periodically when needed.<sup>259</sup>

#### 4. Oil Spill Liability Trust Fund Tax Reinstated

**Summary:** Congress reinstated this dormant tax.

Thanks to the 2005 Act, the five-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.<sup>260</sup> Until 1995 when the tax was suspended, there was a five-cent-per-barrel tax on crude oil received at a United States 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

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256. See Superfund Revenue Act of 1986, Title V of P.L. 99-499.

257. Section 4082(a), as amended by 2005 Act 1362(b)(1).

258. Joint Committee on Taxation, *Estimated Budget Effects of The Conference Agreement For Title XIII. Of H.R.6, The "Energy Tax Incentives Act of 2005,"* JCX-59-05 (Provision F-2), July 27, 2005.

259. 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.

260. Section 4611(f), as amended by 2005 Act § 1361.

crude oil prior to exportation. The tax was effective only if the Fund's balance fell below one billion dollars. Revenues from the tax went into the Oil Spill Liability Trust Fund account. The Fund had several purposes, mainly 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:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: Gain of one hundred and fifty million dollars in 2006; gain of two hundred and fifty-four million dollars in 2007; gain of two hundred and seventy-six million dollars in 2008; gain of two hundred and eighty-two million dollars in 2009; gain of two hundred and eighty-five million dollars in 2010; gain of two hundred and ninety million dollars in 2011; gain of two hundred and ninety-two million dollars in 2012; gain of two hundred and ninety-eight million dollars in 2013; gain of three hundred and three million dollars in 2014; and gain of seventy-six million dollars in 2015. Total estimated revenue gains as a result of this provision in the years 2005-2010 is \$1.248 billion. Total estimated revenue gains as a result of this provision in the years 2005-2015 is \$2.508 billion.<sup>261</sup>

**Comment:** This tax provides an appropriate way to spread the cost of necessary environmental remediation. It needs to be reinstated periodically when needed.<sup>262</sup>

##### 5. Brownfields Include 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 ("brownfields"). 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).<sup>263</sup> The provision is retroactive to 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.<sup>264</sup>

**Revenue Effects:** The Joint Committee has estimated the revenue

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261. Joint Committee on Taxation, *Estimated Budget Effects of The Conference Agreement For Title XIII. Of H.R.6, The "Energy Tax Incentives Act of 2005,"* JCX-59-05 (Provision A., 8), July 27, 2005. Joint Committee on Taxation, *Estimated Budget Effects of The Conference Agreement For Title XIII. Of H.R.6, The "Energy Tax Incentives Act of 2005,"* JCX-59-05 (Provision F-1 ), July 27, 2005.

262.

263. Section 198(d)(1)(C), as amended.

264. Section 198(h), as amended by 2006 Act § 109(a), (b).

effects of this provision to be as follows: Loss of eighty-four million dollars in 2006; loss of thirty-nine million dollars in 2007; loss of five million dollars in 2008; gain of three million dollars each year during to the 2009-2015 period for a net revenue loss of one hundred and five million dollars during the years 2007-2016.<sup>265</sup> 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.<sup>266</sup>

**Comment:** Another victory for the oil industry, although not an outrage and at least arguably equitable in terms of treatment among industries. It is somewhat unfair because it taxes people 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.

#### V. Electric Power Industry<sup>267</sup>

##### 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 twenty to fifteen years for certain assets used in the transmission of electricity for sale and related land improvements.

The gas utility lobby was not alone. A year earlier in the 2004 Jobs Act, Congress modified the cost recovery rules to allow twenty year write-offs of initial grading and clearing costs for electric utility transmission and distribution plant.<sup>268</sup>

**Revenue Effects:** Apparently not stated.

**Comment:** One wonders if gas utility industry used the same lobbyists, as the electricity industry did to get this subsidy. The same comment applies as above; 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

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265. Joint Committee on Taxation, General Explanation of Tax Legislation Enacted in the 109<sup>th</sup> Congress, January 12, 2007, JCS-1-07, Appendix at p.800 (Part Nine, 1-A-7), p.791.

266. White House 2008 Budget Item 40 states the losses at \$180 millions in 2007-2012.

267. 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 2008-12). 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 (February 6, 2007).

268. Section 168(e)(3)(F), (g)(3)(B) as amended by 2004 Act § 901(b)-(c).

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 newer certified air pollution control facilities used in connection with an electric generation plant, which is primarily coal fired.

Prior law allowed elective sixty month amortization (write-offs) of some or all of the cost 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 or air pollution or contamination. If the facility had a useful life of over fifteen years, only the basis attributable to the first fifteen years could be amortized over the sixty 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 twenty percent before claiming amortization deductions.<sup>269</sup> There are further details that are not relevant here.

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 eighty four-month (seven year) 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,<sup>270</sup> it allows taxpayers to write off the cost of certain certified air pollution control facilities over eighty four months, whether or not 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 been constructed, reconstructed, or erected by the taxpayer after April 11, 2005, or acquired new after that date.<sup>271</sup>

The 2005 Energy Tax Act does not change the limitation on amortization for corporate taxpayers or for pollution control facilities with a useful life of over than fifteen 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:** The Joint Committee on Taxation has estimated

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269. Section 291(a)(5).

270. Section 169(d)(5)(A), as amended by 2005 Act § 1309(a).

271. Section 169(d)(4)(B), as amended by 2005 Act § 1309(b).

the revenue effects of this provision to be as follows: loss of two million dollars in 2005; loss of ten million dollars in 2006; loss of thirty million dollars in 2007; loss of fifty-eight million dollars in 2008; loss of eighty-nine million dollars in 2009; loss of one hundred and twenty-three million dollars in 2010; loss of one hundred and fifty-four million dollars in 2011; loss of one hundred and seventy-seven million dollars in 2012; loss of one hundred and eighty-seven million dollars in 2013; loss of one hundred and seventy-three million dollars in 2014; and a loss of one hundred and forty-four million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is three hundred and thirteen million dollars. Total estimated revenue losses as a result of this provision in the years 2005-2015 is \$1.147 billion.<sup>272</sup>

**Comment:** This offers a significant timing advantage for adding pollution control facilities. For example, coal fired facilities and not others are so benefited has to be put down to the lobbying power of such entities as the Edison Electric Institute. On the other hand, the coal-fired electricity generators are the major offenders in terms of 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. 15-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 twenty years to fifteen 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 twenty year depreciation life with a fifteen year period for hardware (as opposed to real estate)<sup>273</sup> used in the transmission at 69 or more kilovolts of electricity. The fifteen year statutory recovery period<sup>274</sup> excludes initial clearing and grading costs for an electric utility transmission and

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272. Joint Committee on Taxation, *Estimated Budget Effects of The Conference Agreement For Title XIII. of H.R.6, The "Energy Tax Incentives Act of 2005,"* JCX-59-05 (Provision A- 8), July 27, 2005.

273. 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), as amended by 2005 Act § 1308(a).

274. Section 168(e)(3)(E)(vii) as amended by 2005 Act § 1308(a).

distribution plant.<sup>275</sup> Sixty-nine kilovolts is minor electrical power.

**Revenue Effects:** The Joint Committee on Taxation has estimate the revenue effects of this provision to be as follows: there is no estimate for 2005; loss of three million dollars in 2006; loss of eighteen million dollars in 2007; loss of forty-five million dollars in 2008; loss of seventy-eight million dollars in 2009; loss of one hundred and ten million dollars in 2010; loss of one hundred and forty million dollars in 2011; loss of one hundred and sixty-six million dollars in 2012; loss of one hundred and ninety-four million dollars in 2013; loss of two hundred and twenty-five million dollars in 2014; and a loss of two hundred and sixty-one million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is two hundred and fifty-four million dollars. Total estimated revenue losses as a result of this provision in the years 2005-2015 is \$1.239 billion.<sup>276</sup>

**Comment:** It is a victory for major electrical power producers of all kinds and is 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 years back against income; potentially yielding a refund check from the Treasury as opposed of being carried back the normal two years. This burst of benefits applies to losses incurred in 2003-2005.

The new law lets the electrical industry carry back a net operating loss to each of the five years before the year of the tax loss.<sup>277</sup> It applies to losses incurred in 2003, 2004 and 2005. 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's taxable income and get a tax refund.<sup>278</sup>

The special five-year carryback period applies, at the taxpayer's election, to NOLs arising in a tax year ending after 2002, and before 2006 ("loss years"). 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 in part be carried back five years, to the tax year ending in 1998 rather than 2001 and potentially receive a refund check from the

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

276. Joint Committee on Taxation, *Estimated Budget Effects of The Conference Agreement For Title XIII. Of H.R.6, The "Energy Tax Incentives Act of 2005,"* JCX-59-05 (Provision A., 7), July 27, 2005.

277. Section 172(b)(1)(I)(i), as amended by 2005 Act § 1311.

278. Section 172.

Treasury Department.

The election to seize this opportunity can be made in any tax years ending in 2006-2008.<sup>279</sup>

The loss subject to the special carryback period cannot exceed twenty percent of the sum of the taxpayer's "electric transmission property (ETP) capital expenditures" and "pollution control facility (PCF) capital expenditures" for the tax year before the tax year in which the election is made.<sup>280</sup>

**To illustrate:** Taxpayer has a four hundred dollars NOL for its tax year ending 2003. Taxpayer invested seven hundred and fifty dollars in electric transmission equipment in 2005. Taxpayer can make the five-year carryback election as to the 2003 NOL in 2006, the year following the qualified investment. Based on Taxpayer's qualifying investment of seven hundred and fifty dollars, Taxpayer can elect the five-year carryback for one hundred and fifty dollars (twenty percent x seven hundred and fifty dollars) of the four hundred dollars 2003 NOL.<sup>281</sup> NB: 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 sixty nine or more kilovolts of electricity for sale.<sup>282</sup>

*"Pollution control facility capital expenditures"* are capitalized expenditures chargeable to capital account that are:

- made by an electric utility company<sup>283</sup> before August 8, 2005, and
- attributable to a facility which qualifies as a "certified PCF" as defined under § 169(d)(1) relating to an election to write off such equipment over sixty months, but allowing used equipment to qualify and letting the facility have been operating before 1976.<sup>284</sup>

There are numerous administrative rules and restrictions that are beyond the scope of this writing.

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

280. Section 172(b)(1)(I)(i).

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

282. Section 172(b)(1)(I)(vi)(I). This is medium or large sized power output.

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

284. Section 172(b)(1)(I)(vi)(II).



**Revenue Effects:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: Loss of seventy two million dollars in 2006; loss of forty three million dollars in 2007; loss of nineteen million dollars in 2008; *gain* of nineteen million dollars in 2009; gain of sixteen million dollars in 2010; gain of twelve million dollars in 2011; gain of ten million dollars in 2012; gain of eight million dollars in 2013; gain of eight million dollars in 2014; and gain of eight million dollars in 2015. Estimated net revenue losses as a result of this provision in the years 2005-2010 is ninety nine million dollars. Estimated net revenue losses as a result of this provision in the years 2005-2015 is fifty two million dollars.<sup>285</sup>

**Comment:** This special interest legislation benefits the electrical utility industry with a windfall. There are several troubling issues. First, regulated utilities are commonly protected from going broke by their regulators over the long term; 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. In the normal course 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 Are 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.<sup>286</sup> This is part of a complicated tax accounting picture. Accountants, whose job it

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285. Joint Committee on Taxation, *Estimated Budget Effects of The Conference Agreement For Title XIII. Of H.R. 6, The “Energy Tax Incentives Act of 2005,”* JCX-59-05 (Provision A-10), July 27, 2005.

286. Section 468A(b), (f), (d)(2)(A), (d)(1), and (E)(2) as amended by 2005 Act 1310(a), (b)(1), (2), (c) and (e), respectively.

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, whether or not the person sets aside money for the future in the “reserve.” Congress, needing money, has historically rejected “reserve accounting.”<sup>287</sup> 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 that are established to pay for the potentially titanic costs of dismantling (actual decommissioning) 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 in the year made 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. There are some further details.

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.<sup>288</sup> 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 need to fund the total nuclear decommissioning costs for the power plant over the estimated useful life of the power plant.<sup>289</sup> 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 only began in 1984. However, the catch-up payments must be by level

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287. Section 461(h).

288. Section 468A(b), as amended by 2005 Act § 1310(a).

289. Section 468A(d)(2)(A), as amended by 2005 Act § 1310(b)(2).

funding (as opposed to huge early year deductions).<sup>290</sup> There are further technical details that are beyond the scope of this writing.

**Revenue Effects:** The Joint Committee on Taxation has estimated the budget effects of this provision to be as follows: Loss of one hundred and twenty million dollars in 2006; loss of one hundred and ninety-nine million dollars in 2007; loss of one hundred and eighty-seven million dollars in 2008; loss of one hundred and sixty-eight million dollars in 2009; loss of one hundred and twenty-six million dollars in 2010; loss of one hundred and sixteen million dollars in 2011; loss of one hundred and seven million dollars in 2012; loss of ninety-seven million dollars in 2013; loss of ninety million dollars in 2014; loss of eighty-three million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 are \$800 million. Total estimated revenue losses as a result of this provision in the years 2005-2015 are \$1.293 billion.<sup>291</sup>

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

#### *B. New Credit for Advanced Nuclear Facilities*

**Summary:** There is a production tax credit for new advanced nuclear power facilities. The amount is 1.8 cents per KWH (adjusted for inflation) for electricity produced over an eight year period, provided the “nuke” is placed in service after the new law’s passage and before 2021 and the taxpayer gets an allocation of mega watt capacity from the Secretary of Treasury.

The 2005 Energy Tax expanded the general business credit<sup>292</sup> to include an advanced nuclear power facility credit in the amount of 1.8 cents per kilo-watt hour, but only as to power sold to unrelated persons.<sup>293</sup> The credit applies to electricity produced in the US or a US possession<sup>294</sup> 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.

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290. Joint Committee 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 p. 10, July 28, 2005.

291. Joint Committee 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 A-9), July 27, 2005.

292. Section 38.

293. Section 45J(a), as 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. § 45J(e). That subject is discussed elsewhere in this article.

294. Section 45J(e).

An advanced nuclear power facility is defined as an “advanced nuclear facility” which:

- the taxpayer owns and which uses nuclear energy to produce electricity, and
- was placed in service after August 8, 2005 and before 2021.<sup>295</sup>

An “advanced nuclear facility” is any nuclear facility whose reactor design the NRC approved after 1993.<sup>296</sup> It does not include a facility for which a substantially similar design for a facility of comparable capacity was approved before 1994.

The national megawatt capacity limitation is 6,000 megawatts.<sup>297</sup> 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<sup>298</sup> to the rated nameplate capacity of the taxpayer’s facility.<sup>299</sup> For example, if the taxpayer’s specific national allocation were one hundred megawatts and the nameplate capacity (its potential output) were 300 megawatts, 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 one hundred and twenty five million dollars in tax credits per 1,000 megawatts of allocated capacity in any one year of the eight-year credit period.<sup>300</sup>

Rules similar to the phase-out rules applicable to the electricity production credit apply for purposes of the advanced nuclear power facility production credit.<sup>301</sup> What these rules do is to reduce the 1.8¢ if and to the extent the annual average contract price per kilowatt-hour of electricity generated from the facility in the prior year exceeds eight cent per kilowatt-hour.<sup>302</sup> Presumably this threat will stimulate efficiency. In

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295. Section 45J(d)(1)(A)-(B).

296. Section 45J(d)(2).

297. Section 45J(b)(2).

298. 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. § 45J(b)(4).

299. Section 45J(b)(1)(A)-(B). Joint Committee 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 p. 35, July 28, 2005.

300. Section 45J(c)(1)(B).

301. Section 45J(c)(2).

302. The 8¢ price comparison is indexed for inflation. § 45J(e). Thus, 8¢ is adjusted for inflation § 45J(e), as amended by the 2005 Gulf Opportunity Zone Credit. § 402(d)(2), a technical correction clarifying that the inflation adjustment does not apply

addition, up to fifty percent of the advanced nuclear power facility credit is lost to the extent the facility is financed by grants, tax-exempt bonds, subsidized energy financing, and other credits.<sup>303</sup> The credit cannot be carried back to a tax year ending on or before the effective date of the credit.<sup>304</sup> 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 effect:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: Loss of forty-one million dollars in 2013; loss of eighty-three million dollars in 2014; and loss of one hundred and fifty-five million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is zero dollars. Total estimated revenue losses as a result of this provision in the years 2005-2015 is two hundred and seventy-eight million dollars.<sup>305</sup>

**Comment:** This is a generous credit, which cannot be evaluated without more information. The fact is no new nuclear power plant has been built in the U.S. for decades.<sup>306</sup> The revenue cost seems highly speculative, and it not clear that tax incentives rather than regulatory changes are what is really needed. For what is worth, France obtains nearly eighty percent of its power from nuclear energy. Perhaps the federal government should seek advice from French authorities on this matter.<sup>307</sup>

## 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 twenty percent tax credit, other advanced coal-based projects that produce electricity (fifteen percent) and industrial gasification

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to the credit rate.

303. Joint Committee 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 p. 35, July 28, 2005. This may require a technical correction to be law.

304. Section 39(d). This is August 8, 2005.

305. Joint Committee on Taxation, *Estimated Budget Effects of The Conference Agreement For Title XIII. Of H.R.6, The “Energy Tax Incentives Act of 2005,”* JCX-59-05 (Provision A-5), July 27, 2005.

306.

307. See MSNBC Story, *Nuclear Energy’s French Connection*, March 4, 2007, available at <http://www.msnbc.msn.com/id/16554514/>.

projects (twenty percent), which is described under the next heading.

Under prior law, the business investment credit<sup>308</sup> consisted of the rehabilitation credit for modernizing and rehabilitating certain older buildings and historic structures and the energy credit for qualified solar<sup>309</sup> and geothermal property.<sup>310</sup> 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.<sup>311</sup> The credit is available for projects the IRS certifies in consultation with the Department of Energy, and that result from a competitive bidding.

The credit for any tax year equals: twenty percent of the “qualified investment” for the tax year in “integrated gasification combined cycle projects,” plus fifteen percent of the “qualified investment” for the tax year in projects that use other “advanced coal-based generation technologies.”<sup>312</sup> Compare this to the thirty percent credit for qualified solar and geothermal property. There is also a thirty percent geothermal credit that only applies to property needed 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 is the taxpayer acquired as new property, and for which depreciation (or amortization in lieu of depreciation) is allowable.<sup>313</sup> Among other things, this rules out land acquisition as a base for the credit.<sup>314</sup>

It applies to eligible property meaning:

(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

(b) the case of any other qualifying advanced coal project, any

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308. Section 38.

309. This credit is not 30%. § 48(a)(2)(A)(i).

310. Section 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. §48(a)(3)(B).

311. Section 46(3) as amended by 2005 Act § 1307(a) periods, effective after August 8, 2005.

312. Section 48A(a)(2).

313. Section 48A(b)(1)(B).

314. Section 48(a)(3) (A)(iii).

property that is part of the project.<sup>315</sup>

“A qualifying advanced coal project” only qualifies as such if located in the U.S. and:

(a) the IRS determines that, the project uses advanced coal-based generation technology (defined below) to power a new electric generation unit, meaning any facility at least half of the annual net output of which 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, sub-bituminous coal, lignite, and peat;

(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 four hundred megawatts, and

(c) the applicant shows that most of the output of the project is reasonably expected to be acquired or used, and the applicant shows of 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.<sup>316</sup>

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, of which the IRS is authorized to certify \$800,000,000 for integrated gasification combined cycle projects, and \$500,000,000 for projects using other advanced coal-based generation technologies.<sup>317</sup> In this connection, the IRS is supposed to certify roughly an equal amount to bituminous coal, sub-bituminous coal projects, and projects using lignite as a primary feedstock, evidently a political compromise.<sup>318</sup> 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,<sup>319</sup> increased by-product

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315. Section 48A(c)(3)(B).

316. Section 48A(c), (e).

317. Section 48A(d)(3)(B).

318. Section 48A(e)(3)(A).

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

utilization, and other benefits.<sup>320</sup>

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 into the case of coal) that is used to fuel a combined-cycle plant turbine (including a combustion turbine/fuel cell hybrid) and a steam turbine.<sup>321</sup> According to an MIT paper the steam turbine process includes a heat recovery steam generator and the combined cycle technology is similar to the technology in modern gas fired plants but it is not “fully commercial” because it is costly, albeit highly efficient and environmentally desirable.<sup>322</sup> The output is gas plus slag that may be usable as agricultural fertilizer, using solvents or advanced processes.

Advanced coal-based generation technology.<sup>323</sup> 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 (forty percent efficiency), and the unit is designed to certain performance requirements,<sup>324</sup> namely its technology must be designed to meet the following performance requirements: (1) SO<sub>2</sub> (percent removal) ninety-nine percent; (2) NO<sub>x</sub> (emissions) 0.07 lbs/MMBTU; (3) PM\* (emissions) 0.015 lbs/MMBTU; (4) Hg (percent removal) ninety percent. The 2006 Act § 203(a) reduced the bar for units designed for use of feedstock substantially all of which is sub-bituminous coal. For such coal, the removal design level of SO<sub>2</sub> is ninety-nine percent or an emission level of 0.04 pounds or less of SO<sub>2</sub> per million BTU, determined on a thirty day average.<sup>325</sup> 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 for an integrated gasification combined cycle plant.<sup>326</sup>

For this purpose, design net heat rate for an electric generation unit

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320. Section 48(e)(3)(B).

321. Section 48A(c)(7).

322. Maurstad, an overview of Coal Based Integrated Gasification Combined Cycle Technology. Laboratory for Energy and the Environment (MIT Sept. 2005).

323. Section 48A(c)(2).

324. Performance characteristic: Design level for project

SO<sub>2</sub> (percent removal) 99 percent

NO<sub>x</sub> (emissions) 0.0

324. Section 48A(c)(7). Accorr 7 lbs/MMBTU

PM\* (emissions) 0.015 lbs/MMBTU

Hg (percent removal) 90 percent

325. Section 48A(f)(1), as amended by 2006 Act § 203.

326. INTERNATIONAL ENERGY AGENCY, CLEAN COAL TECHNOLOGIES: INTEGRATED GASIFICATION COMBINED CYCLE, <http://www.iea-coal.org.uk/content/default.asp?PageId=74>.



is measured in BTU's per kilowatt hour 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.<sup>327</sup> 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 thirty five percent and an overall thermal design efficiency improvement, compared to a minimum baseline efficiency of the unit as operated.<sup>328</sup>

**Revenue Estimates:** See next heading.

**Comment:** The United States Department of Energy has spent many billions of dollars testing and developing clean coal technology. This is the first time that sequestering greenhouse gases has been a goal of the tax system. It 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<sub>2</sub>.

This an expensive credit, but it may swing business decisions away from simple coal-fired plants in favor this much preferable gasification technology, which seems worthwhile, in spite of the 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.<sup>329</sup> The amount of the credit, which operates as a refund check from the government, leaves the investor free potentially to fund the project 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 will be the voice of the coal-fired plant operators, especially if gasification plants sequester CO<sub>2</sub> emissions.

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327. Under § 48A(f)(2).

328. 7 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 55percent. § 48B(f)(2).

329. See, e.g., *Environmentalists Cite Questions Concerns in Opposing IGCC Plant*, INSIDE THE FPA, § 2. January 12, 2007 (Inside Washington Publishers).

*B. Twenty-Percent Tax Credit for Qualifying Gasification Projects*

**Summary:** Investments in coal gasification projects that will produce electrical energy qualify for a substantial income tax credit.

The 2005 Energy Act added the “qualifying gasification project credit” as a new component of the investment credit.<sup>330</sup> The credit for any tax year is twenty percent of the “qualified investment” for the tax year,<sup>331</sup> except for any qualified investment for which a credit is allowed under for as advanced coal project credit, but a taxpayer can select between which credit to take if both are otherwise available.<sup>332</sup>

The “qualified investment” for any tax year is the basis of eligible property, meaning 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.<sup>333</sup> 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 carried on by an “eligible entity”<sup>334</sup> and any part of whose qualified investment is certified under the qualifying gasification program as eligible for the credit, but up to six hundred and fifty million dollars.<sup>335</sup> That is, the credit limit per project is one hundred and thirty

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330. Sections 46(4) and 48B as amended by 2005 Act § 1307(a), (b), effective for periods after August 8th, 2005. It is in turn part of the general business credit.

331. Section 48B(a).

332. Section 48A provides the advanced project credit.

333. Section 48B(b)(1). This prevent including land.

334. 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. § 48B(c)(7).

335. Section 48B(c)(1)(C). Gasification technology is any process which 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 carbon monoxide and oxygen for direct use or later chemical or physical conversion; agricultural or plant waste, byproduct of wood or paper mill operations, including lignin in spent pulping liquors, and other forestry maintenance products, but not paper which is commonly recycled. §§ 48B(c)(4)(A)-(B).

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, § 48B(c)(7)(D) petroleum residues, forest

million dollars.

**Revenue Effects:** The Joint Committee on Taxation has estimated the budget effects of this credit and the prior one [for qualifying advanced coal projects] to be as follows: Loss of twenty-six million dollars in 2006; loss of fifty-five million dollars in 2007; loss of one hundred and one million dollars in 2008; loss of one hundred and fifty-one million dollars in 2009; loss of two hundred and twelve million dollars in 2010; loss of two hundred and fifty-four million dollars in 2011; loss of two hundred and sixty million dollars in 2012; loss of two hundred and thirty-eight million dollars in 2013; loss of one hundred and seventy-eight million dollars in 2014; and loss of one hundred and thirty-six million dollars in 2015. Total estimated revenue losses as a result of these provisions in the years 2005-2010 are five hundred and forty-six million dollars. Total estimated revenue losses as a result of these provisions in the years 2005-2015 are \$1.612 billion.<sup>336</sup> The White House estimated the revenue losses as follows in millions of dollars<sup>337</sup>

Credit for investment in clean coal facilities

Corporations

2006	2007	2008	2009	2010	2011	2012	2008-12
--	30	50	80	130	130	250	690

**Comment:** Coal gasification is a promising technology using steam into extract energy from coal via converting the coal to several gases (mainly hydrogen and carbon monoxide, allowing separation of the greenhouse gases for use as fertilizers, chemicals, and injection of CO<sub>2</sub> for sequestration with left over solids returned to the mixture). In the end it roughly equals natural gas in a fuel for cleanliness and efficiency. The very existence of this technology may ease the introduction of carbon taxes and other restraints on CO<sub>2</sub> emissions. A broader and simpler solution would be a carbon tax on electricity production. Congress chose the weaker alternative of stimulating relatively more efficient production not calibrated to CO<sub>2</sub> output and highly advanced and very costly advanced production methods that offer to reduce or eliminate CO<sub>2</sub>

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products, and agriculture, including feedlots and dairy operations. § 48B(c)(7).

336. Joint Committee 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 A-6), July 27, 2005.

337. White House 2008 Budget Item 20.

production. It is unclear to what extent the relatively small (five percentage point) additional credit will tease out the far superior technology.

The Swedish approach to limiting air pollution is another alternative. Sweden imposes a charge on nitrogen oxide of SEK 40 (US \$4.60 at the March 2007 exchange rate) per kilo of nitrogen oxides 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 than a revenue purpose. One plant reportedly offers its operators a bonus if NOx 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 NOx. The tax could be adapted to any large emitter and to other emissions, including CO2. 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 Project or Qualifying Gasification Projects*

**Summary:** This limit guarantees tax credits go only to the extent the investor pleases his own money or credit at risk.

In the usual case, the investment tax credit is not available to the extent a project is funded by money as to which the taxpayer claiming the credit is not personally liable. This general rule has been extended to credits for qualifying advanced coal project or qualifying gasification projects.<sup>338</sup> The new rule applies to periods after August 8, 2005.

**Comment:** This is appropriate and not noteworthy. It conforms to the usual requirement that tax credits be based on amounts as to 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 or coke gas. Coke and coke gas are just two types of fuels associated with the steel production industry. Both of which are actually byproducts of the coking process.

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338. Section 49F(a)(1)(C), as amended by 2005 Act § 1307(c)(1).

The following explanation is from a corporate website:

The coking process produces coke, coke gas and tar. The main constituents of coke gas are hydrogen, methane 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.<sup>339</sup>

Certain fuels produced from “nonconventional sources” and sold to unrelated parties are eligible for an elective income tax credit of three dollars (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 generally expired except for certain biomass gas and synthetic fuels sold before 2008, and produced at facilities placed in service after 1992 and before mid-1998.

The 2005 Act added a production credit of three dollar per barrel-of-oil equivalent (indexed for inflation after 2004) for qualified facilities that produce coke or coke gas.<sup>340</sup> Strangely, the credit will apply in the case of a facility for producing coke or coke gas that was placed in service before 1993 or after June 30, 1998 and before 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

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339. GE ENERGY, GASES FROM THE STEEL INDUSTRY, [http://www.ge-energy.com/prod\\_serv/products/recipe\\_engines/en/gas\\_types/coke\\_gas.htm](http://www.ge-energy.com/prod_serv/products/recipe_engines/en/gas_types/coke_gas.htm). Coke also comes from petroleum and is often used for, e.g., dry cells and electro-diesel comes from refiners.

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

equivalent” is the amount of the fuel that has BTU content of 5.8 million BTUs of energy. The three dollar credit for coke and coke gas does not apply to any facility producing qualified fuels for which a credit was available as a fuel from a nonconventional source<sup>341</sup> for the tax year.<sup>342</sup> The 2006 Act gave away some more revenue—how much is unstated—by providing that the phase out adjustments that apply when the price of oil rises do not apply to coke and coke gas production.<sup>343</sup>

**Revenue Effects:** The Joint Committee on Taxation has estimated the budget effects of this provision to be as follows: Loss of five million dollars in 2006; loss of two hundred and twelve million dollars in 2007; loss of seventeen million dollars in 2008; loss of twenty-three million dollars in 2009; loss of nineteen million dollars in 2010; loss of thirteen million dollars in 2011; loss of eight million dollars in 2012; loss of two million dollars in 2013; no effect in 2014 and 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 are seventy-six million dollars. Total estimated revenue losses as a result of this provision in the years 2005-2015 are one hundred and one million dollars.<sup>344</sup> The White House states the revenue loss as follows for the credit in millions of dollars.<sup>345</sup>

**Comment:** This appears to be an industry victory that serves no national security or environmental purposes. At worst it is a credit from continuing to harvest this material as a refinery product. The 2006 Act confirmed that petroleum coke is disqualified, perhaps thereby removing an objection to the provision.<sup>346</sup>

## VIII. The Biodiesel and Ethanol Industries

### A. Biodiesel Fuels Income Tax Credits

**Summary:** Mixers of biodiesel qualify for a one dollar/gallon credit. In essence, the Code has been amended to grant tax relief for biodiesels in two forms:

- biodiesels qualify for a major credit against the highway tax imposed on diesel fuels,

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341. Section 29(g).

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

343. Section 45K(g)(2)(D), as amended. See § 45K(b)(1) for phase-out of nonconventional source fuel production.

344. Joint Committee 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 B-1), July 27, 2005.

345. White House 2008 Budget Item 12.

346. Section 45K(g)(1), as amended by 2006 Act § 211(b).

- 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<sup>347</sup>. In the United States soy beans provide most if not all the vegetable oil. Europe uses rapeseed instead. While diesel engines can run on these oils in their unrefined form, they tend to injure the engines hence the need for refining; the 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 the regular diesel is usually expressed as a B value. For example, a mixture of twenty percent biodiesel would be expressed as B20. The IRS describes biodiesels as follows in a 2002 Revenue Ruling:<sup>348</sup>

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 paraffin. 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 twenty percent biodiesel and eighty percent diesel fuel.

In practice, there are three kinds of biodiesel:

1. Biodiesel from farm productions, mainly of soy beans;
2. Recycled grease from restaurants, and
3. "Renewable Diesel," which entails heated, steamed animal parts.

The credit itself has three components, a biodiesel mixture credit, a biodiesel credit<sup>349</sup> and a small biodiesel refiner credit.

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347. The *Wall St. Journal* described it this way:

About 35 plants across the country make nothing but biodiesel. The process, more like winemaking than oil refining, typically occurs in vats. Vegetable oil or animal fat is dumped in, a chemical catalyst and an alcohol such as methanol is added, and the mixture is heated until a layer of glycerin forms. The glycerin is removed, and what's left is fuel. Some biodiesel plants consist of not much more than a tank inside a rural shed.

348. Rev. Rul. 2002-76, 2002-2 C.B. 840.

349. 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

### 1. The Biodiesel Mixture Credit

This credit is fifty cent per gallon of biodiesel<sup>350</sup> (one dollar per gallon for agri-biodiesel<sup>351</sup>) that the taxpayer mixes in the production of a so-called qualified biodiesel mixture.<sup>352</sup> So, for example, if a taxpayer uses one hundred gallons of appropriately refined soy oil and four hundred gallons of regular diesel, resulting in five hundred gallons of B20, the taxpayer is entitled to a fifty dollar credit against its federal income tax liability for the year.

A qualified biodiesel mixture means 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<sup>353</sup> to this definition, determined without regard to any use of kerosene, which<sup>354</sup> the taxpayer producing the mixture either sells to any person for use as a fuel<sup>355</sup> or uses as a fuel in producing the mixture.<sup>356</sup> Biodiesel that is 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.<sup>357</sup> No biodiesel mixture credit is permitted as to any “casual off-farm production” of a qualified biodiesel mixture.<sup>358</sup> The primary beneficiaries of this program are refiners who add biodiesel to their gas or diesel fuel. A credit of one dollar per gallon represents an enormous subsidy.

### 2. The Biodiesel Credit

This credit is fifty cents per gallon of pure biodiesel—one dollar per

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tax credit claims to block double tax benefits for the same biodiesel.

350. Notice that “biodiesel” excludes “agribiodiesel” and “renewable diesel.” The tax law at § 40A(d)(1) defines *biodiesel* to mean the 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 the EPA under 211 of the Clean Air Act (42 U.S.C. 7545) and the requirements of the American Society of Testing and Materials D6751.

351. 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. § 40A(d)(2). The non-inclusive nature of the list means other sources of a similar type may also qualify.

352. Section 40A(b)(1)(A).

353. Section 4083(a)(3).

354. Section 40A(b)(1)(B).

355. Section 40A(b)(1)(B)(i).

356. Section 40A(b)(1)(B)(ii).

357. Section 40A(b)(1)(C)(i).

358. Section 40A(b)(1)(D). The term casual off-farm production is not defined but seems reasonably self-evident.



gallon for pure agri-biodiesel<sup>359</sup>—the taxpayer used during the tax year as a fuel in a trade or business,<sup>360</sup> and was not sold at retail,<sup>361</sup> or that the taxpayer sold at retail and placed in the buyer's vehicle's fuel tank.<sup>362</sup> Virtually all biodiesel is agri-biodiesel. For example, if the party that mixed the B20 in the previous example also sold one hundred gallons of pure biodiesel to a trucker, the party would be entitled to an income tax credit of fifty dollars, being one hundred gallons times fifty cents per gallon. It would be one hundred dollars if the sale were of agri-biodiesel.<sup>363</sup> It seems it will almost always be agri-biodiesel, so really one dollar per gallon is the uniform subsidy.

Obtaining the credit is conditioned on the taxpayer's getting a certification from the producer of the biodiesel identifying the product and the percentage of biodiesel and agri-biodiesel in the product.<sup>364</sup>

The credit is computed in a way similar to the foreign tax credit<sup>365</sup> in that taxpayer must initially include the amount of the biodiesel fuel credit in gross income.<sup>366</sup> For example, if the taxpayer has pre-tax net income of one hundred dollars and a ten dollar credit, its taxable income would be one hundred and ten dollars. This will cut back the tax value of the credit, but far from eliminate it.

**Example:** Taxpayer is a corporation in the thirty-five percent marginal income tax bracket. It receives a ten dollars biodiesel credit for the year. Its income will rise by thirty-five percent of ten dollars, viz., \$3.50, reducing the credit to \$6.50 from ten dollars. One has to wonder why Congress did not simply provide for a smaller credit. As it is, the credit will benefit taxpayers in lower income tax bracket more than those in higher brackets because the net credit declines as tax brackets rise.

### 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<sup>367</sup> at a rate of ten cents for each gallon of qualified

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359. Section 40A(b)(2)(A).

360. Section 40A(b)(2)(A)(i).

361. Section 40A(b)(2)(B).

362. Section 40A(b)(2)(A)(ii).

363. Section 40A(b)(3).

364. Section 40A(b)(4).

365. Section 78.

366. Section 87, as amended by 2004 Act § 302(c)(1)(A). See § 78 for the foreign tax credit "gross-up."

367. 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. § 40A(e)(1). For a facility in which more than one person has an interest, productive

agri-biodiesel<sup>368</sup> produced.<sup>369</sup> This creates the possibility of agri-biodiesel with a \$1.10 per gallon subsidy. The “qualified agri-biodiesel production”<sup>370</sup> of any producer for any tax year cannot exceed 15,000,000 gallons, and the refiners’ capacity to produce agri-biodiesel cannot exceed sixty million gallons. § 40(A)(e)(1).<sup>371</sup> In order for the credit to apply, the producer must sell the product to another person, thereby limiting this extra credit to small operators:

- (1) 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).
- (2) for use by the other person as a fuel in a trade or business; or
- (3) for sale at retail to another person and placed in the fuel tank of that other person, or
- (4) for use or sale the producer for any purpose described in (1), (2) or (3).<sup>372</sup>

The certification requirement that applies to the biodiesel mixture credit and the biodiesel credit does not apply to the small agri-biodiesel producer credit.<sup>373</sup> According to the *Wall Street Journal*,

Cargill Inc., the big agricultural company, announced it plans to build a particularly big biodiesel plant . . . beside a Cargill soybean-processing plant in Iowa Falls . . . [will] turn out 37.5 million gallons of biodiesel annually—more than the U.S. produced last year.

Perhaps it plans to claim small credit on its first fifteen million gallons of production. Evidently, it could.

In an attempt to prevent abuse, aggregation rules prevent companies like from establishing many small agri-biodiesel firms, each of which

capacity is allocated among those persons in the manner that IRS prescribes. § 40A(e)(4).

368. 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.

369. Section 40A(b)(5)(A).

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

371. Section 40A(b)(5)(C).

372. Section 40A(b)(5)(B)(ii).

373. Section 40A(b)(4), as amended by 2005 Act § 1345(d)(1).

could claim the ten cents per gallon credit.<sup>374</sup> The aggregation rule treats all affiliates as one large company that qualifies for one credit.

**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.” The Joint Committee on Taxation has estimated the revenue effects of these two provisions combined to be as follows: loss of thirty-three million dollars for 2005; loss of fifty-seven million dollars in 2006; loss of sixteen million dollars in 2007; no estimates are given for 2008–2014. Total estimated revenue losses as a result of this provision in the years 2005–2009 is one hundred and seven million dollars. Total estimated revenue losses as a result of this provision in the years 2005–2014 is one hundred and seven million dollars.<sup>375</sup>

This subsidy is not likely to significantly dent U.S. oil consumption anytime soon. An Energy Department study last year concluded the U.S. is producing enough oil from plants and animal fats to make 1.6 billion gallons of biodiesel annually—only about four percent of the diesel fuel used on the nation’s roads.<sup>376</sup> 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 fifteen million barrels of production.<sup>377</sup>

The White House has reported the revenue losses from the small agri-biodiesel producers’ credit as follows in millions of dollars.<sup>378</sup>

#### Corporations [\$0]

#### Individuals

2006	2007	2008	2009	2010	2011	2012	2008-12
90	180	200	30	20	10	10	270

#### 4. Deduction for Unused Credit

The biodiesel fuels credit will be treated as one of the “qualified

374. Section 40A(e)(2).

375. Joint Committee on Taxation, *Estimated Budget Effects of The Conference Agreement For H.R.4520, The “American Jobs Creation Act of 2004,”* JCX-69-04 (Provision III-A., 9), Oct. 7, 2004.

376. WALL ST. J., July 5, 2005 Tuesday, pg. A1.

377. I.e., 15,000,000 gallons times 10¢/gallon.

378. White House 2008 Budget Item 47.

business credits<sup>379</sup> 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 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. To top it off, § 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/gallon, compared to 18.4 cents for gasoline.<sup>380</sup> To put it simply, Congress has reduced the federal excise tax on diesel fuel by one cent per percentage point of agri-biodiesel that was mixed into the final gallon of product.<sup>381</sup> In the case of B20 agri-biodiesel, that means the cost of the blend drops by twenty cents a gallon to 4.4 cents/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.<sup>382</sup>

This suggests that even if the credits exceed the tax paid, the taxpayer will be paid the amount of the credit.<sup>383</sup>

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379. Section 196(c)(11), as amended by 2004 Act § 302(c)(2).

380. Ann. 97-91, 1997-37 IRB 25: § 4081(a)(2).

381. § 6426(c).

382. § 6427(e)(1).

383. See 8 MERTENS LAW OF FED. INCOME TAX'N § 32:94-96.50 (2006).

## 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.<sup>384</sup> Evidently, this is just a revenue raiser.

**Revenue Effects:** The Joint Committee on Taxation, evaluating the 2004 Act has estimated the revenue effects of this provision to be as follows: gain of seventy-four million dollars in 2005; gain of one hundred and seven million dollars in 2006; gain of one hundred and eight million dollars in 2007; gain of one hundred and eight million dollars in 2008; gain of one hundred and eight million dollars in 2009; gain of one hundred and eight million dollars in 2010; gain of one hundred and eight million dollars in 2011; gain of one hundred and eight million dollars in 2012; gain of one hundred and seven million dollars in 2013; gain of one hundred and six million dollars in 2014; and gain of thirty-six million dollars in 2015. Total estimated revenue gains as a result of this provision in the years 2005-2009 is five hundred and five million dollars. Total estimated revenue gains as a result of this provision in the years 2005-2014 is \$1.043 billion.<sup>385</sup>

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

Section 40 of the Code offers a ten cent per gallon credit on qualified ethanol fuel production, up to a maximum of fifteen million gallons. It is available only to “eligible small ethanol producers,” formerly meaning a person, with not more than a thirty million gallon production capacity through the taxable year. The 2005 Energy Tax Act raised the limit to sixty million gallons.<sup>386</sup> It does not increase the fifteen 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:** The Joint Committee for Taxation has estimated the revenue effects of this provision to be as follows: loss of one million dollars for 2005; loss of twenty-two million dollars in 2006; loss of twenty-four million dollars in 2007; loss of twenty-eight million dollars

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384. 2004 Act § 870(c) amending § 4083(a)(3) and § 7427(h)(2).

385. Joint Committee on Taxation, Estimated Budget Effects of The Conference Agreement For H.R.4520, The “American Jobs Creation Act of 2004,” JCX-69-04 (Provision IV-C-20), October 7, 2004.

386. Section 40(g), as amended by 2005 Act § 1347(a), applicable to years ending after August 8, 2005.

in 2008; loss of twenty-six million dollars in 2009; loss of twenty-six million dollars in 2010; loss of twenty-three million dollars in 2011; loss of fourteen million dollars in 2012; loss of eleven million dollars in 2013; loss of five million dollars in 2014; and no estimate for 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is one hundred and twenty-eight million dollars. Total estimated revenue losses as a result of this provision in the years 2005-2015 is one hundred and eighty-one million dollars.<sup>387</sup>

**Comment:** This parallels the small agribiodiesel 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:** Self-explanatory.

Under prior law, the credit against income tax for sale or use of alcohols (fifty one cent per gallon for ethanol for 2005-2007, and sixty cent per gallon for methanol with reduced credits for low-proof alcohols) used, either straight or blended with gasoline or other liquid fuel used in internal combustion engines, as motor fuel, and for certain small ethanol producers (ten 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¢ per gallon.

The credit had to be reduced to take into account any tax benefit provided by the various excise tax provisions that reduced the excise tax rates. The 2004 Job Act extended the applicable alcohol fuels income tax credit through the end of 2010,<sup>388</sup> and modified the credit termination rule to provide that the credit does not apply:

- to any sale or use after 2010<sup>389</sup>, or
- for any period before 2011 when the removal-at-terminal excise tax on gasoline, diesel fuel and kerosene drops to 4.3¢ per gallon.<sup>390</sup>

Also, the rule coordinating the alcohol fuels income tax credit rules with the excise tax rate reduction rules were modified to reduce any alcohol

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387. Joint Committee on Taxation, *Estimated Budget Effects of The Conference Agreement For Title XIII. Of H.R. 6, The "Energy Tax Incentives Act of 2005,"* JCX-59-05 (Provision D-5), July 27, 2005.

388. Section 40(h)(1), as amended by 2004 Jobs Act § 301(c)(4)(A); § 40(h)(2), as amended by 2004 Act § 301(c)(4)(B).

389. Section 40(e)(1)(A), as amended by 2004 Jobs Act § 301(c)(3)(A).

390. Section 40(e)(1)(B), as amended by 2004 Jobs Act § 301(c)(3)(B).

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<sup>391</sup>; and the excise tax refund alternative to the excise tax credit for alcohol fuel and biodiesel mixtures,<sup>392</sup> 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,<sup>393</sup> which were eliminated by the 2004 Jobs Act;
  - the reduced producer's/importer's tax rates for aviation fuel-alcohol mixtures,<sup>394</sup> 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,<sup>395</sup> referring to fuels which are at least eighty five percent ethanol, methanol or other alcohol made from natural gas.<sup>396</sup>

**Revenue Effects:** The Ways and Means Committee has estimated the revenue effects from this provision to be as follows: No gain or loss in the years 2005-2007; loss of two million dollars in 2008; loss of six million dollars in 2009; loss of eight million dollars in 2010; loss of eight million dollars in 2011; loss of six million dollars in 2012; loss of three million dollars in 2013. Total estimated revenue losses as a result of this provision in the years 2005-2009 is eight million dollars. Total estimated revenue losses as a result of this provision in the years 2005-2014 is thirty-four million dollars.<sup>397</sup>

The White House figures are as follows for the item captioned "Alcohol Fuels Credit":<sup>398</sup>

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391. Section 6426.

392. Section 6427(e).

393. Section 4081(c).

394. Section 4091(c).

395. Section 4041(m).

396. Section 40(c), as amended by 2004 Act § 301(c)(1).

397. Ways and Means Committee, *Estimated Budget Effects of the Conference Agreement for H.R. 4520, The "American Jobs Creation Act of 2004,"* <http://waysandmeans.house.gov/media/pdf/hr4520/hr4250confrepretable.pdf> (Provision II-A-8), December 7, 2006.

398. White House 2008 Budget at Item 17. The explanation given in the Budget seems to say that this combines the income tax and excise tax credits.

## Corporations

2006	2007	2008	2009	2010	2011	2012	2008-12
40	40	50	50	60	20	--	180

## Individuals

2006	2007	2008	2009	2010	2011	2012	2008-12
10	10	10	20	20	10	--	60

The item includes the following stunning footnote 1:

In addition, the alcohol fuel credit results in a reduction in excise tax receipts (in millions of dollars) as follows: 2006 \$2,570; 2007 \$2,990; 2008 \$3,460; 2009 \$4,280; 2010 \$4,990; 2011 \$1,440; 0 in 2012.

These are very large numbers, especially for a footnote. ADM reportedly has the largest share of this market, namely twenty five percent.<sup>399</sup>

**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.<sup>400</sup>

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 better to influence the entire market with global effect, e.g., a carbon tax, or an oil import fee, or to accept this new hodgepodge of relaxations and subsidies, or simply 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

399. Business Week Online, *Ethanol Fuels ADM's Profits*, February 2, 2007. Its sales of the product were \$9.44 billion. Business Week Online, *Renewable Fuels News*, November 6, 2007.

400. David Koplow, *Biofuels-At What Cost? Government Support for Ethanol and Biodiesel in the United States*, Oct. 2006, Intl. Inst. for Sustainable Development. (extensive discussion).



to the benefits, but the subject is highly contentious and merits Congressional hearings? For example, one source,<sup>401</sup> puts the cost of displacing gasoline with ethanol at least \$1.80 per gallon and \$1.25/gallon for cellulosic ethanol, and claims it costs five hundred dollars/ metric ton of CO<sub>2</sub>—equivalent removed, which is far more than at the cost of buying an emissions trading right for the same volume of CO<sub>2</sub>. Another study asserts that ethanol produces twenty-five percent more energy than it produces while biodiesel produces ninety-three percent more and is far preferable in terms of emissions reduction.<sup>402</sup> 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 U.S. reportedly imposes tariffs at the rate of fifty-four cents per gallon on imported ethanol.<sup>403</sup> Brazil claims this anti-competitive tariff is designed to block its exports and keeps ethanol from becoming a standard commodity.<sup>404</sup> 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 carbon dioxide emissions. The energy security argument is undermined by the small contribution these fuels are likely to provide in place or imported petroleum and the carbon reduction argument is weakened by the amount of energy used to produce the plants. One critical study suggests that CO<sub>2</sub> reduction is trivial in the sense that it costs five hundred dollars to eliminate a ton of CO<sub>2</sub> produced by ethanol fuels, compared to the far lower price for which a ton of CO<sub>2</sub> emissions rights can be purchased on the European carbon exchange.<sup>405</sup>

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401. *Id.* at pp. 53 *et seq.*

402. N.Y. TIMES Business Section, *It's Corn vs. Soybeans in a Biofuels Debate*, 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.

403. See U.S. Fed. News (May 8, 2006), 2006 WLNR 8314876, citing statements of Senator Jon Kyle.

404. N.Y. TIMES, *With Big Boost From Sugar Cane, Brazil Is Satisfying Its Fuel Needs*, April 10, 2006, available at <http://www.nytimes.com/2006/04/10/world/americas/10brazil.html?pagewanted=2&ei=5088&en=03adc82c67600388&ex=1302321600&partner=rssnyt&emc=rss>.

405. D. Koplow, *Biofuels: At What Cost? Government Support for Ethanol and Biodiesel in the United States*, October 2006, International Institute for Sustainable

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

**Summary:** Taxpayer who install these advanced ethanol plants can electively claim fifty percent bonus depreciation and alternative minimum tax relief are for new “qualified cellulosic biomass ethanol plant property” (“QCEPP”) they buy after December 20, 2006 and place in service before 2013.<sup>406</sup> In addition, the usual level of depreciation is also allowed. The property must be used in the United States. This new treat appears in the form of new Code section 168(l).

In order to be a QCEPP, 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.<sup>407</sup> 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.<sup>408</sup> However, there is a specialized form of depreciation recapture if they are disposed of.<sup>409</sup> 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 Effect:** The Joint Committee on Taxation estimates the revenue losses as one million dollars in 2008; five million dollars in 2009 and 2010; seven million dollars in 2011; twelve million dollars in 2012; no gain or loss in 2013; and revenue gains of eight million dollars in 2014, six million dollars in 2015, five million dollars in 2016 for a revenue loss of seventeen million dollars in 2007-2011, and a net revenue loss over the 2007-2016 period of nine million dollars.<sup>410</sup>

**Comment:** This is a huge boost for an environmentally superior industry and puts the construction of these plants on a 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.

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Development.

406. 2006 Act § 209(b).

407. Section 168(l)(3).

408. Joint Committee on Taxation, Technical Explanation of H.R. 6408, The “Tax Relief and Health Care Act of 2006,” as Introduced in the House on December 7, 2006, JCX-50-06 p. 64, December 7, 2006.

409. Rules similar to the rules under § 179(d)(10) apply. Joint Committee on Taxation, Technical Explanation of H.R. 6408, The “Tax Relief and Health Care Act of 2006,” as Introduced in the House on December 7, 2006, JCX-50-06 p. 64-65, December 7, 2006.

410. Joint Committee on Taxation, General Explanation of Tax Legislation Enacted in the 109<sup>th</sup> Congress, January 12, 2007, JCS-1-07, Appendix at p.800 (Item II-1) 51-06.

*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 US 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.<sup>411</sup> There was no excise tax credit or for the sale or use of alternative fuels such as liquefied petroleum gas, liquefied natural gas, or compressed natural gas.<sup>412</sup>

The 2005 Transportation Act created two new excise tax credits and alternative refund rules for alternative fuels and alternative fuel mixtures. For the sale or use for any period after September 30 of 2006, the law now allows a credit (1) for the total of the alternative fuel credit and the alternative fuel mixture credit against the § 4041 retail excise fuels tax; and (2) 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.<sup>413</sup> This does not change the existing alcohol fuel mixture and biodiesel mixture excise tax credits other than 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 IRS under § 4101 to claim the credit.<sup>414</sup>

The alternative fuel and alternative fuel mixture credits end as to sales or use after September 30, 2009.<sup>415</sup> The date is September 30, 2014 for any sale or use involving liquefied hydrogen.<sup>416</sup>

The alternative fuel credit equals fifty cent times the number of gallons of an alternative fuel, or gasoline gallon equivalents, of a non-liquid alternative fuel, that the taxpayer sells for use as a fuel in a motor vehicle or motorboat, or is so used by the taxpayer.<sup>417</sup> "Alternative fuel" is defined<sup>418</sup> as:

(a) liquefied petroleum gas (LPG);

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

412. See § 4041 for changes to the retail excise fuels tax with respect to alternative fuels.

413. Section 6426(a).

414. Section 6426(a).

415. Section 6426(d)(4), as amended by § 11113(b)(2) of The 2005 Transportation Act.

416. Section 6426(e)(3).

417. Section 6426(d)(1).

418. Section 6426(d)(2).

- (b) P Series Fuels,<sup>419</sup> generally meaning renewable non-petroleum 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,<sup>420</sup> and
- (f) liquid hydrocarbons derived from biomass,<sup>421</sup> that is, any organic material other than oil and natural gas, and coal including lignite.

For these purposes, “alternative fuel” excludes ethanol, methanol, or biodiesel.<sup>422</sup> “Gasoline gallon equivalent,” with respect to any non-liquid alternative fuel, refers to the amount of that fuel having a Btu content of 124,800 (higher heating value).<sup>423</sup> 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 fifty cent times the number of gallons of the alternative fuel the taxpayer uses in order to produce an alternative fuel mixture for sale or for use in the taxpayer’s business.<sup>424</sup> An “alternative fuel mixture” is defined<sup>425</sup> as a mixture of an alternative fuel and a taxable fuel<sup>426</sup> (generally, gasoline, diesel fuel or kerosene) that:

- (a) is sold by the taxpayer who produces the mixture to any person for use as a fuel; or
- (b) 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

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419. 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.

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

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

422. Section 6426(d)(2).

423. Section 6426(d)(3).

424. Section 6426(e)(1), as amended by § 11113(b)(2) of the 2005 Transportation Act.

425. Section 6426(e)(2).

426. As it is defined in §§ 4083(a)(1)(A)-(C).

respect to alternative fuels. Thus, if someone sells or uses an alternative fuel as fuel in a motor vehicle or motorboat in their business, the IRS will pay that person an amount equal to the alternative fuel credit,<sup>427</sup> the provided the person is registered under § 4101.<sup>428</sup> These payment rules do not apply to any alternative fuel or alternative fuel mixture, other than one involving liquefied hydrogen, that is sold or used after September 30, 2009,<sup>429</sup> nor to any alternative fuel or alternative fuel mixture that involves liquefied hydrogen which is sold or used after 2014.<sup>430</sup>

These provisions apply to any sale or use after September 30, 2006.<sup>431</sup>

**Revenue estimates:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: Loss of one hundred and sixty-two million dollars in 2007; loss of one hundred and seventy-five million dollars in 2008; *gain* of forty-six million dollars in 2009; gain of twenty-five million dollars in 2010; gain of thirty-nine million dollars in 2011; gain of forty-two million dollars in 2012; gain of forty-four million dollars in 2013; gain of forty-seven million dollars in 2014; gain of forty-nine million dollars in 2015. Estimated net revenue losses (there were gains in years 2009-2010) as a result of this provision in the years 2005-2010 is two hundred and sixty-five million dollars. Estimated net revenue losses (there were gains in years 2009-2015) as a result of this provision in the years 2005-2015 is forty-four million dollars.<sup>432</sup>

**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 eighty five percent 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¢ per gallon,

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427. Section 6427(e)(2), as amended by § 11113(b)(3)(C)(iii) of 2005.

428. Section 6427(e)(4).

429. Section 6427(e)(5)(C).

430. Section 6427(e)(5)(D).

431. The 2005 Transportation Act § 11113(d).

432. Joint Committee 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.

consisting of the otherwise applicable 18.3¢ per gallon regular retail excise tax rate<sup>433</sup> minus the sum of (a) the six cents per gallon excise tax, and (b) the LUST tax” of .05¢ per gallon. In contrast, the reduced rate for qualified ethanol fuel is 13.25¢ per gallon consisting of the otherwise applicable 18.3¢ per gallon regular retail excise tax rate (a) less, for sales or uses for calendar years 2001 through 2007, ten percent of the alcohol fuel credit “blender amount” (i.e., for 2005-2007, 51¢ per gallon) for the calendar year of the sale or use, i.e., for 2005-2007, 5.1¢ per gallon, and (b) plus the special .05¢ per gallon LUST tax rate.<sup>434</sup>

**Revenue Effect:** It is apparently described above in VIII.C in connection with extension of alcohol fuels income tax credit, but it should include about nineteen billion dollars in revenue losses from declining excise tax receipts. This presumably reflects taxpayers’ ability to collect the credit by means of the excise tax refund procedure.

**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 renewable resources should be subsidized and to what extent.

## IX. Transportation Industry

### A. *Highway or Surface Freight Transfer Facility Bonds Get Tax-Exempt “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 as exempt facility bonds” and can, therefore, pay tax-exempt interest.<sup>435</sup> This will cost substantial federal revenues.

These facilities are evidently 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<sup>436</sup> 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 that title 23

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433. See § 4041(a)(2).

434. Section 4041(b)(2)(C)-(D), as amended by 2006 Act § 208(a)-(b).

435. Section 142(a)(15), as amended by 2005 Act § 11143(a).

436. As in effect on August 10, 2005.

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).<sup>437</sup>

The aggregate amount the Secretary of Transportation can allocate to qualified highway or surface freight transfer facilities cannot exceed fifteen billion dollars.<sup>438</sup> There are limited restrictions on refunding bonds,<sup>439</sup> 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.<sup>440</sup>

To qualify, at least ninety-five percent 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 on 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 ninety days after the end of that five-year period.<sup>441</sup> The Secretary of the Treasury, can extend the five-year period if the issuer shows that the failure to meet that five-year is caused by circumstances beyond its control.<sup>442</sup>

**Revenue Estimate:** The White House estimate of revenue losses in millions of dollars is:<sup>443</sup>

Corporations							
2006	2007	2008	2009	2010	2011	2012	2008-12
10	15	20	25	25	25	25	120
Individuals							
2006	2007	2008	2009	2010	2011	2012	2008-12
15	35	55	70	70	75	75	345

437. Section 142(m)(1),

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

439. Section 142(m)(4).

440. Section 146(g)(3), as amended by 2005 Act § 11143(c).

441. Section 142(m)(3).

442. Section 142(m)(3).

443. White House 2008 Budget Item 83.

**Comment:** This tax subsidy is designed to help the financing of inter-modal freight transfer facilities. Its implications as to the 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 gross vehicle (i.e., truck or bus) weight of at least 55,000 pounds. The highway tax was scheduled to expire for use after September of 2006. The 2005 Transportation Act extended the tax (and exemptions) through September 30, 2011.<sup>444</sup>

**Revenue Estimate:** 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 twelve percent 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 “gross vehicle weight” of 33,000 pounds or less, and on trailers with a gross vehicle weight of 26,000 pounds or less. This means that highway tractors in combination with a trailer or semi trailer were subject to the twelve percent retail excise tax, whatever their weight. The 2005 Transportation Act liberalized the weight-based exclusion. Specifically, the twelve percent 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 weights not over 19,500 pounds and the tractor-trailer combination weighs not over 33,000 pounds.<sup>445</sup>

**Revenue Effects:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: Loss of one million dollars in 2005; loss of two million dollars in 2006; loss of two million dollars in 2007; loss of three million dollars in 2008; loss of three million dollars in 2009; loss of three million dollars in 2010; loss of three million dollars in 2011; loss of three million dollars in 2012; loss of three million dollars in 2013; loss of three million dollars in 2014; and loss of three million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is fourteen million dollars. Total estimated revenue losses as a result of this provision in the years

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444. Section 4483(h), as amended by 2005 Act § 11101(b)(2).

445. Section 4051(a)(4) as amended by 2005 Transportation Act § 1112.



2005-2015 is thirty-one million dollars.<sup>446</sup>

**Comment:** A small victory for smaller trucks.

*D. Gas Guzzler Tax Pushed Back for Limousines*

**Summary:** Self-explanatory.

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 pounds unloaded gross vehicle weight.

Automobiles with a fuel economy of under 22.5 miles per gallon are subject to the tax, which is imposed in graduated amounts, ranging from \$1,000 to \$7,700 per automobile, depending on its 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 pound weight limit.<sup>447</sup> The 2005 Transportation Act deleted limousines from the definitions of passenger automobiles if they weigh at least 6,000 pounds. The stated Congressional justification is that limousines are vital to commerce.<sup>448</sup>

**Revenue effect:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: Loss of three million dollars in 2006; loss of four million dollars in 2007; loss of four million dollars in 2008; loss of four million dollars in 2009; loss of five million dollars in 2010; loss of five million dollars in 2011; loss of five million dollars in 2012; loss of five million dollars in 2013; loss of five million dollars in 2014; and loss of six million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is twenty million dollars. Total estimated revenue losses as a result of this provision in the years 2005-2015 is forty-six million dollars.<sup>449</sup>

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

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

447. Section 4064(b)(1)(A), before amendment by 2005 Act § 11111(a).

448. Joint Committee on Taxation, GENERAL EXPLANATION OF TAX LEGISLATION ENACTED IN THE 109TH CONGRESS (2007), enacted on January 17, 2007, PART SIX: SAFE, ACCOUNTABLE, FLEXIBLE, EFFICIENT TRANSPORTATION EQUITY ACT: A LEGACY FOR USERS (Pub. L. 109-59) (JSC-1-07) [Reauthorization of Trust Fund Taxes., effective October 1, 2005].

449. Joint Committee 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.

*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 tax based on volume.

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 U.S., and the 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).<sup>450</sup> 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¢ per gallon. It consists of a 24.3¢ per gallon diesel fuel tax rate, plus the 0.1¢ per gallon tax that funds the Leaking Underground Storage Tank Trust Fund (LUSTTF). Under previous law, this 24.3¢ per gallon rate was scheduled to drop to 4.3¢ 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.<sup>451</sup> It also extends the 0.1¢ per gallon LUSTTF tax, which was scheduled to end after September 30, 2005, through September 30, 2011.<sup>452</sup>

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 fourteen percent water is now 19.7¢ per gallon, reduced from 24.3¢ per gallon, beginning in 2006.<sup>453</sup> The emulsion additive must be registered by a U.S. manufacturer with the Environmental Protection Agency as required in § 211 of the Clean Air Act.<sup>454</sup> The 0.1¢ per gallon LUSTTF tax also will apply, for a total tax of 19.8¢ 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,<sup>455</sup> so for those not registered, regular of 24.4¢ per gallon rate will apply.

A refund is available for tax-paid diesel fuel that was used to produce a qualifying emulsion diesel fuel. The IRS will pay the difference between the regular tax rate and the incentive tax rate for any

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450. Section 4081(a)(2)(D).

451. Section 4041(a).

452. Section 4081(d)(3).

453. Section 4081(a).

454. 42 U.S.C. § 7521 *et seq.*, as in effect on March 31, 2003.

455. Section 4081(a)(2)(D).

diesel fuel that had the removal-at-terminal tax imposed on it at the regular tax rate (24.3¢ per gallon), so long as the fuel was used to produce a diesel-water fuel emulsion that qualifies for the special 19.7¢ per-gallon “incentive” rate. The fuel must be sold or used in that person’s trade or business to qualify for the refund.<sup>456</sup> There are further administrative intricacies.<sup>457</sup>

Any person who separates the diesel fuel from the diesel-water fuel emulsion that had a reduced rate of tax is treated as a refiner of the fuel.<sup>458</sup> 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.<sup>459</sup>

**Revenue Effects:** The Joint Committee on Taxation has estimated the budget effects of this provision to be as follows: 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:** This is an administrative provision. It does not have revenue implications.

The 2005 Transportation Act<sup>460</sup> mandates that when a change in ownership of a registrant occurs, the registrant must re-register with IRS. Specifically, a person is required to re-register under the fuel excise tax provisions if, after the transaction, more than fifty percent of the

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456. Section 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.

457. Section 6427(i)(1), as amended by § 1343(b)(3) of the Energy Policy Act of 2005. Claims made pursuant to § 6427(m) are also added to refund claims that may be made if at least \$750 in excise tax refunds is payable at the end of any quarter during a person’s tax year for fuel that is either used during that particular quarter or a previous quarter in that tax year and no claim has been filed. Code § 6427(k), in general, bars anyone other than governments, their agencies, and exempt organizations from making excise tax refund claims absent a specified exception, and requires persons to claim a credit against income tax to recover the overpaid excise tax. Under § 6427(m), people who make claims are not barred from getting payment their claim and are not required to take it as a credit against their income tax as would have been required under § 6427(k). This is because of an exception to the rule fore persons that qualify under the \$750 quarterly filing provision.

458. Section 4081(c).

459. Section 4081(c).

460. Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users, P.L. 109-59, August 10, 2005.

ownership interests in, or assets of, that person are held by persons other than those who held fifty percent 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.<sup>461</sup> The civil penalty for failure to register now applies to a failure to re-register.<sup>462</sup> The additional non-assessable penalty of \$10,000 now also applies to a failure to re-register.<sup>463</sup> 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.<sup>464</sup>

**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:** This is an administrative provision. It does not have revenue implications.

Any person that operates a vessel within the bulk transfer/terminal system must register with IRS for purposes of certain excise taxes on fuels. Under prior law, an operator of a “deep-draft ocean-going vessel”<sup>465</sup> was not required to register.

The 2005 Transportation Act provides that the IRS must require every operator of a deep-draft ocean-going vessel to register with it. However, registration is not required if the vessel operator uses the vessel exclusively for the purpose of the entry of taxable fuel into the US for consumption, use, or warehousing. The operators of these vessels do not have to be registered to be exempt under the bulk transfer rules.<sup>466</sup>

**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

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461. Section 4101(a)(4).

462. Section 6719.

463. Section 7272(a).

464. Section 7232.

465. A “deep-draft ocean-going vessel” is defined as any vessel designed primarily for use on the high seas which has a draft of more than 12 feet. § 4042(c)(1).

466. Section 4081(a)(1)(B) as amended by § 11166(a)-(b)(1) of 2005.

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” means a fuel which:<sup>467</sup>

- is in a liquid, gaseous, or solid form<sup>468</sup> produced from coal (including lignite) or high carbon fly ash, and fuel used as a feedstock,<sup>469</sup>
- the taxpayer sells with the reasonable expectation that it will be used for the purpose of producing steam,<sup>470</sup>
- the taxpayer certifies as resulting (when used in the production of steam) in a “qualified emission reduction,”<sup>471</sup> and
- is produced in a manner that results in an increase of at least 50 percent 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,<sup>472</sup> i.e., it sells at prices at least 50 percent greater than the prices of the feedstock coal or comparable coal.

“Qualified emission reduction” means a reduction of at least twenty percent 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.<sup>473</sup> A “feedstock” is any raw material used in a manufacturing process to produce another product. So, a qualified refined coal 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<sup>474</sup> produced by the taxpayer at a refined coal production facility during the ten-year period beginning on the date the facility is originally placed in service.<sup>475</sup> A refined coal production facility is a facility that is placed in

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467. Section 45(c)(7)(A), as amended by 2004 Act § 710(a).

468. 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.

469. Section 45(c)(7)(A)(i).

470. Section 45(c)(7)(A)(ii).

471. Section 45(c)(7)(A)(iii).

472. Section 45(c)(7)(A)(iv).

473. Section 45(c)(7)(B).

474. Section 45(e)(8)(A), as amended by 2004 Act § 710(b)(2). This \$4.375 is indexed for inflation. § 45(b)(2).

475. Section 45(e)(8)(A)(i).

service between October 22, 2004 and 2009 that makes “refined coal.”<sup>476</sup> It seems the taxpayer for these purposes could be a lessee or operator, as long as the taxpayer is the person that produces and sells the refined coal and the facility is placed in service after October 22, 2004 and before 2009. The coal must be sold by the taxpayer<sup>477</sup> to an unrelated person<sup>478</sup> during that ten-year period.<sup>479</sup>

Rules similar to the rules of § 45(b)(3) (relating to credit reduction for grants, tax-exempt bonds, subsidized energy financing and other credits), and rules<sup>480</sup> required production to be in the U.S., 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,<sup>481</sup> apply for purposes of determining the amount of any increase in the credit for refined coal production facilities.<sup>482</sup>

**Revenue effect:** 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.<sup>483</sup> 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 really 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 received royalties from coal mining that they can treat as producing capital gains.<sup>484</sup> 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:** This provision upgrades the credit for producing fuel from a non-conventional source to part of the general business credit. Such unused credits may be carried back one year and forward twenty

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476. Section 45(d)(8), as amended by 2004 Act § 710(b)(1).

477. Section 45(e)(8)(A)(ii).

478. Section 45(e)(8)(A)(ii)(I).

479. Section 45(e)(8)(A)(ii)(II).

480. Section 45(e).

481. Section 29.

482. Section 45(e)(8)(C).

483. Joint Committee on Taxation, Estimated Budget Effects of The Conference Agreement for of H.R. 4520, The “American Jobs Creation Act of 2004,” JCX-69-04 (Provision VII-10), October 7, 2004.

484. Section 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.”

years.

Certain fuels produced from nonconventional sources within the United States 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 in the general business credit.<sup>485</sup> As a result, the credit could not exceed regular tax liability minus the tentative minimum tax for alternative minimum tax (AMT) purposes.<sup>486</sup> 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.<sup>487</sup> 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.<sup>488</sup> 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 twenty-year carryforward period.<sup>489</sup> The nonconventional fuel production credit is elective.<sup>490</sup> 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 Effect:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: Loss two hundred and seventy-five million dollars in 2006; loss of three hundred and one million dollars in 2007; loss of twenty-seven million dollars in 2008;

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485. The general business credit appears in § 38.

486. Section 53(d)(1)(B).

487. Section 38(b)(22), as amended by 2005 Act § 1322(a)(2). It also redesignates the credit from § 29 to § 45K.

488. Section 39(d).

489. Section 38(c).

490. 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.

gain of twenty-four million dollars in 2009; gain of forty-six million dollars in 2010; gain of sixty-six million dollars in 2011; gain of eighty-eight million dollars in 2012; gain of eighty-eight million dollars in 2013; gain of eighty-eight million dollars in 2014; gain of eighty-eight million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is five hundred and six million dollars. Total estimated revenue losses as a result of this provision in the years 2005-2015 is eighty-eight million dollars.<sup>491</sup>

**Comment:** A modest revenue loss in a hyper technical 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 fifty dollars/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 after 2004.<sup>492</sup> 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 that 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 itself in that (oversimplifying) treats gains as favorably taxed<sup>493</sup> 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 fifteen percent more likely) or as a dealer<sup>494</sup> (making

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491. Joint Committee 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.

492. 2004 Act § 315(a).

493. The general long-term capital gain tax rate is 15 percent. § 1(h)(1)(C). It does not benefit corporations.

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



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 of federal self-employment taxes.<sup>495</sup>

**Revenue Effects:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: Negligible Revenue Effect.<sup>496</sup> The White House places the lost revenue at about one hundred and eighty-seven million dollars per year.<sup>497</sup> However, the White House Budget lively seemingly includes pre-existing special capital gain-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. The fact is 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.<sup>498</sup> 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 fifteen percent 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

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495. See IRS Pub No. 533, 2004, p. 7.

496. Joint Committee on Taxation, Estimated Revenue Effects of H.R. 4520, The "American Jobs Creation Act of 2004," as Passed by the House of Representatives, JCX-45-04 (Provision II-H-3), June 22, 2004.

497. White House 2008 Budget Item 36 Capital gains treatment of certain timber income.

Individuals							
2006	2007	2008	2009	2010	2011	2012	2008-12
160	170	170	170	190	180	130	840

498. Joint Committee on Taxation, *Description of H.R. 4520, the "American Jobs Creation Act of 2004," Scheduled for Markup by the House Committee on Ways and Means on June 14, 2004*, JCX-41-04 p. 42, June 10, 2004.

been greatly expanded. Prior law, allowed taxpayers to elect<sup>499</sup> to deduct the cost of planting timber<sup>500</sup> in the United States<sup>501</sup> over seven years under § 194, but never more as to \$10,000 of reforestation expenditures per year. Thanks to the 2004 Act, the 10,000 dollar limitation applies to each timber property (meaning area of land).<sup>502</sup> 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:** The Joint Committee on Taxation has estimated the budget effects of this provision to be as follows: Loss of fifty-five million dollars in 2005, loss of thirty-seven million dollars in 2006; loss of twenty-five million dollars in 2007; loss of eleven million dollars in 2008; loss of one million dollars in 2009; gain of two million dollars in 2010; gain of eight million dollars in 2011; gain of thirteen million dollars in 2012; gain of twenty million dollars in 2013; gain of twenty-two million dollars in 2014. Total estimated revenue losses as a result of this provision in the years 2005-2009 are one hundred and twenty-nine million dollars. Total estimated revenue losses as a result of this provision in the years 2005-2014 are sixty-four million dollars.<sup>503</sup> The White House analysis is as follows, in millions of dollars<sup>504</sup>:

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499. See § 194(b)(1)(A) for the election.

500. 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. § 194(c)(3).

501. The planning had to be on qualified timber property, meaning a woodlot or other site located in the U.S. which will contain trees in significant commercial quantities and which 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. § 194(c)(1).

502. Section 194(b)(1)(A). Applicable to expenditures paid or incurred after October 22, 2004. 2004 Act § 322(e). See § 194(a)(1)(A) for the deduction.

503. Joint Committee 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 A-9), July 27, 2005.

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

Corporations [\$0 because corporations do not benefit from capital gains]

Individuals

2006	2007	2008	2009	2010	2011	2012	2008-12
160	170	170	170	190	180	130	840

**Comment:** This original system of credit-and-deduction for planting trees explained as a way to productively reforest idle farmland. 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 and gently taxed (rates not over fifteen percent) 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 is repealed for expenditures paid or incurred after October 22, 2004.<sup>505</sup> Under prior law taxpayers were allowed a ten percent credit for reforestation and afforestation expenses in tandem with the accelerated deduction for timber planting.

**Revenue Effect:** Not stated.

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

*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.<sup>506</sup> The 2005 Transportation Act extended the exemption to fixed-wing aircraft.<sup>507</sup>

**Revenue Effect:** Not stated.

505. Section 46(3), § 48(a)(5) and § 50(c)(3), as amended by 2004 Act § 322.

506. Section 4261(f).

507. Section 421(f), as amended by the 2005 Transportation Act § 1121[c]. The basic tax is 7.5 percent of the ticket plus \$3.20 per flight segment.

**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 alternative minimum tax (AMT) liability. One might say that what for years was given with the left hand the AMT stole with the right hand. 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<sup>508</sup> applies separately to the specified energy credits.<sup>509</sup> 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 (i.e., the sum of the current year, carryforward and carryback business credit amounts), aside from the "specified energy credits."<sup>510</sup>

For this purpose, "specified energy credits" include:

- the credit for electricity produced from certain renewable sources, to the extent attributable to
  - electricity or refined coal produced:<sup>511</sup>
    - (a) at a facility which is originally placed in service after October 22, 2004, and

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508. Section 39.

509. Section 38(c)(4)(A)(i), as amended by 2004 Act § 711(a).

510. Section 38(c)(4)(A)(ii)(II).

511. Section 45.

(b) during the four-year starting when the facility was first placed in service; and

- the alcohol fuel credit under § 40.<sup>512</sup>

**Revenue Effects:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: No Revenue Effect.<sup>513</sup>

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

## XII. Electricity from Renewable Sources

### A. *Credit Halved for Electricity Produced and Sold from Selected Environmentally Friendly Facilities After 2004*

The code grants a ten-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 per kilowatt hour, now indexed for inflation to around 1.9 cents. Before the amendments in the 2004 Jobs Act the production credit was available for:

- 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.
- qualified poultry waste facilities originally placed in service after 1999 and before 2006.

The 2004 Act made two major changes; it expanded the kind 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 thirty percent 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

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512. Section 38(c)(4)(B)(i).

513. Joint Committee on Taxation, *Estimated Revenue Effects of H.R. 4520, The “American Jobs Creation Act of 2004,”* as Passed by the House of Representatives, JCX-45-04 (Provision II-E-1), June 22, 2004.

(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.<sup>514</sup>

*The special case of solar power.* Congress provided that a solar facility is a facility that uses solar energy to produce electricity, and that was placed in service after October 22, 2004 and before January 1, 2006. If it was placed in service on or before August 8, 2005, it can only qualify for half the usual electricity production credit in the sense that the credit period is only five years, rather than the usual ten years. That is plausible, given that the solar facility was not installed in order to get the credit. As to post 2005 installations, there can be no production credit, but instead there is a thirty percent investment tax credit, obviously a political compromise.<sup>515</sup> The same is true of geothermal, small irrigation power, and solid waste.<sup>516</sup> This affects new facilities placed in service after October 22, 2004 and before 2006. Again, this halving is performed by imposing a five-year period beginning on the date the facility was originally placed in service instead of the usual ten-year period.<sup>517</sup>

**Revenue effect:** 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.

*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*

**Summary:** 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<sup>518</sup> 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,

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514. Section 45.

515. Section 48(a)(2)(A).

516. Section 45(b)(4)(A), as amended by 2004 Act § 710(c).

517. Section 45(b)(4)(B)(i).

518. Section 45(b)(3), as amended by 2004 Act § 710(f)(1).

subsidized financing, or other credits.<sup>519</sup>

Under the new law, for all qualifying facilities, other than closed-loop biomass facilities modified to co-fire with coal, to co-fire with other biomass, or to co-fire with coal and other biomass, any reduction in credits by reason of grants, tax-exempt bonds, subsidized energy financing, and other credits cannot exceed fifty percent.

This tax relief does not extend to certain closed-loop biomass facilities owned by the taxpayer, originally placed in service before 2006 and modified to use closed-loop biomass to co-fire with coal, with other biomass, or with both.<sup>520</sup>

**Revenue effect:** 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.*

**Summary:** 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,<sup>521</sup> and poultry waste facilities and sold to unrelated persons during the tax year.<sup>522</sup>

The credit is 1.5 cents per kilowatt hour, indexed for inflation. It applied to:

- qualified wind facilities originally placed in service after 1993 and before 2006; and

519. Section 45(b)(3).

520. Section 45(d)(2)(A)(ii), § 45(b)(3). See below.

521. 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-17771 USTR ¶ 454 Tax Desk ¶ 384,054.1.

522. 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.

- 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 per kilowatt hour, indexed for inflation for qualified poultry waste facilities placed in service after 1999 and before 2006.

The 2004 Act confirmed that the “qualified energy resources” includes closed-loop biomass,<sup>523</sup> and that, for a facility using closed-loop biomass to produce electricity, a “qualified facility” is any facility.<sup>524</sup>

- owned by the taxpayer that is originally placed in service after 1992 and before 2006<sup>525</sup> or
- owned by the taxpayer, which before 2006, and originally placed in service and modified to use closed-loop biomass to co-fire with coal, with other biomass, or with both, 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 Federal Regulations.<sup>526</sup>

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:<sup>527</sup>

- the ten-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;<sup>528</sup>
- The credit for the facility equals the amount determined without regard to<sup>529</sup> 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,<sup>530</sup> and
- 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,<sup>531</sup> so the person who actually produces the electricity from closed-loop biomass co-fired with coal, other biomass, or both (the

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523. Section 45(c)(1)(B), as amended by 2004 Act § 710(a).

524. Section 45(d)(2)(A), as amended by 2004 Act § 710(b)(1).

525. Section 45(d)(2)(A)(i) [note dates were changed from ‘07 to ‘08 by 2006 Act in all “07” locations in 45(d).]

526. Section 45(d)(2)(A)(ii) *See* 65 Fed. Reg. 63052.

527. Section 45(d)(2)(B).

528. Section 45(d)(2)(B)(i).

529. Section 45(d)(2)(B)(ii).

530. Section 45(d)(2)(B)(ii).

531. Section 45(d)(2)(B)(iii).



lessee or the operator of the facility) is entitled to the credit. As a result, someone who merely owns the property and is not eligible for the credit.

**Revenue effect:** Not detectable because its revenue effects are combined with other tax modification with respect to 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 miniscule 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*

**Summary:** The 2004 Jobs Act provided that for purposes of the credit for electricity produced from renewables, qualified energy resources include open-loop biomass.<sup>532</sup>

It does so by expanding the definition of “qualified facility” to include a facility using open-loop biomass to produce electricity, which facility is owned by the taxpayer and originally placed in service before 2009.<sup>533</sup> For this purpose open-loop biomass means<sup>534</sup>

- any agricultural livestock waste nutrients,<sup>535</sup> or
- any solid, nonhazardous, cellulosic waste material or any lignin material that is segregated from other waste materials and is derived from<sup>536</sup> any of these forest-related resources:
- mill and harvesting residues, precommercial thinnings, slash, and brush,<sup>537</sup>
- 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; or<sup>538</sup>

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532. Section 45(c)(1)(C), as amended by 2004 Act § 710(a).

533. Originally 2007, but moved by the 2006 Act § 201.

534. Section 45(c)(3)(A).

535. Section 45(c)(3)(A)(i).

536. Section 45(c)(3)(A)(ii).

537. Section 45(c)(3)(A)(ii)(I).

538. Section 45(c)(3)(A)(ii)(II).

- agriculture sources, including orchard tree crops, vineyard, grain, legumes, sugar, and other crop by-products or residues.<sup>539</sup>

“Open-loop biomass” excludes closed-loop biomass or biomass co-fired with fossil fuel beyond the fossil fuel required for startup and flame stabilization.<sup>540</sup>

“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.<sup>541</sup> “Agricultural livestock” includes cattle, pigs, poultry and sheep.<sup>542</sup> This renders poultry waste a renewable resource as a form of open-loop biomass rather than as 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 which,<sup>543</sup> in the case of a facility using agricultural livestock waste nutrients,<sup>544</sup> is originally placed in service after October 22, 2004 and before 2006,<sup>545</sup> with a nameplate capacity rating<sup>546</sup> of not less than one hundred and fifty kilowatts,<sup>547</sup> and in the case of any other facility, is originally placed in service before 2009.<sup>548</sup>

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

**Comment:** The pattern of spasmodic cut-off dates complicates planning investment in this environmentally friendly technology.

#### *E. Credit for Electricity Produced from Wind Energy Applies to Pre-2006 Qualified Facilities*

**Summary:** Congress extended the placed-in-service date by two years (through 2007) for these qualifying facilities: wind facilities; closed-loop biomass facilities; geothermal facilities; small irrigation power facilities; landfill gas facilities; and trash combustion facilities. The placed-in-service dates for solar facilities and refined coal facilities

539. Section 45(c)(3)(A)(ii)(III).

540. Section 45(c)(3)(A).

541. Section 45(c)(3)(B)(i).

542. Section 45(c)(3)(B)(ii).

543. Section 45(d)(3)(A), as amended by 2004 Act § 710(b)(1).

544. Section 45(d)(3)(A)(i).

545. Section 45(d)(3)(A)(i)(I). the 2006 Act moved the date from pre-2008 to pre-2009. 2006 Act § 201.

546. “Nameplate capacity” is undefined in the tax law but in the industry means instantaneous maximum power output of the plant in megawatts.

547. Section 45(d)(3)(A)(i)(II).

548. Section 45(d)(3)(A)(ii).

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 ten-year period.

An income tax credit is allowed for a decade 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 per kilowatt hour, indexed for inflation and is available for a decade for qualified wind facilities originally placed in service after 1993 and before 2008.<sup>549</sup> 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.<sup>550</sup>

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

**Comment:** This is 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 which is part of the § 38 general business credit, to cover electricity made from small irrigation power.<sup>551</sup> Like the other renewable electricity credits, this one is handed out at 1.5 cents per KWH (currently adjusted for inflation to 1.9 cents per KWH) for a decade.

Small irrigation power is power:

- generated without any dam or impoundment of water through an irrigation system canal or ditch,<sup>552</sup>
- and with a nameplate capacity rating not less than one hundred and fifty kilowatts but is less than five megawatts.<sup>553</sup>

549. Section 45(d)(1) as amended by 2006 Act § 201.

550. Section 45(d)(1), as 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. § 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.

551. Section 45(c)(1)(F), as amended by 2004 Jobs Act § 710(a).

552. Section 45(c)(5)(A).

553. Section 45(c)(5)(B).

For a facility using small irrigation power to make electricity, a “qualified facility” is any facility owned by the taxpayer, which is originally placed in service after October 22, 2004 and before 2009.<sup>554</sup>

**Revenue effect:** Not detectable because its revenue effects are combined with other tax modification with respect to 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*

**Summary:** The 2004 Act expands the credit for electricity produced from renewable resources, which is part of the § 38 general business credit, to include electricity made from municipal solid waste.<sup>555</sup> “Municipal solid waste” has the same meaning as the term “solid waste” as defined in section 2(27) of the Solid Waste Disposal Act,<sup>556</sup> which defines solid waste as 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.

Two different qualifying facilities use municipal solid waste as a qualifying resource, namely landfill gas facilities and trash combustion facilities.<sup>557</sup> Landfill gas is methane gas derived from the biodegradation of municipal solid waste. In the case of a facility landfill gas facility, a “qualified facility” means any facility owned by the taxpayer which is originally placed in service before 2009.<sup>558</sup> The credit is available at the

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554. Section 45(d)(5), as most recently amended by 2006 Act § 201.

555. Section 45(c)(1)(G), as amended by 2004 Jobs Act § 710(a).

556. Section 45(c)(6), as amended by 2004 Jobs Act § 710(a). The cited provision is 42 U.S.C.S. § 6903.

557. Trash combustion facilities are described as facilities that burn municipal garbage to produce steam to drive a turbine for the production of electricity. Joint Committee on Taxation, General Explanation of Tax Legislation Enacted in the 108th Congress, Part Seventeen: American Jobs Creation Act of 2004 (Public Law 108-357), JCS-5-05 p. 338, May 2005. In fact, the facilities can burn almost anything.

558. Section 45(d)(6), as amended by 2004 Act § 710(b)(1). These are complicated earliest dates.

usual 1.9 cents per KWH of electricity to electricity the taxpayer produced from qualified energy facilities or at a qualified facility. The credit last for a decade and is subject to various phase outs. In order for a trash combustion facility to be a “qualified facility” the facility must be owned by the taxpayer owns and originally placed in service and before 2009.<sup>559</sup>

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

**Comment:** Methane is a powerful greenhouse gas. Trapping and burning it at garbage dumps to produce electricity is to be applauded. A longer time horizon and larger credit seem to be in order. However, it is a serious problem that, on close inspection, the trash burning credit can be doled out for burning toxic wastes<sup>560</sup> and may impede recycling.

#### *H. Renewable Resources Energy Production Credit Expanded to Include Electricity from Geothermal Energy*

**Summary:** Self-evident.

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 per kilowatt hour, indexed for inflation. The credit generally lasted a decade.

The 2004 Jobs Act expanded the credit to include electricity produced from geothermal energy.<sup>561</sup> For a facility using geothermal energy or solar energy to produce electricity, a “qualified facility” means any facility owned by the taxpayer, was originally placed in service after October 22, 2004 and before 2006 (extended to before 2009 by the 2006

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

560. The definition of municipal solid waste from purposes of § 45 relies on the definition in 2(27) of 42 U.S.C. 6903 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 Section 45(c) Tax Credits to Certain “Renewable” Energy Resources, David Koplow, Earth Track, Inc.(2004).

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

Act),<sup>562</sup> but not any energy credit property<sup>563</sup> the basis of which is taken into account by the taxpayer for purposes of determining the energy credit.<sup>564</sup> This limit prevents double-dipping.

**Revenue effect:** 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 follows: 2005 loss one million dollars; 2006 loss thirty-five million dollars; 2007 loss one hundred and thirty-four million dollars; 2008 loss two hundred and fifty-six million dollars; 2009 loss three hundred and fourteen million dollars; 2010 loss three hundred and twenty-eight million dollars; 2011 loss three hundred and forty-two million dollars; 2012 loss three hundred and fifty-one million dollars; 2013 loss three hundred and thirty-four million dollars; 2014 loss three hundred and twenty-six million dollars; 2015 loss three hundred and twenty-seven million dollars. The losses for 2005-2010 are \$1068 billion and are \$2.747 billion for 2005-2015.<sup>565</sup>

The White House Budget<sup>566</sup> assigned a far higher number in its Tax Expenditures analysis, but that analysis includes existing tax benefits. Specifically, the White House estimate is in millions of dollar and describing the “new technology credit”<sup>567</sup> (a term not used outside the White House, it seems):

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562. Section 201 of the 2006 Act, amending §45..

563. §48(a)(3).

564. §45(d)(4), as amended by 2004 Jobs Act §710(b)(1)

565. Staff of The Joint Committee on Taxation, Estimated Budget Effects The Conference Agreement For Title XIII of H.R. 6, The “Energy Tax Incentives Act Of 2005,” JCX-59-05 (Item A-1) July 27, 2005.

566. White House Budget Item 16.

567. The White House description is as follows: “New technology, refined coal, Indian coal and coke and coke gas credits.—A credit is provided equal to 10 percent of the basis of solar property (30 percent for purchases beginning in 2006 through 2008) and 10 percent of the basis of geothermal property placed in service during the taxable year. A credit is also available for certain electricity produced from wind energy, biomass, geothermal energy, solar energy, small irrigation power, municipal solid waste, or qualified hydropower and sold to an unrelated party. The credit rate in 2006 is 1.9 cents per kilowatt hour (0.9 cents per kilowatt hour for open-loop biomass, small irrigation power, municipal solid waste and qualified hydropower) and the rate is indexed in subsequent years. Another credit is available for refined coal. The credit rate in 2006 is \$ 5.679 per ton and the rate is indexed in subsequent years. An additional credit is available for the production of Indian coal. The value of the credit is \$ 1.50 per ton in 2006 and indexed for inflation in subsequent years.”

## Corporations

2006	2007	2008	2009	2010	2011	2012	2008-12
470	640	900	1060	1090	1090	1090	5,230

## Individuals

2006	2007	2008	2009	2010	2011	2012	2008-12
40	50	60	60	60	60	60	300

**Comment:** There seems to be little to complain about as to 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 a 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 in light of the superiority of the technology. Notice how wind power does get the production credit, which makes sense in light of the larger scale of many wind power facilities, i.e., wind farms.

It is unfortunate that the coal production figures are “fifth column” and in this writer’s opinion 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*

**Summary:** Congress granted a thirty percent business energy credit for buying qualified fuel power plants for business use, and a ten percent credit for purchase of qualifying stationary microturbine power plants. It was initially supposed to expire at the end of 2007, but was extended through the end of 2008.<sup>568</sup>

The House Report<sup>569</sup> describes the fuel cell and microturbine credit as follows:

A nonrefundable, 10-percent business energy credit is allowed for the

<sup>568</sup>. Section 48(c)(2)(E), as amended by 2006 Act § 207.

<sup>569</sup>. H.R. Rep. 107-157. Energy Policy Tax Policy Act of 2001, p. 55-56, July 24, 2001.

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 non-polluting 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 than 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.

**Revenue effect:** The Joint Committee on Taxation has estimate the revenue effects of this provision to be as follows: there is no estimate for 2005; loss of nineteen million dollars in 2006; loss of eighty-two million dollars in 2007; loss of one hundred and ten million dollars in 2008; loss of thirty million dollars in 2009; loss of eighteen million dollars in 2010; loss of seven million dollars in 2011; gain of six million dollars in 2012; gain of ten million dollars in 2013; gain of fifteen million dollars in 2014; and a gain of twelve million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is two hundred and fifty-nine million dollars. Total estimated revenue losses as a result of this provision in the years 2005-2015 is two hundred and twenty-three million dollars.<sup>570</sup> The White House estimates are slightly higher.<sup>571</sup>

570. Staff Of Joint Comm. On Taxation, Estimated Budget Effects The Conference Agreement For Title XII of H.R. 6, The "Energy Tax Incentives Act Of 2005," JCX-59-05 (Provision C., 6) (July 27, 2005).

571. White House 2008 Budget Item 31: In millions of dollars:

Corporations							
2006	2007	2008	2009	2010	2011	2012	2008-12
60	70	100	40	-10	-10	-10	110
Individuals							
2006	2007	2008	2009	2010	2011	2012	2008-12
20	20	30	10	--	--	--	40

**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.

*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 is originally placed in service.

The 2004 Act prevent 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 as for the tax year or any earlier tax year.<sup>572</sup>

*K. Tax Credit for Clean Renewable Energy Bonds*

**Summary:** Congress invented a new type of tax-exempt bonds known as Clean Renewable Energy Bonds or “CREBs.” CREBs are used to finance capital expenditures incurred for facilities qualifying for tax credits under § 54. Holders of CREBs 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 9/11 tragedy. The 2005 Energy Act created a new category of tax credit bonds, namely “clean renewable energy bonds” (a/k/a, CREBs).<sup>573</sup> These bonds do not pay interest, rather, they “pay” federal tax credits. They must be issued before 2009.<sup>574</sup>

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 alternative minimum tax.<sup>575</sup>

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572. Applicable to electricity produced and sold after October 22, 2004, in tax years ending after October 22, 2004. § 45(e)(9), as amended by 2004 Act § 710(d).

573. Sec. 54(a), as amended by 2005 Act § 1303(a).

574. Code Sec. 54(m), as amended by § 202 of the 2006 Act, which extended the date by a year and added an extra \$400 million of CREB bonding authority.

575. §§ 54(g) and (c)(1). Under the 2005 Act, the credit could be treated as a payment of estimated taxes. § 54(l)(5). Later legislation eliminated that feature. 2005 Gulf Opportunity Act § 402(c)(1).

The credit is nonrefundable, but is available to the owners of pass-through entities such as partnerships.<sup>576</sup>

The credit is computed and doled out every three months to the holders,<sup>577</sup> on the basis of a credit rate as of the sale date.<sup>578</sup> The rate is supposed to be fixed so that the bond can be issued without a discount, premium interest cost to the issuer.<sup>579</sup> The amount of the credit allowed for any tax year is limited to:

Taxpayer's regular tax liability the taxpayer's regular tax liability  
+ Alternative Minimum Tax  
-Most tax credits<sup>580</sup>

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

- the bond is issued by a "qualified issuer" under an IRS allocation to the issuer of part of the national CREB limitation;
- 95 percent or more of the proceeds are to be used for capital expenditures incurred by "qualified borrowers" for one or more" qualified projects;"<sup>581</sup>
- the qualified issuer designates the bond as a CREB;
- the bond is in registered form (which assures that ownership is not concealed);

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576. Section 54(l)(3)(A).

577. 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. § 54(b)(4).

578. Section 54(b)(2).

579. Section 54(b)(3).

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

581. 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 § 54(d)(2)(A) and Joint Comm. Staff, Description and Technical Explanation of the Energy Tax Incentives Act of 2005 (JCX-60-05), 7/28/2005.

- the maturity of the bond does not exceed the maximum IRS the determined for that bond;
- the bond issue provides for an equal amount of principal to be paid each calendar year; and
- the issuer satisfies the arbitrage requirements of § 148 for the proceeds of the issue of which the bond is a part.<sup>582</sup>

A qualified project can be refinanced with proceeds of a CREB.<sup>583</sup> 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.<sup>584</sup>

A “qualified issuer,” is any of the following:

- a CREB lender, meaning a lender that is a coop that is owned by, or has outstanding loans to, a hundred or more cooperative electric companies and that was in existence on February 1, 2002, including any affiliated entity controlled by that lender;
- a cooperative electric company meaning i.e., 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
- any state, territory, U.S. possession, the District of Columbia, Indian tribal government, and any political subdivision thereof.<sup>585</sup>

A “qualified borrower,” entitled to use the proceeds of CREBs is either of the last two classes of entities above.<sup>586</sup>

A “qualified project” that may be financed with the proceeds of a CREB, is any “qualified facility” owned by a qualified borrower. “Qualified facility” is defined in § 45(d), relating to for purposes of the credit for producing electricity from certain renewable resources, but without the reference to Indian Coal Production Facilities.<sup>587</sup> In addition to Indian coal production facilities, qualified facilities comprise wind

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582. Section 54(d)-(i).

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

584. Section 54(d)(2)(B). 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.

585. Section 54(j).

586. Section 54(j)(5)(B).

587. Section 54(d)(2)(A).

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.<sup>588</sup>

Originally, there was a CREB issuance limitation is \$1.2 billion,<sup>589</sup> with a requirement that the IRS allocate this pool among qualified projects, but never allocating more than seven hundred and fifty million dollars of the national CREB limitation to finance qualified projects of governmental bodies.<sup>590</sup> The 2006 Act authorized an extra four hundred million dollars of CREBs through the end of 2008.<sup>591</sup>

There are various administrative details that are beyond the scope of this writing.

**Revenue estimates:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: Loss of nine million dollars in 2006; loss of twenty-five million dollars in 2007; loss of forty-two million dollars in 2008; loss of forty-eight million dollars in 2009; loss of forty-eight million dollars in 2010; loss of forty-eight million dollars in 2011; loss of forty-eight million dollars in 2012; loss of forty-eight million dollars in 2013; loss of forty-eight million dollars in 2014; and loss of forty-eight million dollars in 2015. Total estimated revenue losses as a result of this provision in the years 2005-2010 is one hundred and seventy-one million dollars. Total estimated revenue losses as a result of this provision in the years 2005-2015 is four hundred and eleven million dollars.<sup>592</sup> The White House figures are similar.<sup>593</sup>

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588. 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.

589. Section 54(f)(1).

590. Section 54(f)(2).

591. 2006 Act § 202.

592. Joint Committee 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.

593. White House 2008 Budget Item 20: Credit for holding clean renewable energy bonds

Corporations							
2006	2007	2008	2009	2010	2011	2012	2008-12
10	30	40	50	50	50	50	240
Individuals							
2006	2007	2008	2009	2010	2011	2012	2008-12
10	30	40	50	50	50	50	240

**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<sub>2</sub>. As usual, it is part of a crazy quilt of tax incentives and adds even more complexity to the Code.

### XIII. Energy Industries Generally

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

**Summary:** Congress changed the twenty percent research and development tax credit by allowing credit equal to twenty percent 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 that equaled to the sum of: [twenty percent] times [the qualified research expenses for the tax year minus a base amount (unless the taxpayer instead elected the alternative incremental credit), plus [twenty percent 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 expenses or contract research expenses. The qualified organization base period amount means the sum of the minimum basic research amount in excess of the “maintenance of effort amount.”<sup>594</sup>

Thanks to the new law, contract research expenses<sup>595</sup> now include seventy five percent of the amounts a taxpayer pays or incurs to a “qualified research consortium,” for the performance of a qualified research on behalf of the taxpayer and one or more unrelated taxpayers.<sup>596</sup> A qualified research consortium is a tax-exempt nonprofit scientific research organization that is either a tax-exempt organization

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594. Section 41(e)(3).

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

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

with a charitable, scientific, religious, educational, etc.<sup>597</sup> purpose or is a tax-exempt organization such as chamber of commerce or business leagues, that is organized and operated primarily to conduct scientific research,<sup>598</sup> and is not a so-called private foundation.

The 2005 Energy Tax Act expanded the research expense credit with a credit of twenty percent business payments incurred (including as contributions) to an energy research consortium. This new credit applies to all such expenditures, not just those in excess of a base amount, making it more generous. An energy research consortium is any exempt organization which is formed and operated primarily to conduct energy research,<sup>599</sup> or primarily to conduct energy research in the public interest and which is not a private foundation.<sup>600</sup> At least five unrelated persons<sup>601</sup> must have paid or incurred expenditures during the calendar year in which the tax year of the organization begins amounts to the organization for energy research, and no single person (defined below) 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 half of the total amounts by the research consortium during received the calendar year.<sup>602</sup>

An organization cannot be both a qualified research consortium and an energy research consortium under § 41(f)(6)(A).<sup>603</sup> If an organization is both, it is excluded from being a qualified research consortium. Also, research credits cannot be double-counted.<sup>604</sup>

The payee must be an eligible small business an institution of higher education, or a federal laboratory.<sup>605</sup>

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

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597. Section 501(c)(3).

598. Section 501(c)(6).

599. Section 41(f)(6)(A)(i)(I).

600. See § 509(a)(b) for the definition of a "private foundation."

601. 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). § 41(f)(6)(B).

602. Section 41(f)(6)(A)(iv).

603. Section 41(b)(3)(C)(ii), as amended by 2005 Act § 1351(a)(3).

604. Section 41(f)(D), as added by the Gulf Opportunity Zone Act § 4D2(l)(1).

605. This term is defined in the Stevenson-Wydler Technology Innovation Act of 1980, as in effect on August 8, 2005. Code Sec. § 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.

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.<sup>606</sup>

An eligible small business is a small business for which the taxpayer does not own<sup>607</sup> fifty percent 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.<sup>608</sup> A small business is any person if the annual average number of employees during either of the two preceding calendar years was five hundred people or fewer.<sup>609</sup>

**Revenue Effects:** The Joint Committee on Taxation has estimated the revenue effects of this provision to be as follows: Loss of three million dollars in 2005; loss of ten million dollars in 2006; loss of thirty-five million dollars in 2007; loss of twenty-one million dollars in 2008; loss of eleven million dollars in 2009; loss of eight million dollars in 2010; loss of four million dollars in 2011; and loss of one million dollars in 2012. Total estimated revenue losses as a result of this provision in the years 2005-2010 is ninety-one million dollars. Total estimated revenue losses as a result of this provision in the years 2005-2015 is ninety two million dollars.<sup>610</sup> The White House asserts that the revenue loss from the R&D credits collectively is as follows<sup>611</sup>:

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606. Joint Committee 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 p. 92, July 28, 2005.

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

608. §41(b)(3)(D)(ii)

609. 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 Code Sec. 220(c)(4)(B) (Archer medical savings accounts) apply as Code Sec. 220(c)(4)(D) (dealing with Archer medical savings accounts apply for purposes of Code Sec. 41(b)(3)(D)(iii)(II). All persons treated as a single under Code Sec. 414(b), Code Sec. 414(c), Code Sec. 414m, and Code Sec. 414(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.

610. Joint Committee on Taxation, Estimated Revenue Effects of Title XV. of H.R. 6, The "Energy Policy Tax Incentives Act of 2005," as Passed by the Senate on June 28, 2005, JCX-51-05 (Provision V-2), June 28, 2005 was this updated in 2006?

611. White House 2008 Budget Item 10.



## Expensing of exploration and development costs, fuels:

## Corporations

2006	2007	2008	2009	2010	2011	2012	2008-12
590	750	730	620	520	390	270	2,530

## Individuals

2006	2007	2008	2009	2010	2011	2012	2008-12
90	110	110	90	80	60	40	380

**Comment:** This provision was saved by the 2006 Act, without which it would have expired. It is very difficult for businesses to plan their R&D 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. Be that as it may, 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 tell part of the story. Taking the numbers shown under the previous headings and aggregating them over a convenient ten-year period, the winners are, in descending order, using Joint Committee figures and not incorporating the 2006 Act "extenders":

- Petroleum industry<sup>612</sup>: \$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.
- Coal industry \$1.713 billion, including benefits of coal as "renewable resource",<sup>613</sup>

612. 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.

613. Advanced project credits, coke credit, not counting refined coal and Indian coal characterized in Code as renewables but undifferentiated in multibillion renewables credit

- Automobile and other vehicles industries<sup>614</sup>: \$1.686 billion.
- Natural gas industry \$1.969 billion<sup>615</sup>
- Nuclear industry \$1.293 billion<sup>616</sup>
- Electricity industry \$ 2.438 billion<sup>617</sup>
- Building industry two hundred and seventy-one million dollars<sup>618</sup>
- Timber-owners who can benefit from capital gains rates one hundred and twenty-nine million dollars<sup>619</sup>
- Agri-biodiesel one hundred and seven million dollars plus
- Ethanol industry two hundred and twenty-four million dollars<sup>620</sup>
- Consumers as to energy-efficient housing five hundred and eighty-seven million dollars<sup>621</sup>
- Renewable energy providers, treating production and desulphurization of coal as coal industry benefits \$2.970 billion<sup>622</sup>
- Investors and utilities—CREB bond financing for electricity from renewable sources: four hundred and ninety-three million dollars.
- Appliance manufacturers: one hundred and ninety million dollars.

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614. Alternative vehicles credits.

615. This consists of pipeline depreciation, grading write-offs.

616. Accounting changes and electricity output credit.

617. Pollution control facilities, depreciation, and special net operating loss deduction.

618. Accelerated depreciation and building credit.

619. Reforestation deductions and capital gains from sales.

620. Small producer credit, extension of income tax credit, cellulosic, disregarding lost excise taxes \$19 billion approximately from White House Budget in lost revenues.

621. Efficiency credit for homes.

622. Treating refined coal and Indian coal as renewable resources. Includes fuel cells and microturbines.

- Transport industry five hundred and forty-two million dollars.<sup>623</sup>

These numbers are necessarily controversial. They are based on revenue estimates that are inherently uncertain. Some taxes can and others cannot 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.<sup>624</sup> 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 minor, pre-existing LUST Fund Tax and Oil Spill Liability Trust financing rates, which merely reflects 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 with respect of 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 sixty dollars 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 at enhancing energy independence. The result is good politics, since every constituent like a tax subsidy, but no

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623. Limousines, truck excise tax, exempt facility bonds.

624. 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. S 9117 (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.

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-the-environment sphere.

The new legislation dodges global warming. Only one minor provision—partially conditioning credits for advanced coal projects on using technologies, which 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 fifty percent 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 extracting clean coal. 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<sub>2</sub>, such as the fifteen percent 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 the 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? Explanations like “Congress thought is appropriate” to do this or that are just burbling psittacisms. This is a serious subject. The public deserves better. Worse, there is no coherent system to evaluate

whether the legislation affects 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 at once 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 they are far less visible than direct grants, hence subject to less scrutiny and criticism and that 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.