DANIEL E. KWAK*

Civilizing Society: The Need for a Carbon Tax in Light of Recent Changes to U.S. Energy Taxation Policy

> Taxes are what we pay for civilized society . . . .[1]
>
> – Justice Oliver Wendell Holmes

Scientists estimate that continued greenhouse gas emissions will likely increase Earth's average surface temperature by two to eleven and a half degrees Fahrenheit by the end of the twenty-first century, making the expected rate of temperature change at least twice the rate observed in the twentieth century.[2] This increased rate of change is a major cause for concern among governments and environmentalists; however, the fact the United States contributes twenty-two percent of the world's carbon dioxide emissions by burning fossil fuels is even more alarming because U.S. residents make up less than five percent of the world's population.[3] If developing countries, such as China and India, join the consumption bandwagon, then the sustainability of the earth for future generations will be jeopardized.

* J.D. Candidate, University of Oregon School of Law, 2010. Associate Editor, *Oregon Law Review*, 2009–10. I am grateful to Professor Nancy Shurtz and Adam Kobos for their guidance and support.

1 Compañía General de Tabacos de Filipinas v. Collector of Internal Revenue, 275 U.S. 87, 100 (1927) (Holmes, J., dissenting).

2 U.S. Envtl. Prot. Agency, Future Climate Change: Future Temperature Changes, http://www.epa.gov/climatechange/science/futuretc.html (last visited Jan. 6, 2010).

3 Carbon Tax Ctr., Frequently Asked Questions, http://www.carbontax.org/faq (last visited Jan. 6, 2010) [hereinafter CTC FAQ].

Although regulations are important instruments to combat global warming, this Comment focuses on two fiscal instruments that provide legal protection for the environment: environmental taxes and tax incentives.[4] Environmental taxes aim to decrease environmentally destructive activity by imposing taxes on businesses or individuals engaging in these activities. Tax incentives, on the other hand, reward those who engage in environmentally beneficial activity. To encourage energy efficiency, curb carbon emissions, and decrease dependence on fossil fuels, governments provide tax deductions and credits for taxpayers who develop and invest in renewable energy projects.[5]

In addition to federal initiatives, some states have enacted innovative programs designed to encourage energy-efficient development and investment in more environmentally effective ways. Oregon, for example, established itself as a model state for environmentally conscious energy taxation policy with a program that streamlines the planning process for investors and developers.[6] While energy tax policy in the United States provides several incentives designed to encourage investments in "energy property"[7] development, there is a dearth of taxes on environmentally harmful activity in the Internal Revenue Code (IRC or Code). Conversely, other countries—e.g., countries in Europe—have passed taxes on carbon dioxide emissions to control fossil fuel consumption and decrease greenhouse gas emissions.

The Emergency Economic Stabilization Act of 2008, signed into law on October 3, 2008,[8] expanded the applicability of energy tax incentives by extending placed-in-service dates,[9] introducing new credits, and allowing taxpayers to use certain credits to offset

4 Susana Bokobo, *Environmental Taxation in Spain*, *in* 2 CRITICAL ISSUES IN ENVIRONMENTAL TAXATION 543, 543 (Hope Ashiabor et al. eds., 2005).

5 Unfortunately, the government also provides incentives for environmentally harmful activity. For example, depletion allowances and intangible drilling expenses, both allowed by the Internal Revenue Code, encourage the use of fossil fuels. *See infra* pp. 552–53.

6 *See* discussion *infra* Part III.

7 "Energy property" is broadly defined as property that uses solar, wind, or geothermal energy to generate electricity. For a more comprehensive definition, see I.R.C. § 48(a)(3) (West 2009); *see also infra* pp. 571–73.

8 Emergency Economic Stabilization Act of 2008, Pub. L. No. 110-343, 122 Stat. 3765.

9 The placed-in-service date is "the date on which . . . [t]he facility has reached a degree of completion which would permit its operation at substantially its design level [and] is, in fact, in operation at such level." Treas. Reg. § 1.150-2(c) (1993).

alternative minimum tax (AMT) liability.[10] The American Recovery and Reinvestment Act of 2009 (ARRA or Stimulus Bill), signed into law on February 17, 2009,[11] introduced other major modifications in the Code affecting tax credits for investments in energy property.[12] One such modification allows taxpayers to receive cash grants in lieu of tax credits, effectively simplifying the planning process for investors and developers of energy property.[13] Another repeals a limitation on tax credits, further streamlining the planning process.

This Comment examines the current federal energy tax policy as amended by the recent legislation. Additionally, by comparing and contrasting the federal policy with tax policies adopted by other governments, this Comment both suggests additional reforms in the current policy and argues for the passage of a carbon tax. Part I of this Comment provides a background and overview of the history of energy tax policy in the United States. Part II discusses recent legislative changes to the current policy. Parts III and IV compare facets of the energy tax policies adopted by Oregon and countries in Europe. Finally, Part V suggests changes to the new legislation and argues for the introduction of a carbon tax to help offset the increased federal deficit resulting from the new legislation's high price tag.

I
OVERVIEW OF U.S. ENERGY TAX POLICY

The Congressional Research Service[14] divides the history of federal energy tax policy into the following four eras: the oil and gas period before the 1970s; the energy crisis period during the 1970s; the Reagan administration, free-market era of the early to mid-1980s; and the post-Reagan era after 1988.[15] The Obama administration continues the post-Reagan approach but with an increased concern for a sustainable future. The recent passage of the Emergency Economic

10 *See infra* p. 560.

11 American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115.

12 *See infra* Part II.B.

13 *See infra* Part II.B.

14 The Congressional Research Service provides legislators with research to aid in bill drafting. Cong. Research Serv., About the Congressional Research Service, http://www.loc.gov/crsinfo/aboutcrs.html (last visited Jan. 6, 2010).

15 SALVATORE LAZZARI, CONG. RESEARCH SERV., ENERGY TAX POLICY: HISTORY AND CURRENT ISSUES 2 (2006), *available at* https://www.policyarchive.org/handle/10207/2938 (follow "View Publication" hyperlink).

Stabilization Act of 2008 and the ARRA suggests that U.S. energy policy will likely continue following this trend.

A. Pre-1970s

From about 1916 through 1970, energy tax policy in the United States promoted increases in oil and gas supplies.[16] Tax incentives for energy efficiency, energy conservation, or alternative fuels did not exist at the time.[17] The two main preferences in the Code represented by this policy were (1) the expensing of intangible drill costs (IDCs) and (2) the percentage depletion allowance.[18] Oil and gas producers benefited from the allowance of expensing IDCs, which included costs associated with labor, materials, supplies, and drill repairs.[19] Producers were able to write off a substantial portion of the start-up costs associated with bringing a well into production.[20] The percentage depletion allowance enabled producers to claim 27.5% of their entire revenue as a deduction to compensate for the cost of depletion of their oil or gas deposit.[21] These two main subsidies, acting in concert with other tax subsidies, reduced tax rates, lowered production costs, and increased investments in the oil and gas industries,[22] which effectively encouraged consumption of oil and extraction of fossil fuels.

B. The 1970s

Federal energy tax policy dramatically shifted in focus during the 1970s for several reasons. Increasing federal budget deficits made the large revenue losses associated with the oil and gas tax preferences during the earlier era difficult to justify, and concerns over pollution and environmental degradation gained awareness among the public, drawing considerable political support away from the domestic oil

16 *Id.*; *see also* John Stewart, *U.S. Energy Tax Policy: History and Current Issues*, COLO. ENERGY NEWS, Oct. 1, 2008, http://coloradoenergynews.com/2008/10/energy-tax-policy-history-and-current-issues.

17 LAZZARI, *supra* note 15, at 2.

18 *Id.*

19 *Id.*; *see also* ERIC TODER, TAXES AND ENERGY: WHAT TAX INCENTIVES ENCOURAGE ENERGY PRODUCTION?, *in* THE TAX POLICY BRIEFING BOOK: A CITIZENS' GUIDE FOR THE 2008 ELECTION AND BEYOND (2007), http://www.taxpolicycenter.org/briefing-book/key-elements/energy/incentives.cfm.

20 LAZZARI, *supra* note 15, at 2.

21 *Id.*

22 *Id.* at 2–3.

and gas industry.[23] Additionally, the oil embargo of 1973 and the Iranian Revolution brought attention to failures in the energy markets.[24] As a result of these developments, U.S. energy tax policy shifted away from oil and gas supply and toward energy conservation and alternative energy sources.[25]

Three broad actions demonstrate the shift in focus during the 1970s.[26] First, Congress substantially reduced tax preferences favoring oil and gas producers.[27] The significant decrease in subsidies for IDC deductions and percentage depletion marked the end of Code policies favoring the oil and gas industries over those policies that favored energy efficiency.[28] Second, Congress introduced several new excise taxes that penalized the use of conventional fossil fuels.[29] The Energy Tax Act of 1978, which is still in effect today, created a federal excise tax, known by policymakers as the "gas guzzler" tax, on the sale of automobiles with fuel economy ratings that fell below federally mandated limits.[30] The windfall profit tax, enacted in 1980 and repealed in 1988, forced oil and gas producers to pay an excise tax on the difference between the market price of oil and a predetermined base price.[31] Another tax enacted during this era came with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, also known as the "Superfund" program.[32] The tax created under the Superfund program was an excise tax on crude oil received at U.S. refineries and was designed to charge oil refineries for releasing hazardous materials during the crude oil refining process.[33] Although Congress did not renew this tax after its expiration in 1995, it has proposed legislation to reinstate it.[34] Finally, the third action demonstrating a change in

23 *Id.* at 3.

24 *Id.*; *see also* Samantha A. Krasner, Note, *America's Addiction to Oil: A Comprehensive Strategy for Reducing our Nation's Dependence*, 40 CONN. L. REV. 209, 216 (2007).

25 LAZZARI, *supra* note 15, at 3.

26 *See* Stewart, *supra* note 16.

27 LAZZARI, *supra* note 15, at 3.

28 *Id.*; *see also* Stewart, *supra* note 16.

29 LAZZARI, *supra* note 15, at 4; *see also* Stewart, *supra* note 16.

30 LAZZARI, *supra* note 15, at 4.

31 *Id.*

32 *Id.*

33 *Id.*; *see also* Thomas L. Nummey, Note, *Environmental Salvage Law in the Age of the Tanker*, 20 FORDHAM ENVTL. L. REV. 267, 277 (2009).

34 LAZZARI, *supra* note 15, at 4.

focus during the 1970s was the introduction of tax incentives, in the form of subsidies, for energy conservation, energy efficiency, and the development of alternative fuels and alternative fuel technologies.[35] A majority of these tax incentives were introduced as part of the Energy Tax Act of 1978.[36] These incentives included the following: income tax credits for businesses and homeowners that invested in energy conservation products;[37] tax exemptions for gasohol, an alcohol-based fuel; and percentage depletion allowances for geothermal deposits.[38] In summation, this new focus in energy tax policy is exemplified by both the subsidizing of different forms of energy and the provision for tax incentives from investments in energy efficiency.[39] Furthermore, policymakers have followed this paradigm in the United States since the 1970s.[40]

C. The Reagan Administration Era

In contrast to the policy shift of the 1970s, the Reagan administration opposed using tax law to encourage energy conservation or increases in alternative fuel supplies.[41] Instead, it opted to follow predictions of economic theory that "more neutral" energy tax policies make energy markets more efficient and generate benefits for the rest of the economy.[42] Additionally, the administration allowed the business income tax credits and the residential energy tax credits to expire as scheduled.[43] The Reagan administration's policy was based on creating a free-market energy policy, liberalizing the depreciation system,[44] and reducing marginal

35 *Id.*; *see also* Stewart, *supra* note 16.

36 LAZZARI, *supra* note 15, at 4.

37 *Id.* This included a fifteen percent tax credit for solar energy, which was reduced to twelve percent in 1987 and again to ten percent in 1988—where it remained until 2005. Sequoia Solar, Solar Energy News: President Signs Investment Tax Credit Extension! (Oct. 3, 2008), http://sequoiasolar.com/news/president-signs-investment-tax-credit-extension/ [hereinafter SEIA].

38 LAZZARI, *supra* note 15, at 5.

39 *Id.*

40 *Id.*

41 *Id.*; *see also* Stewart, *supra* note 16.

42 LAZZARI, *supra* note 15, at 5.

43 *Id.* at 6.

44 The most notable "liberalization" was the introduction of the Modified Accelerated Cost Recovery System (MACRS). *See* Kyle D. Logue, *Tax Transactions, Opportunistic Retroactivity, and the Benefits of Government Precommitment*, 94 MICH. L. REV. 1129, 1150 n.80 (1996).

tax rates.[45] However, the administration continued to support fossil fuels by retaining percentage depletion and expensing IDCs.[46] This resulted in negative tax rates for investments in alternative energy, such as solar and synthetic fuels.[47]

D. Post-1988

The following Bush and Clinton administrations amended tax laws by introducing major energy provisions.[48] The original aim of these amendments was to reduce demand for foreign oil.[49] However, policymakers increasingly viewed energy tax policy as a tool for addressing both environmental and fiscal concerns.[50] As a result, Congress passed new legislation to both tackle growing concerns over oil's impact on the environment and generate revenue.

The revenue provisions under the Omnibus Reconciliation Act of 1990 included tax incentives for conservation that increased the gasoline and gas-guzzler taxes.[51] The Act also provided incentives for enhanced oil recovery[52] expenditures and alternative fuels by restricting the percentage depletion allowance, reducing the AMT's impact on oil and gas investments, and allowing small producers of ethanol-based motor fuel to receive tax credits for these unconventional fuels.[53] The Energy Policy Act of 1992 created the tax credit in section 45 of the Code for electricity produced from alternative sources.[54] The Act also added a tax deduction for the costs of clean-fuel-powered vehicles and expanded production tax credits for renewable energy resources.[55] The Energy Policy Act of

45 LAZZARI, *supra* note 15, at 6.

46 *Id. See generally* Milton R. Copulos, *Reagan's Tax Revolution: Fair Play for Energy*, 115 HERITAGE FOUND. ISSUE BULL. 1, 1 (1985), http://www.heritage.org/Research/EnergyandEnvironment/upload/91084_1.pdf.

47 LAZZARI, *supra* note 15, at 6.

48 *Id.* at 6–7.

49 Stewart, *supra* note 16.

50 *Id.*

51 LAZZARI, *supra* note 15, at 6.

52 Enhanced oil recovery is defined as "the recovery of oil from a reservoir using means other than using the natural reservoir pressure." Offshore-technology.com, Glossary Definition: Enhanced Oil Recovery, http://www.offshore-technology.com/glossary/enhanced-oil-recovery.html (last visited Jan. 6, 2010).

53 LAZZARI, *supra* note 15, at 6–7.

54 *Id.* at 7; *see also* Emily Kennedy, *Federal Regulations, Incentives, and Funding of Renewable Energy in 2006*, 1 ENVTL. & ENERGY L. & POL'Y J. 403, 406 (2007).

55 LAZZARI, *supra* note 15, at 7; *see also* Kennedy, *supra* note 54, at 406–07.

2005 introduced the commercial and residential investment tax credits for solar energy property put in place through December 31, 2007.[56] The Tax Relief and Health Care Act of 2006 extended this tax credit through 2008,[57] and the Energy Improvement and Extension Act of 2008 further extended it through 2016.[58]

E. Current U.S. Energy Tax Policies

Energy tax policy today continues the tradition of focusing on tax incentives.[59] Two types of tax incentives encourage energy-efficient developments: investment tax incentives, also known as development tax incentives, and production tax incentives.[60] Although investment tax incentives do not encourage actual production of energy from the property, they encourage investments in developing energy property.[61] In contrast, production tax incentives encourage energy production by providing tax incentives when the property actually produces energy.[62]

Section 38 is the broad provision in the Code that allows businesses to take general business credits against taxes.[63] The amount of credits allowed is "equal to the sum of[:] (1) the business credit carryforwards carried to such taxable year, (2) the amount of the current year business credit, plus (3) the business credit carrybacks carried to such taxable year."[64] Carryforwards, which apply current-year credits to a future year,[65] and carrybacks, which

56 SEIA, *supra* note 37.

57 *Id.*

58 STAFF OF S. COMM. ON FINANCE, 110TH CONG., STAFF SUMMARY OF THE ENERGY IMPROVEMENT AND EXTENSION ACT 1 (Comm. Print 2008), *available at* http://finance.senate.gov/sitepages/2008legislation.htm (follow "Staff Summary of the Energy Improvement and Extension Act" hyperlink).

59 This Comment focuses on investment tax credits; however, there are other incentives in the Code that promote energy-efficient development, including various deductions and production tax credits. *See* I.R.C. §§ 45, 179 (West 2009); *see also* Chris Heuer et al., *Federal Tax Incentives for Green Buildings*, SUSTAINABLE LAND DEV. TODAY, July 22, 2008, http://www.sldtonline.com/content/view/546/99.

60 Larry Kreiser et al., *The Use of Environmental Taxation Incentives to Encourage Investment in Solar Power*, *in* 3 CRITICAL ISSUES IN ENVIRONMENTAL TAXATION 461, 465 (Alberto Cavaliere et al. eds., 2006).

61 *Id.*

62 *Id.*

63 I.R.C. § 38(a) (West 2009).

64 *Id.*

65 InvestorWords.com, Carryforward Definition, http://www.investorwords.com/742/carryforward.html (last visited Jan. 6, 2010).

are used by a taxpayer to receive a refund of back taxes by applying current-year credits to a prior year,[66] are based on the amount of current-year business credits. Section 38(b) defines current-year business credit as the sum of thirty-five different credits,[67] one of which is the investment credit under section 46.[68]

Section 46 of the Code defines the term "investment credit" as "the sum of[:] (1) the rehabilitation credit, (2) the energy credit[,] (3) the qualifying advanced coal project credit, and (4) the qualifying gasification project credit."[69] The credit most relevant to this Comment is the energy credit. Section 48 provides, "[f]or purposes of section 46 . . . the energy credit for any taxable year is the energy percentage of the basis of each energy property placed in service during such taxable year."[70] Section 48(a)(3)(A) enumerates seven types of property that qualify as "energy property." The energy percentage referred to in section 48 is thirty percent for the following four types of energy property: qualified fuel cell property,[71] equipment that uses solar energy to generate electricity,[72] equipment that uses solar energy to provide light through fiber-optic distributed sunlight,[73] and qualified, small wind energy property.[74] The energy credit on these four types of energy property equals the amount of thirty percent of the basis[75] of the property. In other words, taxpayers who invest in these types of property can qualify for a tax credit equal to thirty percent of the basis value. The energy credit is ten percent for the remaining three types of energy property: equipment used to utilize, produce, or distribute energy from a geothermal deposit; combined power and heat system property; and equipment that uses the ground or groundwater to heat or cool a structure.[76] Up until February 2009, section 48 limited credits by reducing the basis of energy property financed in whole or in part by a government

66 InvestorWords.com, Carryback Definition, http://www.investorwords.com/741/carryback.html (last visited Jan. 6, 2010).

67 § 38(b).

68 § 38(b)(1).

69 I.R.C. § 46 (West 2009).

70 I.R.C. § 48(a)(1) (West 2009).

71 § 48(a)(2)(A)(i)(I); *see also* § 48(c)(1)(A) (defining "qualified fuel cell property").

72 § 48(a)(2)(A)(i)(II), (a)(3)(A)(i).

73 § 48(a)(2)(A)(i)(III), (a)(3)(A)(ii).

74 § 48(a)(2)(A)(i)(IV).

75 "Basis" is defined as "the cost of . . . property." I.R.C. § 1012 (West 2009).

76 *See* § 48(a)(2)(A)(ii).

subsidy. The American Recovery and Reinvestment Act of 2009, discussed below, repealed this section 48 limitation.

1. Reductions in the Energy Property Investment Tax Credit

Prior to the ARRA's passage, the concept of subsidized energy financing was somewhat unclear to energy property development planners. Consequently, developers often had difficulty determining whether their particular developments were subject to this reduction in tax credits. Stated differently, many developers were uncertain as to whether the Internal Revenue Service (IRS) would consider the financing they received for their projects to be subsidized energy financing within the meaning of section 48. The IRS reduced tax credits for projects financed by subsidized energy financing to prevent taxpayers from double-dipping into federal energy incentive programs.[77] The Crude Oil Windfall Profit Tax Act of 1980 introduced the concept of limiting the amount of an allowable credit because of subsidized energy financing.[78] The 1980 law, in part, amended section 48(a)(4)(A) of the Code by inserting the term "subsidized energy financing."[79]

Section 48 of the Code defines "subsidized energy financing" as "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."[80] Therefore, financing is considered "subsidized energy financing" if (1) the financing provided was subsidized, (2) the principal purpose of the financing was to fund energy property, and (3) the energy property was designed to conserve or produce energy. All three elements are required for financing to be considered subsidized energy financing.

a. Subsidized Financing

Under the previous section 48 definition, the IRS considered financing to be "subsidized energy financing" if a federal or state subsidy provided the funds. Thus, money received was considered subsidized energy financing only if the taxpayer received a subsidy at

[77] John Kaufmann, *Federal Income Tax Incentives for Energy from Renewable Sources*, 20 J. NAT. RESOURCES & ENVTL. L. 163, 190 (2005–06).

[78] *See* Crude Oil Windfall Profit Tax Act of 1980, Pub. L. No. 96-223, § 223(c), 94 Stat. 229, 266 (repealed 1988).

[79] *See id.* § 223(c)(1), 94 Stat. at 266.

[80] I.R.C. § 48(a)(4)(C) (West 2009).

government expense.[81] The word "subsidized" has been the main issue in several IRS letter rulings involving the applicability of subsidized energy financing. *Black's Law Dictionary* defines "subsidy" as "[a] grant, usu[ally] made by the government, to any enterprise whose promotion is considered to be in the public interest."[82] The plain language of this definition leads one to assume that any monetary grant by the government would be considered "subsidized" within the section 48 definition of "subsidized energy financing."

The IRS, however, adhered to a more restrictive definition of "subsidized." The IRS's definition focused on whether the financing, at the expense of the government, conferred financial benefits in addition to tax credits to the taxpayer. Price guarantees[83] and purchase agreements were generally not considered subsidized energy financing because they conferred only a contingent benefit.[84] Funds advanced[85] under price guarantees or purchase agreements, however, acted as loans and were considered to be subsidized energy financing.[86]

The broad definition in *Black's Law Dictionary* also leads to the conclusion that government loans repaid at below-market rates should have been considered subsidized energy financing; however, these below-market loans elevated to the level of subsidized energy financing only if the government provided the funds in the form of a government subsidy. In a 1981 revenue ruling, the IRS did not consider a governmental agency loan to be subsidized energy financing because the funds were drawn from the agency's sales revenue and not a government subsidy, despite the fact that the loan was made at a below-market rate.[87] Because the taxpayer would not have received a double benefit from a tax-supported subsidy for energy property, the agency loan was not considered subsidized energy financing.[88]

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81 I.R.S. Priv. Ltr. Rul. 84-32-072 (May 8, 1984).

82 BLACK'S LAW DICTIONARY 1469 (8th ed. 2004).

83 This is defined as the assumption of a suretyship obligation. *Id.* at 723.

84 Income Tax; Subsidized Borrowings Reduce Business Energy Credits, 47 Fed. Reg. 3559, 3559 (Jan. 26, 1982) (codified at Treas. Reg. § 1.48–9).

85 An example could be funds advanced before the project is operational. *See id.*

86 *Id.*

87 *See* Rev. Rul. 81-52, 1981-1 C.B. 9.

88 *Id.*

Additionally, financing provided to the taxpayer was considered subsidized energy financing if the principal obligation of the financing was reduced by funds provided under a government subsidy.[89] For example, if a taxpayer received a $3000 loan from a bank to develop energy property and $500 of that $3000 was reduced through funds provided from a government energy-property subsidy, then the entire $3000 was considered subsidized energy financing because the principal obligation to the taxpayer was reduced by a government subsidy.[90]

b. Principal Purpose of the Financing

In addition to the requirement that financing be subsidized, financing was considered subsidized energy financing if its principal purpose was to provide funding for energy property. In a 1985 private letter ruling, a taxpayer's energy property that was financed by the Federal Financing Bank (FFB) was not considered subsidized energy financing because the government Agency, as a condition to the loan guarantees, required the taxpayer to obtain the loan through the FFB.[91] Even though the IRS found that the funding in this situation was clearly a governmental program, the program's principal purpose was not to provide subsidized financing for energy property.[92] Financing through the FFB was merely a condition for obtaining the agency loan guarantee.[93] Furthermore, the taxpayer was required to pay the market rate.[94] Because the taxpayer did not receive a double benefit, the IRS did not label the loan as subsidized energy financing.

c. Energy Property

The IRS subjected a project to this reduction in tax credits only if the property was considered energy property or, in other words, if the property was eligible for the energy credit. Energy property generally included any type of property that used solar, wind, or geothermal

89 Treas. Reg. § 1.23-2(i)(1) (1987).

90 *Id.* § 1.23-2(i)(2).

91 *See* I.R.S. Priv. Ltr. Rul. 85-30-004 (Apr. 30, 1985).

92 *Id.*

93 *Id.*

94 *Id.*

energy to generate electricity;[95] however, only equipment dedicated to the functioning of energy property qualified as energy property and, therefore, qualified as expenditures for renewable energy sources.[96] For example, the IRS ruled in a 1984 memorandum that excess insulation and "extra-sized lumber" added to a house did not qualify as solar energy property because they were not components of the direct-gain, passive solar system being claimed as energy property by the taxpayers.[97] Instead, they were considered basic structural components of the house and, consequently, did not qualify as energy property under section 48 of the Code.[98]

II
RECENT FEDERAL LEGISLATION

Amid growing concerns over global climate change and an economic recession, two legislative bills have made significant changes to the Code: the American Recovery and Reinvestment Act of 2009 and the Emergency Economic Stabilization Act of 2008.[99] These laws met both harsh criticism and immense support, while making headlines around the world, particularly for their high price tags. Although a majority of the Code changes are simply extensions of favorable tax treatment for certain energy-efficient activities, the laws also introduced major modifications and additions to the Code that demonstrate a shift in U.S. energy tax policy.

A. The Emergency Economic Stabilization Act of 2008

In response to the global financial crisis in 2008, a Democratic Congress under the Bush administration introduced the Emergency Economic Stabilization Act of 2008 (EESA). In addition to the Emergency Economic Stabilization Division of the Act, which advanced the well-known Troubled Asset Relief Program, EESA included an energy provision entitled the Energy Improvement and

95 For a more comprehensive definition of "energy property," see I.R.C. § 48(a)(3) (West 2009).

96 Treas. Reg. § 1.48–9(f)(1) (1981).

97 I.R.S. Tech. Adv. Mem. 85-02-005 (Oct. 9, 1984).

98 *Id.*

99 American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115; Emergency Economic Stabilization Act of 2008, Pub. L. No. 110-343, 122 Stat. 3765.

Extension Act of 2008 (Energy Division).[100] The division's aim is to provide more incentives for renewable energy and restrict carbon use.[101]

The Energy Division extended the placed-in-service date to December 31, 2009, for the section 45 production tax credit (PTC) on wind and refined coal facilities, previously set to sunset at the end of 2008.[102] PTCs on other qualifying renewable resources were extended through December 31, 2010.[103] The Energy Division also created a new section 45 PTC for qualified carbon dioxide sequestration at qualified facilities after October 3, 2008.[104]

The division extended the section 48 investment tax credit (ITC) for solar energy property, qualified fuel cell property, and microturbines, previously set to sunset at the end of 2008, through December 31, 2016.[105] It also created a new section 48 ITC for combined heat and power system property (CHP), which is defined as "property that uses the same energy source for the simultaneous or sequential generation of electrical power, mechanical shaft power, or both, in combination with the generation of steam or other forms of useful thermal energy (including heating and cooling applications)."[106] The ten percent CHP ITC is subject to certain reductions for larger projects.[107] Additionally, the Energy Division allows taxpayers to use any of the section 48 credits to offset AMT liability, further exemplifying congressional intent to encourage long-term investment and development in renewable energy and alternative resources.[108]

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100 Energy Improvement and Extension Act of 2008, Pub. L. No. 110-343, Div. B, §§ 1-202, 122 Stat. 3765, 3807–33.

101 John Harman et al., *Energy Tax Title in the Emergency Economic Stabilization Act*, 121 TAX NOTES 1399, 1399 (2008).

102 *Id.*

103 *Id.*

104 Stoel Rives LLP, Energy Tax Law Alert: Rescue Bill Extends Production Tax Credits and Investment-Based Energy Tax Credits and Provides Additional Tax Benefits for Renewable and Other Energy Activities (Oct. 8, 2008), http://www.stoel.com/showalert.aspx?Show=3208; *see also* Harman et al., *supra* note 101, at 1400.

105 Harman et al., *supra* note 101, at 1403.

106 *Id.* at 1400.

107 Stoel Rives LLP, *supra* note 104.

108 Harman et al., *supra* note 101, at 1400.

B. The American Recovery and Reinvestment Act of 2009

On February 17, 2009, President Barack Obama signed a $787 billion economic stimulus measure known as the American Recovery and Reinvestment Act of 2009 into law.[109] The Act represents the core of President Obama's plan to soften the impact of the worst economic recession in decades both by providing hundreds of billions of dollars to boost public consumption and by granting tax cuts to swell consumer spending.[110] The U.S. House of Representatives asserted that this Act was "the first crucial step in a concerted effort to create and save 3 to 4 million jobs, jumpstart our economy, and begin the process of transforming it for the 21st century with . . . tax cuts and . . . carefully *targeted priority investments* . . . ."[111] These targeted efforts included investments in promoting efficient American energy, improving education, lowering health care costs, providing aid to workers severely affected by the economy, and saving public sector jobs, among other investments.[112]

President Obama placed the passage of the Act at the top of his priorities to address and alleviate economic problems faced by a majority of Americans. Speaker of the House Nancy Pelosi stated that

> [t]he [P]resident requested swift, bold action . . . . The American people are feeling a great deal of pain. They have uncertainty about their jobs, about health care, about the ability to pay for the

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109 American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115.

110 Associated Press, *Obama: Stimulus Bill Far from Perfect, Obama Says*, MSNBC, Feb. 7, 2009, http://www.msnbc.msn.com/id/29050187/ [hereinafter MSNBC].

111 Press Release, Comm. on Appropriations, Summary: American Recovery and Reinvestment Conference Agreement (Feb. 13, 2009), *available at* http://appropriations.house.gov/pdf/PressSummary02-13-09.pdf (emphasis added).

112 David M. Herszenhorn, *Party Lines Barely Shift as Package Is Approved*, N.Y. TIMES, Feb. 14, 2009, at A15, *available at* http://www.nytimes.com/2009/02/14/us/politics/14web-stim.html?_r=1&scp=3&sq=stimulus%20plan%20passes&st=cse. Voting on the Act was divided along party lines and was met with harsh criticism because a majority of its provisions amounted to increased federal spending within a short time frame. *Id.* Journalist David Herszenhorn noted that

> [t]he $787 billion plan—a combination of fast-acting tax cuts and longer-term government spending on public works projects, education, health care, energy and technology—was smaller than Democrats first proposed. But, according to an analysis by the Congressional Budget Office, more than 74 percent of the money will be spent within the next 18 months, a relatively rapid pace that could determine whether the plan succeeds.

Id.

> education of their children, and sad to say in our great country, even to put food on the table. And today we have passed legislation that does take that swift, bold action on their behalf.[113]

Acting swiftly and boldly allowed Congress to pass the bill within thirty days of President Obama's inauguration; however, imperfections inevitably arise from hasty legislation. President Obama himself has called the ARRA "imperfect," but the consequences of imperfection were balanced against the need for economic stimulation.[114]

While the Act's primary goal was to stimulate the economy and save and create jobs, it also included tax provisions that have a significant impact on U.S. energy tax policy. Three main modifications to the Code affect taxpayers hoping to receive investment tax credits. The first modification allows taxpayers who are eligible for the production tax credit to claim the ITC in lieu of the PTC for qualifying facilities placed in service between 2009 and 2013—and between 2009 and 2012 for wind facilities.[115] The second modification gives taxpayers the option of receiving a Treasury grant in lieu of tax credits for property that both would normally qualify for the ITC or the PTC and is placed in service in 2009 or 2010.[116] Finally, the third modification repeals the section 48 reduction in basis and limitation on credits for property funded by subsidized energy financing, as long as the property is placed in service after 2008.[117]

Giving PTC-eligible taxpayers the option to claim the ITC in lieu of the PTC for qualifying projects provides increased flexibility in planning the development of energy property. While the advantages of this option are not immediately clear, the implications of this modification are especially advantageous when examined in conjunction with the second modification, namely the option to claim Treasury grants in lieu of the ITC.

The option to claim grants addresses a common problem investors and developers face when drawing up energy property deals. Because

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113 *Id.* (internal quotation marks omitted).

114 MSNBC, *supra* note 110. In his weekly radio and internet address, President Obama stated, "We can't afford to make perfect the enemy of the absolutely necessary." *Id.*

115 Stoel Rives LLP, Tax Law Alert: Stimulus Bill Enacted (Feb. 19, 2009), http://www.stoel.com/showalert.aspx?Show=3560.

116 *Id.*

117 *Id.*

tax credits are credits against tax liability, investors can only benefit from ITCs if the energy property has taxable income. Most tax incentives operate through exclusions or deductions.[118] Consequently, taxpayers who are in higher tax brackets receive larger incentives than those in lower tax brackets.[119] In other words, taxpayers who develop energy properties that are unprofitable will not realize the benefits of these tax credits because they will likely have no taxable income. Giving taxpayers the option to claim cash grants in lieu of the ITC solves this common problem by immediately conferring a benefit to the investor, regardless of whether the project has any tax liability.

The grants essentially function as refundable tax credits.[120] The grant amount is equivalent to the amount of credits the taxpayer would otherwise have been eligible to receive, which is generally thirty percent of qualified costs.[121] The ARRA also contains a provision that ensures adequate funding will be available to enable the Department of Energy (DOE) to pay the grants.[122] Additionally, the DOE is required to award the grant within sixty days of the date the project owner submits the application.[123]

A refundable tax credit can be reduced to four main elements. A refundable tax credit is (1) located in the IRC, (2) administered through the tax system, (3) designed to stimulate targeted behavior, and (4) intended to be refundable or, in other words, this type of credit can be paid out in cash when tax credits are unavailable due to a lack of taxable income.[124] The IRC includes the following three main refundable tax credits: the Earned Income Tax Credit, the Child Tax Credit, and a health insurance credit.[125] Although these programs met resistance when initially introduced, these three refundable credits have proven to be effective tools in encouraging

118 Lily L. Batchelder et al., *Efficiency and Tax Incentives: The Case for Refundable Tax Credits*, 59 STAN. L. REV. 23, 24 (2006).

119 *Id.*

120 Stoel Rives LLP, Renewable Energy Law Alert: House Bill Proposes Increased Incentives for Renewable Energy Projects (Jan. 22, 2009), http://www.stoel.com/showalert.aspx?Show=3486.

121 *Id.*

122 *Id.*

123 *Id.*

124 Batchelder et al., *supra* note 118, at 33.

125 *Id.*

targeted behavior.[126] Similarly, giving taxpayers the option to claim grants in lieu of credits for investments in energy property encourages targeted behavior by both streamlining the project development process and guaranteeing an immediate benefit to the party seeking the ITCs.[127]

The third modification, Congress's repeal of the section 48 limitation on credits, also streamlines the energy property planning process by eliminating the uncertainty stemming from whether the IRS will label certain financing as subsidized energy financing, thereby reducing the amount of the ITCs.[128] The revenue expenditure estimate for this provision is $604 million over ten years.[129] Because the legislative history of this provision does not provide sufficient background on the repeal, Congress's reasoning behind eliminating this limitation is unclear. What is clear, however, is that repealing this limitation encourages investments in energy property because planners are no longer concerned about reductions in credits for investors.

III
THE STATE OF OREGON

Although federal law provides significant energy incentives, Oregon has adopted a program that further simplifies the planning process for energy projects. Since developers and investors were often unsure as to whether certain financing was subject to the section 48 limitation on credits, the parties typically entered into complex agreements to ensure that investors would maximize their receipt of tax credits. Oregon's Business Energy Tax Credit (BETC) streamlined the planning process through a mechanism known as the Pass-Through Option.[130] This mechanism both allows developers to

126 *Id.* at 41–42.

127 While the ITC is still considered a nonrefundable credit, the option to claim grants in lieu of credits makes the ITC similar to both a refundable credit and Oregon's BETC in that less time is spent structuring and executing complex energy property development deals. *See infra* Part III.

128 *See* HOWARD A. COOPER, EDISON ELEC. INST., SIDE-BY-SIDE OF ENERGY-RELATED PROVISIONS OF HOUSE AND SENATE FINANCE COMMITTEE VERSIONS OF THE "AMERICAN RECOVERY AND REINVESTMENT TAX ACT OF 2009" at 3 (2009), *available at* http://www.eei.org/whatwedo/PublicPolicyAdvocacy/washreps/Documents/energytaxsidebyside.pdf.

129 *Id.*

130 *See* NW Natural, Oregon Business Energy Tax Credit, https://www.nwnatural.com/content_yourbusiness.asp?id=292 (last visited Jan. 6, 2010).

sell off their tax credits to investors for an immediate benefit and avoids the common hassles involved with penciling out these types of deals.

The BETC amount is generally thirty-five percent of eligible production costs.[131] Taxpayers are allowed to take the credit in increments.[132] If a taxpayer decides to take the thirty-five percent credit over five years, for example, then ten percent may be taken over the first and second years each and five percent thereafter for the next three years.[133] Those who are unable to take the full credit each year can carry the unused amount forward up to eight years, and taxpayers with eligible project costs of $20,000 or less may take the full credit amount in one year.[134]

The BETC covers all costs directly related to the energy property.[135] These costs can include the cost of equipment, installation labor, engineering, materials, and supplies.[136] Maintenance costs and costs for replacing equipment at the end of its useful life, however, are not covered.[137] The range of qualifying projects is similar to that of the IRC. Qualifying projects under BETC include those designed to use or produce alternative fuels, hybrid vehicles, and rental dwelling weatherization, as well as projects designed to improve transportation and create sustainable buildings.[138] Any taxpayer who owns a business or rental property and pays taxes for a business site in Oregon is eligible for this credit.[139] Only those who are directly involved in the business may take the credit—namely, the shareholders, the business partners, or the business itself.[140]

The BETC's most interesting feature, as mentioned above, is its Pass-Through Option. This allows project owners to transfer their BETC project eligibility to an investor, also known as a pass-through partner, for a lump-sum cash payment.[141] Public entities or tax-

131 *Id.*
132 *Id.*
133 *Id.*
134 *Id.*
135 *Id.*
136 *Id.*
137 *Id.*
138 *Id.*
139 *Id.*
140 *Id.*
141 *Id.*

exempt nonprofit organizations may be project owners that choose to use the Pass-Through Option.[142] Although additional tax implications may arise when using the Pass-Through Option, this feature saves developers time and money in preparing and structuring energy property projects because tax credits may be sold for an immediate benefit to the taxpayer. Additionally, organizations such as Passthrough Partners LLC provide assistance in matching investors with energy property developments that need capital, further circumventing the traditional hurdles involved in closing energy property development deals.[143]

IV

EUROPE

The European approach to energy taxation policy is markedly different from that of the United States. While the United States focuses on tax incentives, primarily through the issuance of tax credits, European countries have passed environmental taxes on carbon dioxide (CO_2) emissions.[144] A tax on CO_2 emissions, also known as a carbon tax, is essentially a tax on the release of CO_2 into the atmosphere from burning fossil fuels.[145] Carbon atoms are present in all fossil fuels and are converted to CO_2 when the fuel is burned; therefore, a carbon tax essentially functions as a tax on the use of fossil fuels.[146]

A European Union (EU) tax on CO_2 emissions was proposed in 1992 in response to a Joint Energy/Environment Council goal of

142 Conservation Div., Or. Dep't of Energy, Business Energy Tax Credits, http://www.oregon.gov/ENERGY/CONS/BUS/BETC.shtml (last visited Jan. 6, 2010).

143 *See* Passthrough Partners LLC, About Our Business, http://passthroughpartner.com/636.html (last visited Jan. 6, 2010).

144 In the United States, attempts to introduce taxes on carbon met severe resistance. For example, the Clinton administration proposed a tax on the British Thermal Unit (BTU) content of fuels in the early nineties, but the tax failed to pass in 1993. Janet Milne, *Environmental Taxation in Europe and the United States*, *in* THE ENCYCLOPEDIA OF EARTH (2007), http://www.eoearth.org/article/Environmental_taxation_in_Europe_and_the_United_States. Consequently, the United States has followed a different path from that of European countries by focusing its tax initiatives on credits and deductions for targeted activities. *Id.*

145 Carbon Tax Ctr., Introduction, http://www.carbontax.org/introduction/ (last visited Jan. 6, 2010).

146 *Id.*

reducing EU carbon emissions to 1990 levels by 2000.[147] The European Commission concluded that tax policy initiatives were necessary in reaching this goal, sparking their carbon tax proposal.[148] The tax was to be levied on fuel products such as coal, natural gas, and electricity.[149] The tax rate was scheduled to start at $3 per barrel of oil in 1993 and rise to $10 per barrel by the late nineties.[150] Renewable energy sources, however, were to be exempted from the tax, with the exception of large-scale hydro power plants.[151] Although the tax failed to pass, countries within the EU have passed legislation taxing carbon emissions. As of 2007, taxes on motor vehicles and fuels account for approximately ninety percent of environmental tax revenue in the EU.[152]

The United Kingdom's carbon tax system raises a significant amount of revenue and discourages the use of fossil fuels. Furthermore, the U.K. Department for Environment, Food and Rural Affairs has concluded that environmental taxes are easier to administer and more difficult to avoid by taxpayers in comparison to income or profit taxes; therefore, these taxes are ideal tools for addressing both environmental and fiscal concerns.[153]

Some European countries have been front-runners in introducing carbon taxes. Sweden first introduced a tax on CO_2 emissions in 1991.[154] Norway and the Netherlands followed Sweden's lead and passed a carbon tax as well.[155] The effectiveness of the energy tax policies in Sweden, Norway, and the Netherlands warrants a closer look at the effects of carbon taxing in each of these three countries.

A. Sweden

Environmentalists and economists consider Sweden's energy tax policy to be a model of efficiency and effectiveness. Germanwatch, a

147 Kees A. Heineken, *The History of the Dutch Regulatory Energy Tax: How the Dutch Introduced and Expanded a Tax on Small-Scale Energy Use*, *in* 1 CRITICAL ISSUES IN ENVIRONMENTAL TAXATION 189, 192 (Janet Milne et al. eds., 2002).

148 *Id.*

149 *Id.*

150 *Id.*

151 *Id.*

152 Milne, *supra* note 144.

153 U.K. DEP'T FOR ENV'T, FOOD & RURAL AFFAIRS, GREENING THE TAX SYSTEM IN THE NETHERLANDS 1 [hereinafter DEFRA].

154 CTC FAQ, *supra* note 3.

155 *Id.*

German environmental group, has ranked Sweden first in its list of countries that do the most for the planet.[156] Sweden reduced carbon emissions by nine percent between 1990 and 2006; more astonishing, however, is the fact that the country experienced economic growth of forty-four percent during those years.[157] Experts conclude that Sweden's introduction of a carbon tax in 1991 is the main reason for this success.[158]

The Swedish government's imposition of a carbon tax increased the country's use of bioenergy.[159] Efforts to avoid paying the carbon tax have encouraged cities to use biomass, a material derived from forests and forest industry waste, to provide heat for buildings.[160] Before the tax, most cities used coal or oil for this heating.[161] The carbon tax has also encouraged innovative energy efficiency in public transportation. For example, the entire fleet of buses and trains, in addition to some private taxis, in Linköping, Sweden's fifth largest city, runs on biogas.[162]

B. Norway

Norway imposed a carbon tax in 1991 as well. The results of this tax, however, are puzzling. Offshore drilling and oil consumption increased despite the carbon tax, which led to a fifteen percent increase in greenhouse gas emissions.[163] The fact that the oil and gas industries have been, and are currently, Norway's most lucrative businesses is likely the reason for the boom in offshore drilling.[164] Leila Abboud, a journalist for the *Wall Street Journal*, noted the following:

> Drilling on the Continental Shelf has been the primary engine of economic growth in Norway since the 1960s, generating some 24% of the country's annual [gross domestic product]. Taxes on the

156 Gwladys Fouché, *Sweden's Carbon-Tax Solution to Climate Change Puts It Top of the Green List*, GUARDIAN (London), Apr. 29, 2008, http://www.guardian.co.uk/environment/2008/apr/29/climatechange.carbonemissions.

157 *Id.*

158 *Id.*

159 *Id.*

160 *Id.*

161 *Id.*

162 *Id.*

163 Leila Abboud, *An Exhausting War on Emissions*, WALL ST. J., Sept. 30, 2008, at A15, *available at* http://online.wsj.com/article/SB122272533893187737.html.

164 *See id.*

> sector account for 31% of the nation's revenues, financing a generous social welfare system that includes universal health care and state-funded pensions.[165]

While Norway's oil and gas industries are "among the greenest in the world," the size of these respective industries, combined with a massive seventy percent increase in the country's gross domestic product since 1990, may explain these unusual results.[166]

The carbon tax in Norway, nevertheless, has sparked some positive changes despite the disappointing outcome. For example, three of the country's largest aluminum companies, pursuant to an agreement with the government, reduced industrywide emissions fifty-five percent below 1990 levels.[167] Also, Norwegian oil conglomerate StatoilHydro (Statoil) spent approximately $200 million over two years on developing technology that pushes carbon dioxide under the sea floor—as opposed to emitting it into Earth's atmosphere.[168] Although Statoil's overall emissions have quadrupled since 1990, Statoil and the Norwegian government maintain that the increase would have been much worse if the government did not introduce a carbon tax.[169]

C. The Netherlands

The Netherlands is another EU member country that has been proactive in striving for a greener taxation system. Since public support is often a necessary condition for success in tax reform, the government developed committees consisting of government representatives, scientists, and interest groups to encourage this support and examine possible strategies to improve the country's environmental tax policy.[170]

In 1996, the Netherlands introduced the Regulatory Energy Tax (RET) to help reach its goal to reduce carbon emissions.[171] The RET

165 *Id.*

166 *Id.*

167 *Id.*

168 *Id.*

169 *Id.*

170 DEFRA, *supra* note 153, at 1.

171 *Id.* at 4. The word "regulatory" was included intentionally to emphasize the fact that the main goal of the tax was to reduce energy consumption, and, therefore, all revenue would be recycled back to taxpayers by lowering other taxes. Heineken, *supra* note 147, at 195. Because the tax was not introduced to raise overall government income, but rather for environmental reasons, the revenues were recycled through the lowering of other taxes.

mainly affects small-scale energy consumers such as office buildings, schools, and residences.[172] Motor fuels were left out of the tax because they are heavily taxed by excise duties.[173] The tax amount was based on energy contents and carbon dioxide emissions—in accordance with the European Commission's 1997 proposal for a European tax on carbon dioxide.[174] The rate of $10 per barrel was also based on the Commission's proposal.[175] Although the RET was introduced primarily to reduce consumption, it also encourages renewable energy by establishing a payment discount in addition to a zero rate[176] for renewable energy.[177] The implications of the payment discount are beneficial because energy distribution companies may withhold payable tax on the renewable energy they sell if this benefit is passed on to a renewable energy producer.[178] The zero rate implies that renewable energy sold under a specific "green" contract will not be subject to the RET.[179]

V

REFORMING THE REFORM

The federal government has trailed behind the governments of some individual states and those of other countries in using the tax system to encourage environmentally conscious behavior. While the recent legislative changes are positive steps in the right direction, the United States should adopt two additional measures to make the current energy tax policy more efficient and effective. First, the government should prevent taxpayers from double-dipping into federal energy subsidies by reintroducing the section 48 limitation on credits for projects that are financed in whole, or in part, by subsidized energy financing. Second, the government should introduce a carbon tax to curb emissions while raising revenue to offset the cost of recent legislation.

DEFRA, *supra* note 153, at 5. This recycling mechanism was a significant factor in attaining public approval of the RET. *Id.*

172 DEFRA, *supra* note 153, at 4.

173 *Id.*

174 Heineken, *supra* note 147, at 195.

175 *Id.*

176 This means it will be exempt from a value-added tax.

177 Heineken, *supra* note 147, at 196.

178 *Id.*

179 *Id.*

A. Congress Should Reintroduce the Section 48 Limitation for ITCs

Awarding ITCs to taxpayers who invest in renewable energy projects is clearly an effective way to encourage energy efficiency and stimulate the economy. Additionally, the extension of the credit through 2016 increases the potential for creating new high-wage jobs, further spurring economic growth and reducing emissions.[180] Giving taxpayers the option to claim Treasury grants in lieu of credits streamlines the planning process and is a step in the right direction. Allowing taxpayers to receive credits on property financed by subsidized energy financing, however, amounts to a double-dip in federal funds. Congress should, therefore, reintroduce the section 48 limitation on credits for projects funded in whole, or in part, by subsidized energy financing.

As noted above, the Stimulus Bill's legislative history does not clearly provide Congress's reasoning behind repealing the section 48 limitation.[181] The repeal may have been motivated by a desire to spark as much energy property investment as possible in an effort to stimulate the economy while also encouraging energy efficiency. Another reason for the repeal may be that the haste with which the Act was passed precluded Congress from passing a bill that was comprehensively well written.

Allowing developers and investors to claim the ITC in lieu of the PTC and permitting taxpayers to receive grants in lieu of tax credits address the main issues that arise in planning for energy property development. Repealing the section 48 credit reduction addresses the same common planning problems; however, the repeal does so at an unreasonable expense to the government. The ARRA essentially permits developers and investors to double-dip into federal funds for

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[180] SEIA, *supra* note 37.

> Clean energy tax policies play a vital role in creating new high-wage American jobs, spurring economic growth, promoting consumer purchases of energy efficient [sic] products, lowering energy bills for consumers and businesses, and of course reducing global warming pollution. . . .
>
> . . . [A]fter only two years of the ITC, the U.S. solar market grew by 45 percent. Now with an 8-year extension of the ITC, the solar industry is projected to gain 440,000 permanent jobs and $325 billion in investment by 2016.
>
> . . . .
>
> Additionally, solar energy is unique from other renewable technologies because it . . . requires a workforce of skilled electrical workers, plumbers, roofers and others to be trained and certified to install solar systems.

Id.

[181] *See supra* p. 563.

capital. At a time when federal spending is reaching record highs, the government must allocate borrowed funds wisely. Allowing taxpayers to claim the ITC in lieu of the PTC, in addition to making ITCs refundable, will likely emerge as sufficiently desirable to encourage energy property developments. Disregarding the source of financing for purposes of calculating the ITC, thereby allowing the double-dip, is accordingly an extraneous provision. If the government were to reintroduce this limitation into the Code, however, the IRS should also interpret the phrase "subsidized energy financing" as narrowly as possible. This would encourage investments in energy property, while maintaining the legislative intent behind the reintroduction of the section 48 limitation, namely preventing taxpayers from double-dipping into federal funds.

Prior to the passage of the Stimulus Bill, the IRS already interpreted subsidized energy financing somewhat narrowly; however, the Agency has considered entire sums of financing to be subsidized energy financing within the meaning of section 48 when only a small part of the funding was actually provided from a government subsidy. For example, if a taxpayer received $3000 from a bank, and the bank's loan to the taxpayer consisted of $2500 in bank funds and $500 in government-subsidized funds, the IRS treated the entire $3000 amount as "subsidized energy financing." Partial financing from federal energy subsidies should not taint the entire amount of a loan. Although the principal obligation to the financer in the above example is decreased by the amount of subsidized energy financing used—$500 in this example—the developer is still obligated to pay back the $2500 loan. It does not follow that the entire $3000 amount should be considered a contribution from a governmental energy subsidy. The IRS's broader interpretation puts a strain on developers who sought financing from banks or lenders authorized to use government subsidies for targeted activities.

For these reasons, the government should both reintroduce the section 48 reduction of basis and limitation on credits for energy property financed in whole, or in part, by subsidized energy financing and narrowly interpret the phrase "subsidized energy financing" to continue encouragement of investments in energy property development.

B. Congress Should Pass a Carbon Tax

In addition to reintroducing the section 48 credit limitation, Congress should also introduce a carbon tax. Achieving a substantial

reduction in the amount of CO_2 emissions is essential to reversing the effects of global warming. Introducing a carbon tax into the Code would be an effective way of furthering that purpose. While passing a carbon tax for global warming considerations would appeal to environmentalists, the benefit of using the tax as a revenue stream may be the added incentive needed to persuade Congress.

One argument against extending the current tax incentive program for energy property and introducing a refundable tax credit is that this course of action increases government spending. As current market trends continue downward, this argument against tax incentives seems compelling. The cost of improving the current program, after all, amounts to a price tag in the billions. These added expenses, however, could be offset by a tax on carbon.

Although countries in Europe have been taxing greenhouse gas emissions for some time now, the United States has opted to focus on tax incentives to encourage energy-efficient development. Continuing down this road of solely using tax subsidies to promote energy goals would prove to be unfruitful—it is simply the "path of least political resistance."[182] Political allegiances and bipartisan debate have been major contributors to this problem. The fact that politicians are more attentive to voter popularity than they are to economic principles is an unfortunate reality; therefore, it is understandable that politicians opt to favor policies that reduce gas prices.[183] Economists argue that the implications of this unfortunate fact reveal that U.S. energy policy is not in fact grounded in economics.[184]

A carbon tax would likely be set as a flat tax that accompanies units of a particular type of fossil fuel. For example, if the federal government passed a tax that charged users ten cents per gallon of gasoline, then individuals or businesses that purchased and used a gallon would be required to pay a tax of ten cents, regardless of their annual income. This type of flat tax is known as a "regressive tax" and is a disfavored method of taxation because it burdens lower-income households and smaller businesses more heavily than higher-income households and larger corporations.[185]

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[182] Richard J. Lazarus, *Pursuing "Environmental Justice": The Distributional Effects of Environmental Protection*, 87 NW. U. L. REV. 787, 810 (1993).

[183] Martin A. Sullivan, *Tech Neutrality, Tax Credits, and the Gas Tax*, 122 TAX NOTES 619, 619 (2009).

[184] *Id.*

[185] CTC FAQ, *supra* note 3.

The Carbon Tax Center (CTC), a nonprofit organization that lobbies for the passage of a carbon tax in the United States, advocates for a carbon tax that eliminates any possible regressive characteristics by allocating revenues in ways that benefit lower-income households and businesses.[186] The CTC has asserted that if a carbon tax were to be introduced in the United States, then it should be revenue neutral as revenues would be rebated through equal dividends to all U.S. residents.[187] This program would operate in a manner similar to the Alaska Permanent Fund, which gives all state residents an equal amount of money from the state's North Slope oil royalty-investment earnings.[188] Rebating revenues through equal dividends would circumvent the traditional hurdles of regressive taxes because individuals and businesses with higher incomes typically use more energy than those with lower incomes.[189] Because of the strong correlation between income and energy consumption, most low-income households would receive more in rebates than they would pay in carbon taxes.[190]

Implementing the revenue-neutral carbon tax proposed by the CTC would clearly facilitate a decrease in fossil fuel consumption; however, the government should also adopt this tax to generate revenue for purposes of offsetting the $787 billion Stimulus Bill. Using a carbon tax to generate revenue would be effective because such a tax has great potential to generate large amounts of money. Using the CTC's federal "starter" carbon tax example, a tax of ten cents per gallon of gasoline would generate approximately $55 billion in revenue per year.[191] Adding successive increases in the tax would exponentially increase the amount of revenue.[192] If the federal government were to retain even a small portion of the carbon tax revenue, while rebating the remainder back to taxpayers equally, the brunt of the carbon tax would be shifted to wealthier households and large, profitable corporations and revenue would be generated to help offset the federal deficit.

186 *Id.*

187 Carbon Tax Ctr., *supra* note 145.

188 CTC FAQ, *supra* note 3.

189 *Id.*

190 *Id.*

191 *Id.*

192 *Id.*

For example, if a low-income household paid a carbon tax of $400 for a given tax year (because it consumed relatively less energy) and a high-income household paid $600 in the same year (because it consumed relatively more energy), then the carbon tax revenue paid for the two households would be $1000. If the government retained $200 of that amount, which accounts for twenty percent of the total revenue, and granted a $400 rebate check to each household, which accounts for the remaining eighty percent of the total revenue, then the low-income household would receive its entire payment back in rebates while the high-income household would pay $200 in carbon tax. Alternatively, the government should explore limiting rebate payouts to taxpayers who fall below a certain level of income. This would both put more of the carbon tax burden on households and businesses that are better able to afford such a tax and minimize unfair taxation on low-income taxpayers, all while raising revenue for the federal government.

Disagreement along party lines has proven to be the biggest obstacle to passing such a tax. In 1993, President Clinton, as part of his deficit-reduction package, proposed an energy tax to generate revenue and decrease pollution.[193] Republicans argued against the tax saying that the plan was "too burdensome" and "relied too heavily on tax increases."[194] The lack of bipartisan support consequently led to the demise of President Clinton's Btu tax.[195] With the recent passage of the Emergency Economic Stabilization Act of 2008 and the American Recovery and Reinvestment Act of 2009, however, the new administration may be in a better position to argue the advantages of passing a carbon tax. A majority of the provisions in the Stimulus Bill calls for an increase in federal spending. Considering the current state of the economy, policymakers are understandably concerned about the spending increase. But the environmental tax provisions are crucial to reaching President Obama's energy goals and to decreasing the United States's contribution to global warming. The cost of these programs could be partially offset by a tax on carbon. The benefit of introducing this tax, therefore, would be twofold because the tax would discourage overconsumption of fossil fuels and raise revenue to help offset the

193 Dawn Erlandson, *The Btu Tax Experience: What Happened and Why It Happened*, 12 PACE ENVTL. L. REV. 173, 173 (1994).

194 *Id.* at 176.

195 *Id.* at 177.

cost of the Stimulus Bill, which, in turn, would reduce the federal deficit. For these reasons, the government should impose a progressive carbon tax with uniform rebates from the tax's total revenue for taxpayers.

C. A Counterargument and Rebuttal—Cap-and-Trade Programs

Some experts argue that a cap-and-trade program, instead of a carbon tax, should be implemented to control the emission of greenhouse gases.[196] Washington, D.C., attorneys Tracy D. Perry and Robert M. Gordon argue that this route may be preferable to a carbon tax because it sets a statutory limit for emissions, effectively allowing the market to determine the value of emissions allowances—whereas a carbon tax determines the value and allows the market to decide how much it will emit.[197] This cap or statutory limit could decrease each year to reduce emissions over time and soften the blow of such a dramatic change.[198] Allowing the market to determine the value of emissions allowances would force developers to reevaluate their use without the implementation of an additional tax. Furthermore, environmental organizations could purchase allowances with no intention to resell them, effectively taking these allowances out of the market permanently and further increasing prices for the remaining allowances.[199]

While published guidance for cap-and-trade programs at the federal level is scant, the government has created analogous programs, including the treatment of sulfur dioxide emission allowances under the Clean Air Act.[200] Under the Clean Air Act, unauthorized emission of sulfur dioxide is a direct violation of the law and each excess ton emitted is treated as a separate violation.[201] These allowances are valuable and freely transferable; as a result, "an active secondary market for them has developed."[202] Although this program is generally seen as a success and has achieved major

196 *See* Tracy D. Perry & Robert M. Gordon, *Carbon Cap and Trade Programs: Potential U.S. Tax Issues*, PRAC. TAX LAW., Winter 2009, at 7.

197 *Id.* at 8.

198 *See id.* at 7.

199 *Id.*

200 *Id.* at 8.

201 *Id.*

202 *Id.*

reductions in sulfur dioxide emissions at a low cost,[203] models of successful carbon cap-and-trade programs are difficult to find. For example, the European Union introduced the Emissions Trading Scheme in 2005 to reach the goals set by the 1997 Kyoto Protocol.[204] Unfortunately, the EU allotted too many emissions permits, causing a crash in value.[205] As a result of the drop in value, the Emissions Trading Scheme failed to ignite a drop in emissions.[206]

In 2008, the Senate voted against the Lieberman-Warner Climate Security Act of 2008, which would have granted and auctioned emission allowances.[207] At the time of this writing, the House passed the American Clean Energy and Security Act of 2009 (ACES), also known as the Waxman-Markey comprehensive energy bill, by a narrow margin of 219–212, while the Senate has yet to vote on its version of the bill.[208] Although opposition in the Senate appears more extensive,[209] recent legislative trends suggest that federal taxation issues associated with an emissions cap-and-trade program will likely move to the forefront of the debate.[210]

While the arguments for the adoption of a cap-and-trade program as opposed to a carbon tax are compelling, the benefits of implementing a carbon tax outweigh the drawbacks. The CTC considers carbon taxes more effective in reducing greenhouse gas emissions for several reasons. First, carbon taxes will promote predictable energy prices, whereas cap-and-trade programs will result in unstable pricing because the price of carbon allowances in such a program "will fluctuate as weather and economic factors affect the demand for energy."[211] Historically, fluctuations in prices have discouraged investments in alternative energy.[212]

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[203] *Id.* at 8–9.

[204] Matthew Hennessey, *Cap and Trade vs. Carbon Tax*, POL'Y INNOVATIONS, Nov. 19, 2007, http://www.policyinnovations.org/ideas/briefings/data/cap_tax.

[205] *Id.*

[206] Roberta F. Mann, *The Case for the Carbon Tax: How to Overcome Politics and Find Our Green Destiny*, 39 ENVTL. L. REP. 10,118, 10,120 (2009).

[207] Perry & Gordon, *supra* note 196, at 10.

[208] Evan Glass, *House Passes Energy Overhaul Bill 219-212*, CNN POLITICS, June 26, 2009, http://www.cnn.com/2009/POLITICS/06/26/house.energy/index.html.

[209] Jeff Poor, *Inhofe: Senate Will Not Pass Cap-and-Trade*, BUS. & MEDIA INST., June 3, 2009, http://www.businessandmedia.org/articles/2009/20090603094659.aspx.

[210] Perry & Gordon, *supra* note 196, at 10.

[211] Carbon Tax Ctr., Tax vs. Cap-Trade, http://www.carbontax.org/issues/carbon-taxes-vs-cap-and-trade/ (last visited Jan. 6, 2010) [hereinafter Tax vs. Cap-Trade].

[212] *Id.*

Another argument the CTC advances is that carbon taxes are generally easier to understand and implement;[213] whereas a cap-and-trade program would be "infinitely more complex to implement."[214] Furthermore, there would be less of an opportunity for special interest groups to manipulate the system.[215] The simplicity and clarity of a carbon tax would bring accountability to the oil and gas industry at a time when large corporations are actively searching for comparative advantages to stay afloat. Professor Roberta Mann at the University of Oregon School of Law comments:

> The complexity of a cap-and-trade system makes it difficult for taxpayers and consumers to determine who will be paying the costs, and how much those costs will be. The complexity allows affected industries to jockey for advantage and exemptions without the general public understanding what is going on. From an end-user cost perspective, a carbon cap-and-trade system is opaque, not transparent. This may be viewed as a political advantage—if consumers don't understand that some industries are getting off without paying their fair share, it is unlikely that consumers will raise objections.[216]

A carbon tax, on the other hand, can circumvent the issues inherent in cap-and-trade programs while providing reliable market incentives to invest in energy property.[217] Additionally, a carbon tax could be implemented sooner than a complex cap-and-trade system.[218] A cap-and-trade program would take years to develop and implement,[219] while a simple carbon tax would only require determinations of the level of tax and measurement standards for emissions.[220]

Adopting a carbon tax over a cap-and-trade program, in light of these arguments, would be in accordance with President Obama's request for "swift" and "bold" action.[221] Since the U.S. economy is

213 *Id.*

214 Mann, *supra* note 206, at 10,120.

215 Tax vs. Cap-Trade, *supra* note 211.

216 Mann, *supra* note 206, at 10,123.

217 Tax vs. Cap-Trade, *supra* note 211 (quoting Editorial, *A Warming World: Time to Tax Carbon*, L.A. TIMES, May 28, 2007, at 26).

218 *Id.*

219 *Id.*

220 Mann, *supra* note 206, at 10,120.

221 Herszenhorn, *supra* note 112, at A15.

"an economy in the grips of the worst recession in decades,"[222] the revenue-raising possibilities created by passing a carbon tax outweigh any arguments favoring a hard cap on emissions. As federal spending increases and the deficit continues to grow,[223] the government should both move away from the fear of public disapproval inherent in passing a new tax and introduce a carbon tax rather than a cap-and-trade program to cut both emissions and the federal deficit.

CONCLUSION

The unfortunate realities of global warming are far too disastrous and threatening to our "civilized society"[224] to warrant careless responses. While all carbon-emitting countries are responsible for the worldwide increase in greenhouse gas emissions, per capita contributions of the United States to global warming far exceed those of most.[225] The burden on Americans to reduce emissions, therefore, is substantial. Because governments are able to use taxation to promote particular economic behavior on a grand scale, the federal government should focus its attention on reforming its energy taxation policy.

In 1987, the World Commission on Environment and Development stated: "[E]nvironmental regulation must move beyond the usual menu of safety regulations, zoning laws, and pollution control enactments; environmental objectives must be built into taxation [policy]."[226] Providing credits to taxpayers who invest in energy property has proven to be an effective way of encouraging energy property development. Allowing taxpayers to claim Treasury grants

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[222] Christopher S. Rugaber, *Federal Budget Deficit Reaches $765B in 5 Months*, HUFFINGTON POST, Mar. 11, 2009, http://www.huffingtonpost.com/2009/03/11/federal-budget-deficit-re_n_173959.html.

[223] *See id.* The federal deficit is growing at record pace. *See id.* Even if the federal deficit is cut, the national debt continues to grow and is reaching $11 trillion. David Stout, *Obama Vows to Slash Federal Deficit*, N.Y. TIMES, Feb. 24, 2009, http://www.nytimes.com/2009/02/24/us/politics/24web-obama.html?n=Top/Reference/Times%20Topics/People/S/Stout,%20David. For frequently updated numbers on the national debt, see TreasuryDirect, The Debt to the Penny and Who Holds It, http://www.treasurydirect.gov/NP/BPDLogin?application=np (last visited Jan. 6, 2010).

[224] Compañía General de Tabacos de Filipinas v. Collector of Internal Revenue, 275 U.S. 87, 100 (1927) (Holmes, J., dissenting).

[225] NationMaster.com, Environment Statistics: CO2 Emissions (Per Capita) (Most Recent) by Country, http://www.nationmaster.com/graph/env_co2_emi_percap-environment-co2-emissions-per-capita (last visited Jan. 6, 2010).

[226] WORLD COMM'N ON ENV'T & DEV., OUR COMMON FUTURE 64 (1987).

in lieu of these credits streamlines the process, further encouraging investments. Awarding credits for property financed by subsidized energy financing, however, amounts to a double-dip in federal funds and should not be allowed in an era during which the national debt increases every month.

In addition to reintroducing the section 48 limitation, Congress should pass a tax on carbon emissions. Rather than increasing taxation of income or other positive contributions to the economy, the government should shift its attention to environmentally harmful activities, and, with the recent passing of the American Recovery and Reinvestment Act of 2009, the timing may be right for a persuasive appeal to Congress. Political alliances and party promises will remain significant hurdles to gaining public support for a carbon tax. The bottom line, however, is clear: other countries have become savvy to the need for increased environmental taxation in energy policy, and it is time for the United States to follow suit.