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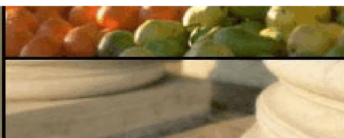

University of Arkansas
System Division of Agriculture
NatAgLaw@uark.edu | (479) 575-7646

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Fill 'Er Up With Corn: The Future of Ethanol Legislation in America

by

Brian R. Farrell

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Brian R. Farrell*

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I. INTRODUCTION

As you drive through Iowa in late summer, you may feel close to the land as you view the rolling hills filled with lush crops and picturesque farmsteads. The economic lifeblood of the region, both now and a century ago, is obvious as you pass row upon row of corn and soybeans. But your eyes may stray from the speedometer, and your serenity may be interrupted by the flashing lights of a state patrol car.

Do not despair. Your appreciation for the importance of agriculture to this state will only increase as the trooper opens his door and you notice that the shield of the Iowa State Patrol is really a kernel of corn. But a closer look at the patrol car would provide you the best lesson, as a sticker informs you that the vehicle is running on more than just gasoline.

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Farmers in the Tall Corn State, along with farmers across the nation, are finding an alternative use for their crops. Instead of being gobbled by cattle and hogs, their corn is being consumed by Broncos, Rams, and Cougars. A change in farm livestock? Not at all. Rather, their corn is being processed into ethanol, which is then blended with gasoline and used in motor fuel.

Throughout its existence over the past two decades, the nation's ethanol industry has been the subject of widespread and at times controversial legislation at the state, federal, and local levels.[1] Beginning with the Energy Tax Act of 1978, government assistance has helped ethanol remain competitive with fossil fuels.[2] Ethanol was originally promoted as a means to reduce American dependence on foreign petroleum. Although its production was initially expensive, ethanol can now be produced much more efficiently.[3] This increased efficiency, coupled with the end of the energy crisis, has many ethanol opponents calling for an end to subsidies and tax breaks.[4] At the same time, supporters stress the environmental advantage of ethanol as a renewable fuel and its positive effect on farm-state economies.[5] The political and economic struggle surrounding ethanol over the past ten years has left legislators searching for the best alternative. "While states have supported ethanol through subsidies and credits, the petroleum industry has fought to minimize these benefits, claiming that ethanol's environmental benefits are not entirely proven and petroleum is still a viable alternative."

This Note examines and questions the roles of federal and state governments in the ethanol industry. Part II of this Note provides background information about the development of ethanol as an alternative fuel and government involvement in this process.[6] Part II also examines advances in ethanol technology and additional justifications for its use.[7] Part III describes the enactment of federal and state legislation promoting ethanol.[8] Part IV analyzes the merits, success, and effectiveness of various state and federal incentive programs and governmental mandates enacted in the past decade.[9] Finally, Part V suggests that governments should move away from tax credit programs, which have traditionally amounted to corporate welfare benefiting a few large ethanol producers.[10] Part V asserts that less direct governmental support of ethanol is desirable and concludes

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1. Susan Brom, *Tax Credit for Ohio-Produced Ethanol: Forced Reciprocity or Promotion of Health and Commerce?*, 42 TAX LAW. 401, 403 (1989).

2. *See generally* Pub. L. No. 95-618, § 221, 92 Stat. 3185 (codified as amended at 26 U.S.C. §§ 4041, 4081 (1992 & Supp. IV)) (providing partial exemption from the federal motor fuel excise taxes that are earmarked for the Highway Trust Fund).

3. *See* George Anthan, *USDA Study Favorable to Ethanol*, DES MOINES REG., Aug. 9, 1995, at 8.

4. *See* George Anthan, *Ethanol Subsidy Faces a Challenge*, DES MOINES REG., May 10, 1996, at 8 (explaining political opposition).

5. *See* Jerry Perkins, *Ruling Disappoints Iowans*, DES MOINES REG., Apr. 29, 1995, at 4 (describing the expanding ethanol production industry in the Midwest).

6. *See infra* Part II (describing the economic conditions of the late 1970s that prompted the search for alternative fuels).

7. *See infra* Part II (discussing increased efficiency in ethanol production and emergence of environmental concerns).

8. *See infra* Part III (describing types of legislation and opposition).

9. *See infra* Part IV (examining the unconstitutionality of reciprocal tax credit programs and the legal and practical effect of other programs).

10. *See infra* Part V (discussing the decline of subsidy programs).

that increased ethanol use will be best achieved through a combination of traditional market promotion and limited, indirect government assistance.[11]

II. BACKGROUND

During the energy crisis of the late 1970s, Americans depended heavily on foreign fossil fuels.[12] When Middle Eastern oil-producing nations imposed a petroleum embargo in the late 1970s, American government and industry focused on developing alternative fuels.[13] One alternative was ethanol, a 199-proof alcohol derived from corn or other grains, which uses enzymes to convert the grain's starch into sugar.[14] President Jimmy Carter promoted ethanol as a means of lessening American dependence on foreign oil while creating a market for surplus corn.[15] Ethanol produced in the United States was used in "gasohol," a fuel containing ten percent ethanol and ninety percent gasoline, which promised to replace other fuels.[16]

Production of ethanol in the late 1970s was inefficient compared with production today,[17] making it difficult for the fuel additive to compete with other fuels. In an attempt to promote ethanol use and increase its chances of success, Congress passed the Energy Tax Act in 1978.[18] Other federal and state enactments followed and were eagerly accepted by the fledgling ethanol industry.

Although ethanol was originally heralded as a vehicle for achieving American energy independence,[19] it quickly gained strong support for other reasons. Ethanol reduces carbon monoxide emissions and is a safer octane enhancer than lead, which dominated the market until its removal from gas during the 1980s, and benzene, which is believed to cause health and environmental hazards.[20] Economically, ethanol provides another major market for Midwestern corn;[21] approximately seven percent of the total corn crop is used

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11. *See infra* Part V (suggesting indirect methods of promotion that states might adopt).

12. Anthan, *supra* note 3, at 8. In 1960, 16.5% of all oil consumed in the U.S. was imported; in 1970, that figure had risen to 21.5% and peaked at 46.5% in 1977; in 1980, imported oil accounted for 37.3% of U.S. oil consumption; in 1990, the level had risen back to 42.2%; and in 1996 consumption was up to 46.5%. Richard Powelson, *Oil Imports on the Rise. U.S. Dependence on Foreign Crude Highest Since '77*, ANCHORAGE DAILY NEWS, Aug. 9, 1997, at B6.

13. *Id.*

14. *See* New Energy Co. v. Limbach, No. 85AP-340, 1986 WL 5416, at *2 (Ohio App. 1986) (stating the facts in a dispute over a state statute).

15. *See* Anthan, *supra* note 3, at 8; *Quiet Earthquake at the Gas Pumps*, DES MOINES REG., Aug. 18, 1996, at 1.

16. *See New Energy*, 1986 WL 5416, at *2 (describing facts surrounding the dispute over the controversial statute).

17. *See* Anthan, *supra* note 3, at 8. According to a U.S. Department of Agriculture report, the amount of energy required to produce one gallon of ethanol declined from 120,000 British Thermal Units (BTU) in 1981 to 43,000 BTU in 1993. *Id.*

18. Pub. L. No. 95-618, § 221, 92 Stat. 3185 (codified as amended at 26 U.S.C. §§ 4041, 4081 (1982 & Supp. IV)) (providing exemption from federal motor fuel excise taxes).

19. *See* Anthan, *supra* note 3, at 8.

20. *See* Jayne O'Donnell, *Gasoline Allies: Politicians, the EPA, and Farm Interests Are Fooling with Your Fuel*, AUTOWEEK, Apr. 21, 1994, at 4.

21. *See* Anthan, *supra* note 3, at 8. Ethanol is most frequently derived from corn, but can be produced from other sources as well. *Id.* In the United States, 72% of ethanol is made from corn, 11% from other grains, 11% from sugar or molasses, and 6% from waste or other feed stock. *Id.*

for ethanol production.[22] At this rate, about 450,000 bushels of corn are required each day to produce 424 million gallons annually,[23] a boon to farm states.

According to the ethanol industry, this economic benefit totals $4.6 billion each year, with $1.2 billion of this amount representing farm income.[24] Ethanol production also provides employment in Midwestern states such as Iowa, where ethanol is responsible for over 12,000 jobs.[25] The stakes are high for farm states to maintain ethanol's place in the fuel industry. A study by Iowa State University predicted that a fifty percent decrease in ethanol demand would result in a twelve percent decline in corn prices in less than a year.[26] For these reasons, midwestern politicians have long struggled to maintain favorable ethanol legislation by blocking any attempts to eliminate its favored status.[27]

Ethanol is winning acceptance regardless of legislation mandating its use or providing subsidies. For example, in 1995 ethanol-blend gasoline had a thirty-five percent share of the market in Chicago, without any statute requiring its use.[28] In Iowa, ethanol use increased by sixty million gallons in both 1994 and 1995.[29] This acceptance may be partially explained by the fact that ethanol can be produced more cheaply and efficiently now than when it first appeared on the market.[30] In 1995, the United States Department of Agriculture declared that ethanol had achieved a "net positive energy balance."[31] For example, ethanol can provide approximately twenty-five percent more energy than is required to produce it.[32] The USDA estimated that ethanol production required almost three times as much energy in 1981 as compared to current methods.[33]

The automobile industry has also responded to increased ethanol availability and technological advances. Another ethanol-blend fuel that combines eighty-five percent ethanol with fifteen percent gasoline is currently in limited use primarily by government entities.[34] Major domestic automobile companies plan to begin marketing "flexible fuel" vehicles,[35] despite the fact that many ethanol subsidies are scheduled to end in 2000.[36]

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22. *Id.* at 8.

23. *See* George Anthan, *Shedding Light on Ethanol Flap*, DES MOINES REG., Dec. 24, 1995, at 1.

24. *See* Anthan, *supra* note 3, at 8.

25. *See* Anthan, *supra* note 23, at 1.

26. *Id.* The report added that soybean, wheat, and sorghum prices would drop as well, although none of these crops are necessary for ethanol production. *Id.*

27. Anthan, *supra* note 4, at 8. While discussing proposals to end ethanol subsidies, U.S. Sen. Charles Grassley (R–Ia.) said, "What I do know is that nothing is going to happen to ethanol. We can stop these proposals." *Id.*

28. Perkins, *supra* note 5, at 4.

29. *Id.*

30. Anthan, *supra* note 3, at 4-5 (citing a USDA report stating that the energy required in the processing of ethanol decreased from 120,000 BTU/gallon of ethanol in 1981 to 43,000 BTU/gallon in 1991).

31. *Id.*

32. *Id.* One of the early criticisms of ethanol was that ethanol production required more energy than it created. *Id.* Researchers admitted, however, that some of these earlier university studies had included the energy required to produce farm machinery in their calculations of the amount of energy required to produce ethanol. *Id.* The USDA report considered the amount of energy required to grow, harvest, transport, and distill the corn in conjunction with the valuable by-products the process generated. *See* Anthan, *supra* note 3, at 8.

33. *Id.* The difference may be attributable to the implementation of different methods of calculation. *See supra* note 32.

34. *See, e.g.*, IOWA CODE ANN. § 18.115 (West 1995 & Supp. 1997).

35. Flexible fuel vehicles are those which can run on gasoline or various ethanol blends.

36. *See* Anne Fitzgerald, *Ethanol Industry Voices Optimism*, DES MOINES REG., Feb. 2, 1996, at 10

The Ford Motor Company planned to begin manufacturing up to 6,000 such cars in 1996, and the General Motors Corporation is expected to market flexible fuel pickups by 1998,[37] indicating that the ethanol industry has secured a place in the American market.

III. ENACTMENT OF LEGISLATION

Ethanol legislation was first enacted during the energy crisis of the late 1970s. States and the federal government have continued such legislation with a number of diverse statutes. Motivation for the enactment of these statutes is similarly diverse.

A. Rationale

Every jurisdiction cites slightly different justifications for legislation promoting ethanol. Congress summarize the various interests during legislation reconsideration in 1987.[38]

> Congress finds that—(1) the United States is dependent for a large and growing share of its energy needs on the Middle East at a time when world petroleum reserves are declining; (2) the burning of gasoline causes pollution; (3) ethanol can be blended with gasoline to produce a cleaner source of fuel; (4) ethanol can be produced from grain, a renewable resource that is in considerable surplus in the United States; (5) the conversion of grain into ethanol would reduce farm program costs and grain surpluses; and (6) increasing the quantity of motor fuels that contain at least 10 percent ethanol from current levels to 50 percent by 1992 would create thousands of new jobs in ethanol production facilities.[39]

These general themes—energy independence, environmental concern, and agricultural development—are compelling interests in the minds of most legislators and are difficult to oppose for political reasons.[40]

B. Opposition to Government Ethanol Promotion

Despite general bipartisan political support, opposition to legislation promoting the use of ethanol does exist. Because ethanol reduces the national demand for petroleum, the petroleum industry, in particular, opposes ethanol production, subsidies, and tax

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(predicting the future impact of ethanol laws). Currently, the tax incentives have not been extended, but legislation is proposed in both the House of Representatives and the Senate to extend the incentives through 2007. *See* H.R. RES. 2489, 105TH CONG. (1997); S. RES. 1008, 105TH CONG. (1997).

37. *Id.*

38. Omnibus Budget Reconciliation Act of 1987, Pub. L. No. 100-203, Title I, § 1508(a), 101 Stat. 1330-29 (1987) (referenced in notes, 42 U.S.C.A § 7545 (West 1998)) (issuing findings regarding ethanol and instructing EPA administrators to use authority provided by the Clean Air Act to require greater use of ethanol as motor fuel).

39. *Id.*

40. *See, e.g.*, Anthan, *supra* note 23, at 1 (explaining the criticism of U.S. Rep. Jim Nussle by fellow Iowa Republicans for not defeating in committee a bill threatening ethanol subsidy).

credits.[41] Members of Congress from oil-producing and petroleum-refining states are the most vocal about ending favors to the ethanol industry.[42]

The petroleum industry has also attacked ethanol-friendly legislation in the courts. In *American Petroleum Institute v. United States EPA*,[43] petroleum interests challenged the Clean Air Act's reformulated gasoline requirements.[44] As part of the program, Congress directed the administrator of the EPA to

> promulgate regulations . . . establishing requirements for reformulated gasoline to be used in gasoline-fueled vehicles in specified nonattainment areas. Such regulations shall require the greatest reduction in emissions of ozone forming volatile organic compounds . . . and emissions of toxic air pollutants . . . achievable through the reformulation of conventional gasoline, taking into consideration the cost of achieving such emission reductions, any nonair-quality and other air-quality related health and environmental impacts and energy requirements.[45]

The statute also requires that the reformulated gasoline be at least two percent oxygen by weight.[46] In the fuel industry, the primary sources of oxygen in gasoline are ethanol and methyl tertiary-butyl ether (MTBE).[47] Ethanol is considered a renewable resource, while MTBE is a derivative of nonrenewable resources such as natural gas and petroleum.[48] However, ethanol used in gasoline increases emissions of volatile organic compounds (VOCs),[49] which contravenes the purpose of the reformulated gasoline program.[50]

Despite the increased VOC emissions attributed to ethanol, the EPA's final regulations for the reformulated gasoline program required that thirty percent of the oxygen in reformulated gasoline come from renewable sources.[51] At that time, ethanol was the only product capable of meeting the requirements.[52] Because the petroleum industry's preferred oxygenate was MTBE, the industry immediately contested the thirty percent

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41. *See generally*, Clean Air Act, 42 U.S.C. § 7545(k)(1) (1996) (directing a reduction in fossil fuels); Pub. L. No. 100-203, Title I, § 1508 (b), 101 Stat. 1330-29 (1987) (instructing the EPA administrator to use her authority provided by the Clean Air Act to require greater use of ethanol as motor fuel). *See also* AMERICAN PETROLEUM INSTITUTE, *Major Policy Issues: Alternative Fuels* (last modified Jan. 27, 1998) <http://www.api.org/news/496altfu.htm> (arguing that ethanol tax incentives raise fuel costs and decrease economic well-being with little environmental and national energy security impact).

42. *See* Anthan, *supra* note 3, at 8 (describing challenges to federal tax breaks and use requirements led by Sen. Bill Bradley of New Jersey, a petroleum-refining state, and Sen. Don Nickles of Oklahoma, an oil-producing state).

43. 52 F.3d 1113 (D.C. Cir. 1995).

44. *See id.* at 1118.

45. 42 U.S.C. § 7545(k)(1). The nine major metropolitan "nonattainment areas" specified in the statute experienced the most pronounced air pollution, thereby requiring increased oxygen in the atmosphere. *See* Jerry Perkins, *Court Will Decide Fate of Ethanol*, DES MOINES REG., Feb. 12, 1995, at 1.

46. *See* 42 U.S.C. § 7545(k)(2).

47. *See American Petroleum Inst.*, 52 F.3d at 1115 (ethanol and MTBE are commonly referred to as oxygenates).

48. *Id.*

49. *Id.* The court noted that ethanol increases fuel volatility and raises volatile organic compound emissions, particularly during summer months, while MTBE does not produce such effects. *Id.*

50. *See* 42 U.S.C. § 7545(k)(1) (requiring reduction in emissions of volatile organic compounds).

51. *See* 59 Fed. Reg. 39,258 (1994) (codified at 40 C.F.R. pt. 80).

52. *See Federal Judges Question EPA's Rule on Ethanol*, DES MOINES REG., Feb. 17, 1995, at 4.

rule.[53] The EPA defended the rule, claiming ethanol use would conserve fossil fuels, stimulate the renewable oxygenate market, and fulfill the purpose of the reformulated gasoline program.[54]

The petroleum industry, led by the American Petroleum Institute, challenged the rule in federal court.[55] In a brief opinion, the court stated that the plain meaning of the reformulated gasoline program precluded the adoption of rules that did not reduce volatile organic compound emissions.[56] The court then criticized the EPA for promulgating rules that not only failed to reduce harmful emissions, but could make air quality worse.[57] Ethanol supporters considered the ruling a major defeat,[58] and the decision led to finger-pointing at almost every level of government.[59]

The petroleum industry is not the only opponent of ethanol. In fact, some recent attacks on ethanol have come from unlikely sources. Corn growers are highly enthusiastic about the new market ethanol has provided them, but this enthusiasm is not shared by all members of the agricultural community. Other aspects of agricultural production rely on grain. High corn prices stemming from increased demand cause livestock producers to become disgruntled.[60] Some cattle, pork, and poultry producers suggest that ending subsidies for ethanol would cause demand to decrease, making more corn available to the feed market at moderate prices.[61] Most farmers dismiss the notion of disharmony, though, and emphasize the cyclical nature of grain prices and the unity of agricultural interests.[62]

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53. *See* Perkins, *supra* note 45, at 1.

54. *See* 59 Fed. Reg. 39,262 (1994) (codified at 40 C.F.R. pt. 80) (justifying adoption of the 30% ethanol requirement).

55. *See* American Petro. Inst. v. United States Envtl. Prot. Ag., 52 F.3d 1113 (D.C. Cir. 1994).

56. *Id.* at 1119.

57. *Id.* Judge Stephen Williams, troubled by the lack of a logical connection between the statute and the rule derived from it, said, "It seems to me EPA is in outer space." *Federal Judges Question EPA's Rule on Ethanol, supra* note 52, at 4.

58. Sen. Charles Grassley of Iowa stated that the "appeals court decision on ethanol is catastrophic." Kenneth Pins, Court Hands Ethanol a Big Setback, DES MOINES REG., Apr. 29, 1995, at 4. Grassley expected a ten cent drop in the price of corn per bushel after 1995, resulting in a three billion dollar loss to farmers by the end of the decade. *Id.*

59. Sen. Grassley attacked the Clinton administration for failing to propose inclusion of an ethanol requirement in the actual statute, although others suggested the requirement would have been successfully challenged whether in the statute or the EPA rule. *Id.* Some in the Department of Agriculture faulted the Bush administration for failing to issue an ethanol rule until its last weeks in office and said the rule the administration finally produced was "unworkable." *Id.* Some also criticized the handling of the case by the EPA. *Id.*

60. *See* Anthan, *supra* note 4, at 8. In August of 1996, corn was almost five dollars per bushel, nearly double a Department of Agriculture forecast predicting prices between two and a half to three dollars. *Id.* Anthan noted that it is difficult for "creation of a surplus market of corn" to justify ethanol tax breaks when the price rises to such levels. *Id.* Farmers who rely on grain are not the only ones who feel the effects of high prices. Archer Daniels Midland Co., which holds a majority share of the nation's ethanol market, stated that it cannot produce ethanol profitably when the price of corn exceeds $4.70 per bushel. *Id.* Many small producers of ethanol are forced to shut down when prices are so high. *Id.*

61. In May 1996, North Carolina Sen. Lauch Faircloth, a large hog producer himself, raised the idea of dropping ethanol tax credits to help pay for the repeal of other gasoline taxes. *See* Anthan, *supra* note 4, at 8. Sen. Faircloth's proposal was quickly blocked by Midwest legislators led by Kansas Sen. Bob Dole; Senator Dole was sometimes referred to as "Senator Ethanol." *Id.*

62. Keith Heard of the National Corn Growers Association stated that opponents of ethanol were discussing the possibility of a split between corn farmers and pork producers over corn prices and stressed that "there

The most recent opposition to ethanol legislation came from perhaps the least likely source—environmental interests. The challenge in *Florida Audubon Society v. Bentsen*[63] arose from a decision by the Secretary of the Treasury[64] to expand ethanol's tax credit to include ethyl tertiary butyl ether (ETBE), a fuel additive derived from ethanol.[65] When extending the tax credit, the Secretary did not prepare an Environmental Impact Statement as required by the National Environmental Policy Act.[66] The Secretary felt that he was excused from preparing a statement under a provision excluding actions that do not "individually or cumulatively have a significant effect on the human environment."[67] The Florida Audubon Society argued that extension of the tax credit to ETBE would increase the market for ETBE.[68] They claimed that this would stimulate corn, sugar cane, and sugar beet production, resulting in increased cultivation.[69] This, in turn, would present an environmental danger to bordering wildlife areas that the society and its members use and enjoy.[70] The court dismissed the society's claim, stating that it had not shown personal injury or an injury fairly traceable to the Secretary's decision not to prepare an Environmental Impact Statement.[71] The case demonstrates that the sources of opposition to ethanol are diverse and surprising.

C. *Types of Legislation*

Each jurisdiction crafts ethanol legislation to fit its own needs, resulting in a variety of approaches. However, legislation promoting ethanol use generally falls into one of two categories. Some statutes make the production of ethanol cheaper or easier, while others require its use in certain circumstances.

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is not going to be a split in agriculture on this issue." *Id.*

63. 1996 WL 468696 (D.C. Cir. 1996).

64. *See* Alcohol Fuels Credit; Definition of Mixture, 55 Fed. Reg. 8,946 (1990) (codified at 26 C.F.R. pt. 1).

65. ETBE is a renewable oxygenate that is produced from ethanol, but the final product does not contain any ethanol. *See Fl. Audubon Soc'y*, 1996 WL 468696, at *2. The EPA made the final decision to extend the ethanol exemption in 1990; however, ETBE was not produced in the United States until 1994. *Id.* Thus, although it is another alternative to MTBE, ETBE still was not commonly used when the program was challenged by petroleum interests in *American Petro. Inst. v. United States Envlt. Prot. Ag.*, 52 F.3d 1113 (D.C. Cir. 1995). Therefore, the court there did not include ETBE in its discussion of oxygenates. *Id.* at 1115. *See supra* notes 43-59 and accompanying text (explaining the *American Petroleum Inst.* decision).

66. 42 U.S.C.A. § 4332(2)(C) (West 1996) (requiring federal agencies to detail the effect of major federal actions on the environment).

67. 40 C.F.R. § 1508.4 (1996). The Secretary concluded that this provision excused clarifications of tax rules. Treasury Directive 75-02.

68. *See Florida Audubon Soc'y*, 1996 WL 468696, at *2.

69. *Id*

70. *Id.*

71. *Id.* at *11. The court felt the Society had not demonstrated that individual corn or sugar farmers bordering wildlife areas would increase their production because of the tax credit. *Id.* at *7. The court also noted that ETBE might be used in place of ethanol, thereby creating no increased production demand. *Florida Audubon Society*, 1996 WL 468696, at *7. The dissent pointed out that one possible injury could be a negative impact on drinking water because certain areas of Minnesota were among those in controversy, proponents of the ETBE credit expected an increased demand for corn, and sixty-eight percent of American corn acreage is treated with atrazine, which is classified as a possible human carcinogen and is the most frequently detected pesticide in the ground water in the Midwestern U.S.. *See id.* at *10 (Rogers, J., dissenting).

1. Incentive Programs

Many state governments and the federal government encourage ethanol production by offering incentives to ethanol producers.[72] These incentives make production more profitable. The most common incentive, the tax credit, reduces the amount of tax paid by the ethanol producer.[73] The various jurisdictions use different approaches. For example, in Ohio the tax levied against a producer is simply reduced by an amount corresponding to the amount of ethanol produced.[74] Wyoming awards the producer a credit voucher that the producer may use or transfer to another party.[75] Colorado offers credit to automobile buyers who purchase vehicles with alternative fuel capabilities.[76] All of these statutes are similar in offering financial incentives to producers or consumers.

2. Mandates

Governments can also promote the use of ethanol by requiring its use. These mandates can range from requiring use of ethanol in vehicles[77] to specifying that certain quantities of ethanol be sold in a geographic area.[78] Although this approach does not provide direct financial benefits to the industry, mandatory ethanol use statutes increase demand for ethanol.

IV. ANALYSIS OF STATUTES

To discuss the future of ethanol legislation, it is important to understand the flaws of past legislation. This includes looking to midwestern state legislatures to determine the policies underlying ethanol legislation and exploring challenges raised against such legislation. Reviewing the successes and failures of these individual programs also provides a glimpse of the future of ethanol programs.

A. Incentive Programs

Government tax credit programs are aimed at promoting competitive ethanol pricing. This puts ethanol on equal footing with petroleum products or gives it an advantage in the marketplace and indirectly encourages expanded ethanol use. Because of their stake in the success of the ethanol industry, corn-producing states have been willing to

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72. *See generally, e.g.*, Nancy Shurtz, *Promoting Alcohol Fuels Production: Tax Expenditures? Direct Expenditures? No Expenditures?*, 36 SW. L.J. 597 (1982).

73. *Id.*

74. *See* OHIO REV. CODE ANN. § 5735.145 (Banks-Baldwin 1996) (subtracting ten cents from the per gallon tax on gasoline blended with ethanol).

75. *See* WYO. STAT. ANN. § 39-6-216 (Michie 1977) (providing a 40 cent credit voucher for each gallon of ethanol produced in the state).

76. *See* COLO. REV. STAT. § 39-22-516 (West 1996) (allowing clean burning alternative fuel vehicle owners a credit of five percent against tax imposed on all new vehicles).

77. *See* IOWA CODE § 262.25A (1997) (requiring vehicles operated by the state board of regents to operate on gasoline blended with at least 10% ethanol).

78. *See* 42 U.S.C. § 7545(k) (1996) (requiring reformulated gasoline usage in certain areas of the nation); *see also supra* notes 43-60 and accompanying text (explaining the Clean Air Act and the American Petroleum Inst. decision).

provide this financial assistance to the industry. The federal government has also shown consistent support for ethanol through incentives.[79]

Congress first provided a motor fuel tax exemption in 1978[80] and many states soon followed.[81] Some groups opposed tax credits because they felt the statutes were too generous. In addition, some early statutes were flawed. Legislators, anxious to promote this fledgling industry, unintentionally provided ethanol opponents with ample opportunity to strike down poorly drafted statutes.

1. Commerce Clause Problems

As noted, legislators, particularly those in the Midwest, were often willing to go to great lengths to help their states reap the benefits of ethanol. In their zeal to create jobs and pander to agricultural voters some legislators forgot the basic constitutional principles of interstate commerce.

In 1980, the Minnesota legislature passed an act that taxed ethanol at a rate lower than the existing state gasoline sales tax.[82] The act provided a four-cent-per-gallon reduction for gasohol, but only if the ethanol in the fuel had been distilled in Minnesota and was made from agricultural products originating in the state.[83] The Archer Daniels Midland Company (ADM) was the largest supplier of gasohol in Minnesota at the time, providing approximately eighty-five percent of the state's supply.[84] Although it was the major supplier of gasohol, ADM neither operated a distillery in Minnesota nor used Minnesota corn in its production of ethanol.[85] ADM did not meet the requirements of the statute and could not benefit from it.[86] The company therefore sought to have the statute declared invalid.

The Minnesota Supreme Court held that the act was an unconstitutional violation of the Commerce Clause.[87] The court stated that the legislation placed "a more onerous tax burden upon out-of-state gasohol simply 'because of its origin in another state.'"[88] Instead of severing the offending language, the court invalidated the entire act.[89]

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79. *See supra* note 27 and accompanying text.

80. *See, e.g.*, Energy Tax Act of 1978, Pub. L. No. 95-618, § 221, 92 Stat. 3185 (codified as amended at 26 U.S.C. §§ 4041, 4081 (1988)).

81. By 1986, at least 32 states allowed tax credits for ethanol-blended gasoline. *See* New Energy Co. of Indiana v. Limbach, No. 85AP-340, 1986 WL 5416, at *3 (Ohio Ct. App. 1986).

82. *See* MINN STAT. § 296.02(1) (Supp. 1981) (taxing ethanol-blended gasoline produced in the state at nine cents per gallon while taxing all other gasoline at 13 cents).

83. *See* MINN. STAT. § 296.02(7) (1980), *repealed by* Laws 1995, ch. 220, § 141(d).

84. *See* Archer Daniels Midland Co. v. State, 315 N.W.2d 597, 598 (Minn. 1982).

85. *Id.*

86. *Id.*

87. *See* U.S. CONST. art. I, § 8, cl. 3 (giving Congress the power to "regulate Commerce . . . among the several States").

88. *Archer Daniels Midland*, 315 N.W.2d at 599 (quoting Baldwin v. Seelig, Inc., 294 U.S. 511, 526 (1935)). The court found that the statute was facially discriminatory and that it failed the Supreme Court's balancing test because less burdensome alternatives, such as property tax relief. were available. *Id.*

89. *Id.* at 600. Apparently, ADM had hoped the court would extend the tax reduction to all producers of gasohol. *Id.* The court chose to invalidate the entire act because the legislature blatantly intended to benefit Minnesota producers, and severance of the offending language would frustrate this intent. *Id.*

Shortly after the Minnesota court invalidated the statute, the Florida legislature passed a gasohol tax exemption statute.[90] The Florida act did not discriminate based on the state of production, but it did limit its four-cent-per-gallon tax exemption to gasohol that contained "ethyl alcohol which is distilled from U.S. agricultural products or by-products."[91] Publicker, an importer of Brazilian ethanol, challenged the law.[92] In *Miller v. Publicker Industries, Inc.*,[93] the Supreme Court of Florida found that the tax violated the Import-Export Clause[94] as well as the Commerce Clause.[95]

Despite these decisions, legislators were not willing to abandon legislation promoting home state ethanol production, so they attempted to devise statutes that would withstand constitutional challenges. Ohio first passed a tax credit statute in 1981.[96] This statute provided credit against the Ohio gasoline tax for each gallon of ethanol-blended gasoline sold without regard for the origin of the ethanol.[97] In 1984 the state legislature enacted a statute limiting this credit, but in an attempt to avoid the facial discrimination of the Minnesota statute[98] the language of the statute provided that the credit would extend only to producers from states that granted a tax credit or refund similar to that of Ohio.[99]

In the same year, the Indiana legislature voted to repeal its tax credit program for ethanol producers.[100] Indiana replaced the tax credit program with legislation providing direct subsidies to its producers.[101] Other states surrounding Ohio provided tax credits; hence, New Energy Company of Indiana was the only ethanol producer affected by the combination of the new Indiana and Ohio statutes.[102]

New Energy challenged the Ohio statute in Ohio state court.[103] An Ohio Court of Appeals upheld the trial court's finding that the statute was valid.[104] Applying a Commerce Clause balancing test,[105] the court found that the legislation did not impose a sig-

90. *See* FLA. STAT. § 212.63, ch. 84-353 (1983).

91. *Id.*

92. *See* Miller v. Publicker Indus., 457 So.2d 1374, 1375 (Fla. 1984). Miller argued Publicker did not have standing because it did not pay or collect the tax. *Id.* The trial court found Publicker had standing because the statute prevented it from selling its ethanol in Florida at a competitive price. *Id.*

93. 457 So.2d 1374 (Fla. 1984).

94. *See* U.S. CONST. art. I, § 10, cl. 2 (prohibiting any state from enacting taxes on imports and exports favoring its own industries).

95. *See Miller*, 457 So.2d at 1376. The court explained that "the prohibition on discriminatory taxation of interstate commerce extends to foreign commerce as well as domestic." *Id.* (citing Japan Line, Ltd. v. County of Los Angeles, 441 U.S. 434 (1979)).

96. *See* New Energy Co. v. Limbach, 486 U.S. 269, 272 (1988).

97. *See* 1981-1982 OHIO LAWS 1693, 1731-1732.

98. *See supra* note 82-89 and accompanying text.

99. *See* OHIO REV. CODE ANN. § 5735.145(B) (Banks-Baldwin 1984). In the event that another state did not allow the same amount of credit, Ohio would grant only an equivalent credit. *Id.*

100. *See* 1984 Ind. Acts 189, 194-195.

101. *See* IND. CODE §§ 4-4-10.1-1 to 4-4-10.1-8 (Supp. 1987).

102. *See* New Energy Co. v. Limbach, 486 U.S. 269, 273 (1988).

103. *See* New Energy Co. v. Limbach, No. 85AP-340, 1986 WL 5416, at *1 (Court of Appeals of Ohio, Franklin County 1986).

104. *Id.*

105. *Id.* The court borrowed its standard, "only if the burden on interstate commerce clearly outweighs the state's legitimate purposes does such a regulation violate the Commerce Clause." from *Minnesota v. Clover Leaf Creamery Co.*, 449 U.S. 459, 471 (1981). *Id.*

nificant burden on interstate commerce because the statute did not ban New Energy from doing business in Ohio and the statute served legitimate state purposes.[106] The court stated that providing an incentive for the use of ethanol, encouraging other states to provide incentives, and protecting Ohio producers from discriminatory programs were three purposes of the legislation.[107] Neither did the Ohio statute give Ohio producers a direct advantage over out-of-state producers because all producers but New Energy enjoyed the credit.[108] In fact, the court quoted the trial court in observing that "the Indiana legislature created the hardship to the plaintiff as much as the Ohio legislature did."[109]

New Energy appealed to the Ohio Supreme Court.[110] This court was no more sympathetic with New Energy than the court of appeals had been.[111] In response to New Energy's argument that environmental protection could not be a legitimate goal of the legislature because the ethanol industry had not yet reached a consensus about its health aspects, the court determined that the issue was best left to the state legislature.[112]

The Ohio court approached the issue of "forced reciprocity"[113] by attempting to determine "who [was] forcing whom."[114] It pointed out that Indiana had a tax credit program until about the time Ohio enacted its reciprocal statute and, after that time, Indiana was one of the only nearby states without a tax credit program.[115] If Indiana forced Ohio to repeal its statute, then Ohio producers could not receive tax credits in neighboring states with reciprocal programs. Ohio producers would then have a cause of action against Ohio's neighbors, "until each state's reciprocal tax credit program would fall like a row of dominos."[116]

In 1988, the United States Supreme Court reviewed the issue and reached conclusions that were drastically different than those of the three Ohio courts.[117] Justice Scalia, writing for the Court, began by acknowledging that there is no per se rule against reci-

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106. *New Energy Co.*, 1986 WL 5416, at *3.

107. *Id.* at *4. The dissent disregarded the legitimate purposes offered by the state, noting that environmental concerns were not even part of the basis used by the trial court to uphold the statute in the first place. *See id.* (Stern, J., dissenting).

108. *Id.* The court stressed that the credit was "available" to any state whose legislature would pass similar legislation. *Id.* It also predicted that the Ohio and Indiana enactments would benefit Tennessee and Illinois producers more than Ohio producers because they would most likely fill the void left by New Energy. *New Energy*, 1986 WL 5416, at *4.

109. *Id.*

110. *See* New Energy Co. v. Limbach, 513 N.E.2d 258 (Ohio 1987).

111. The court was also unsympathetic to the State of Indiana. The court pronounced:

> There is no question that the sovereign state of Indiana has every right to switch from a reciprocal tax credit program to a direct producer subsidy program. If Indiana has determined that a subsidy program is more beneficial for that state, so be it. If because of this policy change an Indiana ethanol producer is put at a disadvantage . . . so be that, too.

Id. at 262.

112. *Id.* at 261 (quoting Ferguson v. Skrupa, 372 U.S. 726, 729 (1963)).

113. Some state statutes intend to force reciprocal action by other states, and courts view them with the "strictest scrutiny." *Id.* at 262 (citing Hughes v. Oklahoma, 441 U.S. 322 (1979)).

114. *Id.* The vocal dissent pointed out that tax laws of one state are not relevant in determining whether another state's statutes violate the commerce clause. *Id.* at 266.

115. *Id.* at 262.

116. *Id.*

117. *See* New Energy Co. v. Limbach, 486 U.S. 269 (1988).

procity requirements but added that there was no justification for Ohio's unequal treatment of New Energy.[118] He explained that neither of the two justifications offered by the state were sufficient to support the statute.[119] He stated that the first rationale—health—was a legitimate government goal, but could find no reason why ethanol from states not offering tax subsidies was less healthy than ethanol produced in Ohio and other states offering tax incentives.[120] Justice Scalia applied essentially the same reasoning to the second justification—promotion of commerce.[121] He also remarked that subsidizing an industry did not amount to market participation, thereby effectively eliminating that argument.[122]

The pronouncement in *New Energy* is clear.[123] After *New Energy*, various groups challenged state incentive programs, forcing states to alter or discontinue these programs. The Illinois Supreme Court struck down an Illinois tax credit program with a reciprocity provision[124] just four months after *New Energy*.[125] After invalidating the reciprocity provision under the authority of *New Energy*,[126] the Illinois Supreme Court declared unconstitutional the statute's definition of the term "gasohol."[127] The legislature had amended the statute in 1985 so the definition of gasohol included only ethanol "obtained from cereal grains or food processed by-products essentially derived from cereal grain."[128] Because almost all ethanol produced in Illinois but not nearly all the ethanol produced nationwide fit this definition, the court found that the statute imposed a disproportionate burden on interstate commerce.[129]

The most recent reciprocity challenge came from North Dakota. In *Service Oil, Inc. v. State*[130] the oil company, which purchased ethanol outside North Dakota, successfully challenged the state reciprocity statute[131] and then sought a refund of the taxes it had paid.[132] The state admitted that the statute was unconstitutional under *New Energy* but

118. *Id.* at 276.

119. *Id.* at 280.

120. *Id.* at 279.

121. *Id.* at 280 (stating that the statute did not promote ethanol tax credits; rather, it simply gave Ohio producers favorable treatment).

122. *See* New Energy Co. v. Limbach, 486 U.S. 269, 277 (1988).

123. *Id.*

124. *See* Use Tax Act, ILL. REV. STAT. ch. 120, ¶¶ 439.3, 441 (1985). This statute provided a tax structure that taxed on a set scale ethanol-blended gasoline distilled in Illinois or a state with similar tax benefits. *Id.* The tax on gasohol would gradually increase from zero to five percent. *Id.*

125. *See* Russell Stewart Oil Co. v. State, 529 N.E.2d 484 (Ill. 1988).

126. *Id.* at 491. The state did not persuade the court that any of the interests it sought justified the burden on interstate commerce. *Id.* The interests raised included grain market stimulation, health and welfare objectives, and foreign oil import reduction. *Id.* at 490.

127. *Id.*

128. ILL. REV. STAT. ch. 120, ¶ 439.3 (1985).

129. *See Russell Stewart*, 529 N.E.2d at 490. The court focused on the fact that 99.4% of Illinois ethanol came from cereal grains or byproducts, but nearly 12% of the nation's ethanol supply came from other sources. *Id.* This definition excluded virtually no Illinois producers, but did exclude a number of out-of-state ethanol producers. *Id*

130. 479 N.W.2d 815 (N.D. 1992).

131. *See* N.D. CENT. CODE § 57-43.1-02 (1993 & Supp. 1997). The statute originally reduced the tax on the sale of any fuel containing "qualifying alcohol." *Id.* Subsection three, added in 1985, limited this tax break to alcohol produced in North Dakota or a state with a similar statute. *Id.*

132. *See Service Oil*, 479 N.W.2d at 817 (seeking a refund for taxes paid on alcohol produced outside the

alleged that it was not required to reimburse Service Oil because the statute was presumptively valid.[133] The Supreme Court of North Dakota concluded that *New Energy* applied retroactively, entitling Service Oil to a refund.[134]

The important lesson derived from this discussion of Commerce Clause issues is that a state legislature wishing to promote ethanol by using tax credits must do so by promoting the entire industry, not merely its own producers. Legislation that provides a tax credit to a producer or dealer will be valid so long as it is nondiscriminatory.[135] A statute providing a tax credit that does not distinguish on the basis of the ethanol's origin would presumably be safe from Commerce Clause challenges.[136]

Reciprocity is not per se unconstitutional.[137] If legislators could convince the judiciary that a reciprocal tax credit statute "advances a legitimate local purpose that cannot be adequately served by reasonable nondiscriminatory alternatives,"[138] a court could find the statute valid despite its discrimination against out-of-state companies. Courts have suggested that legitimate local purposes exist to support such legislation.[139] However, the difficulty lies in overcoming the fact that states will usually be able to use less burdensome means, such as direct incentives, to achieve those goals.

Although courts have interpreted the Commerce Clause as preventing states from limiting interstate commerce,[140] the Commerce Clause also clearly gives Congress broad power to regulate trade between states.[141] For this reason, federal tax credit legislation is not subject to the same attacks as similar state statutes.[142]

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state).

133. *Id.*

134. *Id.* at 820.

135. *See generally* New Energy Co. v. Limbach, 486 U.S. 269 (1988).

136. Statutes that provide an exemption for all producers, regardless of where they are located, do not offend the *New Energy* decision. *See, e.g.*, NEB. REV. STAT. § 66-1344 (1995) (as amended by 1996 Neb. Laws L.B. 1121) (providing an exemption for producers regardless of the origin of corn used in ethanol).

137. *See New Energy*, 486 U.S. at 276.

138. Russell Stewart Oil Co. v. State, 529 N.E.2d 484, 486 (Ill. 1988).

139. *See New Energy*, 486 U.S. at 276 (finding health benefits to be an "occasional and incidental" effect of favoring Ohio companies). *But see Russell Stewart*, 529 N.E.2d at 132 (declaring that there are no more health benefits from cereal-grain based ethanol than other types, but otherwise not dismissing the argument that health was a legitimate goal of the Illinois statute).

140. The express language of the Constitution gives Congress only the power "to regulate Commerce . . . among the several States . . . ." U.S. CONST. art. I, § 8, cl. 3. However, courts have long recognized the "Dormant Commerce Clause," which prohibits states from burdening interstate commerce to protect their own interests. *See generally* Kassel v. Consolidated Freightways Corp., 450 U.S. 662 (1981); Exxon Corp. v. Governor of Maryland, 437 U.S. 117 (1978).

141. The standard of review for federal statutes under the Commerce Clause requires only a "rational basis" showing that the activity regulated affects interstate commerce. *See generally* Hodel v. Virginia Surface Mining Ass'n, 452 U.S. 264 (1981). This is a lower standard than that applied to states that use discrimination to regulate interstate commerce (*i.e.*, the statute must advance legitimate local purposes with no nondiscriminatory alternatives available). *See supra* note 139 and accompanying text (explaining the reasoning used by courts).

142. The Internal Revenue Code reduces the tax on gasoline containing 10% ethanol by 5.4 cents per gallon. *See* 26 U.S.C. § 4081 (1996). The regular federal gasoline tax is 18.3 cents per gallon. *Id.* The Code also provides producers a 60 cent tax credit on each gallon of ethanol produced. 26 U.S.C. § 40 (1996).

2. *State Constitutional Issues*

From a federal standpoint, the dormant Commerce Clause provides the largest constitutional obstacle to ethanol tax credit programs. State constitutions may also limit a legislature's ability to provide tax credits. In *Associated General Contractors of South Dakota, Inc. v. Schreiner,*[143] the state's construction industry challenged a statute providing tax credits to ethanol producers.[144] The construction industry claimed this was an unconstitutional diversion of funds because the South Dakota Constitution requires revenue from gasoline taxes to be used solely for the "maintenance, construction, and supervision of highways and bridges."[145] The state's ingenious argument was that the tax credit prevented the revenue from ever coming into existence.[146] The court rejected this contention, stating that the legislature could not achieve indirectly what it was forbidden to do directly.[147]

More recently, in *Callan v. Balka* the Nebraska Supreme Court[148] assessed the validity of that state's ethanol tax credit statute.[149] The statute directed the state tax commissioner to enter into agreements with producers to furnish transferable tax credits.[150] Taxpayers challenged this statute as violating the Nebraska Constitution[151] by placing the state in the position of a debtor.[152] The court accepted the state's explanation that the tax credit merely offsets a portion of the amount owed the state and is not a loan because the credit is redeemable only when taxes are due.[153]

The Nebraska statute is one of the few tax credit programs still in effect.[154] A large number of similar statutes are no longer on the books. Courts invalidated a few of the statutes, such as those discussed above, and state legislatures repealed most of the others.

3. *Policy Considerations*

In addition to the legal concerns surrounding ethanol tax credits, policy considerations also affect legislators. Tax credits reduce the amount of revenue coming into state coffers. Credits are an expensive option for states wishing to promote the ethanol indus-

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143. 492 N.W.2d 916 (S.D. 1992).

144. *See* H.B. 1009 (enacted as an emergency measure by the Governor). At the same time, the legislature established a fund that used unclaimed tax refunds to promote ethanol production. *See* H.B. 1311.

145. S.D. CONST. art. XI, § 8.

146. *See* Associated General Contractors v. Schreiner, 492 N.W.2d 916, 922 (S.D. 1992) (finding that the legislature may disburse public funds for all lawful purposes).

147. *Id.* at 923.

148. 536 N.W.2d 47 (Neb. 1995).

149. NEB. REV. STAT. §§ 66-1301 to 66-1329 (Cum. Supp. 1992) (allowing a 20 cent credit for each gallon of ethanol produced).

150. *See* NEB. REV. STAT. § 66-1344.

151. *See* NEB. CONST. art. xiii, § 3 (requiring the state to extend the state's credit only to residehts seeking post-high school education).

152. *See* Callan v. Balka. 536 N.W.2d 47, 52 (Neb. 1995) (arguing that the statute created an obligation to forego collection of taxes already levied).

153. *Id.* at 53. The dissent reached the opposite conclusion based on the fact that the state highway fund received reimbursement for the amount not collected from an ethanol incentive fund. *Id.* at 55 (Lanphier. J., dissenting). The court viewed this reimbursement as proof that the state did not merely forgive the tax liability. *Id.*

154. *See* NEB. REV. STAT. § 66-1344 (as amended by L.B. 1121 (1996)).

try.[155] In a time of budget tightening, it may be politically dangerous for states not involved in ethanol production to support the industry through tax credits.[156] Midwestern states, however, are less likely to feel pressured to eliminate the incentives because ethanol production stimulates economic growth in their states.[157]

Credits are also viewed negatively by many who consider them a type of corporate welfare.[158] That the majority of ethanol production is limited to a small number of large, financially secure producers strengthens this belief. Ethanol giant Archer Daniels Midland Company (ADM) dominates the industry, holding a sixty percent share of the market, while its nearest competitor holds one-eighth of ADM's market share.[159] ADM received an estimated $150 million in subsidies in 1987 alone.[160] Industry analysts estimated that in 1995 ethanol subsidies accounted for almost thirty percent of ADM's annual profits.[161] According to one analyst, each dollar ADM's ethanol division earns in profit costs taxpayers thirty dollars.[162] The politics of subsidies is apparent, as ADM has contributed over two million dollars to Republican and Democratic campaigns since 1991.[163]

B. Mandates

Ethanol use mandates are another legislative option to promote the alternative fuel. Instead of encouraging ethanol use as tax credits do, mandates require ethanol blends to be available or used in certain circumstances.[164] In this way, mandates indirectly support the ethanol industry through increased ethanol use by consumers.

States use mandates to a lesser degree than they use tax credits.[165] Iowa currently has the most comprehensive ethanol use requirements. In 1991, the Iowa General Assembly enacted statutes requiring that motor vehicles operated by government entities

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155. The transportation lobby estimates that the federal subsidy has cost taxpayers almost $6 billion since 1983. *See Reauthorization of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), Hearings Before the House Transp. and Infrastructure Comm., Subcomm. on Surface Transp.*, 104th Cong., 2d Sess. (1996) (statement of William Fay, President and CEO of American Highway Users Alliance).

156. *See generally* Michael H. LaFave, *Taking Back the Giveaways: Minnesota's Corporate Welfare Legislation and Search for Accountability*, 80 MINN. L. REV. 1579 (1996) (explaining the political consequences of subsidies when the public perceives that subsidies are unnecessary "welfare" given to successful companies).

157. The ethanol industry generates approximately $4.6 billion nationally each year. *See* Anthan, *supra* note 3, at 8. This amount includes the $1.5 billion generated each year in the state of Iowa alone. *See* Anthan, *supra* note 23, at 1.

158. *See, e.g.*, LaFave, *supra* note 156, at 1580 ("'[C]orporate welfare' connotes an image of an undeserving recipient of public assistance. . . .").

159. *See* Susie T. Parker, *Clean Air Provisions Seen Boosting Ethanol Production Capacity*, THE OIL DAILY, Feb. 24, 1991, at 2.

160. *See* Joshua Wolf Shenk, *The Best and Worst of Bob Dole*, Wash. Monthly, July 17, 1996, at 35.

161. *See* Gaylord Shaw, *A Sweet Deal for Corn Syrup King and Candidates*, NEWSDAY, Aug. 16, 1996, at A42.

162. *See Ethanol + Politics = Corporate Welfare*, SEATTLE TIMES, May 10, 1996, at B4.

163. *See id.*; Beth Glenn, *Congress' Sweet Tooth for Dependent Corporations Survives Reform*, ARIZ. REPUBLIC, Aug. 27, 1996, at B7 (noting that Sen. Bob Dole alone personally received $470,000 from ADM's president).

164. *See supra* notes 77-78 and accompanying text.

165. *Id.*

use only ten percent ethanol-blended gasoline. The affected entities include school districts, city governments,[166] county governments,[167] community colleges,[168] the state board of regents,[169] and the state government.[170] Amendments to the statutes in 1994 added a requirement that at least ten percent of all passenger vehicles and light pickup trucks purchased by the state must be capable of running on alternative fuels.[171]

The federal government also uses mandates. The Clean Air Act requires reduced toxic emissions in certain regions of the United States.[172] When blended with gasoline, ethanol is one of three oxygenates that can achieve these reduced emissions.[173] Thus, the Clean Air Act requirement likely will lead to increased ethanol demand.

The mandate approach to ethanol promotion has merit. As with tax incentives, mandates must comport with both the federal and state constitutions[174] and must be implemented with valid authority.[175] However, mandates avoid some of the difficulties encountered by tax incentive programs. First, unlike tax credits mandates do not involve large financial commitments by the state. Mandates requiring ethanol use may create added cost if pure gasoline is cheaper than ethanol-blend at the pump. However, this increased cost would be slight, is usually temporary, and presents no legal dilemma.[176] Additionally, the corporate welfare arguments levied against tax credit programs[177] are not applicable to mandates. While it is true that requiring ethanol use will result in profits for ethanol producers, particularly ADM, these increased profits materialize through the free market. Government involvement is indirect; the mandates involve no direct subsidies or tax breaks for producers.[178]

Second, mandates requiring ethanol use are less likely to conflict with state constitutional provisions because mandates do not involve the state's financial support of the ethanol industry. Because mandates do not involve state funds, the types of constitutional challenges discussed above are irrelevant.[179] Diversion of funds from road use to ethanol subsidies is not a concern because no transfer from one state fund to another would occur and a state could not be considered a creditor because there is no waiver of tax liability.

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166. See IOWA CODE § 279.34 (West 1997).

167. *See id.* § 364.20.

168. *See id.* § 331.908.

169. *See id.* § 260C.19A.

170. *See id.* § 262.25A.2.

171. *See* IOWA CODE § 18.115(3) (1997).

172. *Id.* One of the acceptable alternative fuels is a mixture of 85% ethanol and 15% gasoline. *Id.* § 260C.19A.2.a(1) (specifying the ethanol mixture). The amendments apply only to community colleges, the board of regents, and the state itself. *See id.* § 260C.19A.2; § 262.25A.2; § 18.115.5.

173. *See* 42 U.S.C. § 7545(k) (1996) (mandating the reformulation of gasoline in a number of polluted urban areas of the United States).

174. The other two oxygenates are MTBE and ETBE. *See supra* notes 48-49 and accompanying text; *see also supra* note 65 (explaining the use of oxygenates in fuel and differences between MTBE and ETBE).

175. *See supra* Part IV.A (exploring constitutional issues).

176. *See supra* notes 43-59 and accompanying text (discussing challenges to the EPA's authority to implement rules mandating ethanol use under the Clean Air Act).

177. Op. Iowa Att'y Gen. (1988).

178. *See supra* notes 158-163 and accompanying text (explaining corporate welfare arguments against tax breaks).

179. *See supra* Part IV.A.2 (discussing state constitutional issues).

Furthermore, states will encounter fewer Commerce Clause obstacles using mandates instead of tax credits. So long as a state does not require use of ethanol produced within its own borders or limit the requirement to out-of-state gasoline users, no facial discrimination exists. This avoids the problems of *Archer Daniels Midland Co. v. State*.[180] When no discrimination occurs, a rational basis standard applies to legislation.[181] Previous cases show that it is difficult for a state to assert that a discriminatory statute is justified by a legitimate local interest and that no alternatives are available, even when the local interest is health-related.[182] But under a rational basis standard courts show great deference to legislators so long as the legislative action is related to a legitimate government interest.[183] Any of the goals of increased ethanol use—environmental protection, energy independence, and economic stimulation—would likely be sufficient justification for discrimination under a rational basis test.[184]

Finally, the nature of the Iowa statutes provides further insulation from Commerce Clause limitations. Because the legislature has mandated that units of state government[185] use gasoline blended with ethanol, the statutes fall under the market participant doctrine.[186] According to this doctrine, when a state acts as a market participant rather than as a market regulator, the state may impose burdens on commerce without violating the Commerce Clause.[187] Because the State of Iowa is a buyer, it is free to act as it wishes within the market.

The market participant doctrine also applies to tax credit programs if the credit is applied only to fuel sold to governmental entities.[188] A Minnesota statute providing an eighty-cent-per-gallon tax credit for every gallon of ethanol sold to the state government, local governments, or school districts is therefore valid.[189] Presumably, the state could even limit this credit to ethanol produced in Minnesota,[190] even though the court struck down the same limitation in *Archer Daniels Midland* when applied to ethanol not for state use.[191]

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180. 315 N.W.2d 597 (Minn. 1982).

181. *See supra* note 141 (explaining the applicable level of scrutiny).

182. *See supra* note 139 and accompanying text.

183. *See* Minnesota v. Clover Leaf Creamery Co., 449 U.S. 456, 464 (1981) (deferring to the legislature so long as the question is "at least debatable").

184. *See* IOWA CODE § 159A.1(2) (1997) (stating the rationales for the state policy of promoting ethanol production and use).

185. All levels of government, including counties and cities, are considered creatures of the state, and are not sovereign entities. *See* IOWA CONST. art. III, § 38A (allowing cities home rule power under state authority).

186. *See generally* South-Central Timber Dev. v. Wunnicke, 467 U.S. 82 (1984).

187. *Id.* at 97 (finding that the market-participant doctrine allows the state to "impose burdens on commerce within the market in which it is a participant").

188. *See* New Energy Co. v. Limbach, 486 U.S. 269, 277 (1985) (rejecting a market-participant claim by Ohio because the state neither purchased nor sold ethanol).

189. MINN. STAT. ANN. § 296.02, subd. (8) (West 1996).

190. *See* White v. Massachusetts Council of Constr. Employers, Inc., 460 U.S. 204, 214 (1983) (upholding an executive order of the Mayor of Boston that construction funded by the city be completed by a work force containing at least 50% Boston residents).

191. 315 N.W.2d 597, 600 (Minn. 1982) (finding a four percent per gallon tax reduction for gasohol produced in Minnesota unconstitutional under the Commerce Clause).

V. THE FUTURE OF ETHANOL LEGISLATION

The future of ethanol as a fuel additive and perhaps as a fuel in itself is promising. The ethanol industry has established ethanol as a dependable alternative fuel and presently has solid government support. However, the industry is changing. Federal tax credits are scheduled to end in 2000.[192] Those who see ethanol tax credits as corporate welfare are fighting the credits even before they run out. For example, over fifty members of the U.S. House of Representatives, led by Rep. Randy Tate of Washington, supported a bipartisan effort to end ethanol subsidies.[193] The industry, therefore, needs to minimize its dependence on government assistance because that assistance may end at any time.

Evidence shows that the industry is becoming more independent. Ethanol blends arrived on the East coast in the early 1990s.[194] Ten percent ethanol blends have captured a substantial share of the fuel market in cities across the heartland, such as Chicago and Milwaukee.[195] Market share may increase as dealers focus on ethanol's environmentally friendly qualities, such as ethanol's ability to cut carbon monoxide emissions by twenty percent.[196]

Technological advances must be made to improve ethanol's chances of success. A few companies are now producing ETBE[197] on a small scale and will increase production with time. Analysts expect that ETBE will be a commonly used gasoline oxygenate sometime in the near future.[198] Ethanol production is increasing, as six new production plants opened in the past year.[199] The entry of ADM's rival, Cargill, Inc., into the ranks of ethanol producers may also lead to increased competition and parity within the industry.[200]

Gasoline blends with much higher ethanol content are gaining wider acceptance. Iowa began requiring the use of fuel containing eighty-five percent ethanol in 1994.[201] Both General Motors and Ford will mass produce 1998 model year vehicles designed to

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192. *See* Fitzgerald, *supra* note 36, at 10.

193. *See Ethanol + Politics = Corporate Welfare*, *supra* note 162, at B4.

194. *See* Parker, *supra* note 159, at 2.

195. Ethanol-blended fuel holds a 35% market share in Chicago. *See* Perkins, *supra* note 5, at 4. Ethanol and ETBE combined to capture over 50% of the Milwaukee market in early 1995. *See Milwaukee ETBE, Ethanol Use Jumps, MTBE Declines After RFG*, 15 21ST CENTURY FUELS, May 1, 1995, *available at* 1996 WL 8572458.

196. *See* Parker, *supra* note 159, at 2.

197. *See supra* note 65 (describing ETBE production and use).

198. Several petroleum companies have begun ETBE production and marketing. *See, e.g.*, *Coastal Refining and Marketing Inc. (Limited Production of ETBE at Corpus Christi, Texas, Refinery)*, June 20, 1994, OIL & GAS J. 28, *available in* 1994 WL 2856805; *Chevron Plans for Two Months Next Summer to Use ETBE as an Alternative to MTBE in its Gasolines Sold in Southern California*, June 28, 1992, OIL & GAS J. 2, *available in* 1992 WL 3130132. ETBE may also gain popularity as an aviation fuel additive. *See Airplanes to Test ETBE Blends*, ALTERNATIVE FUELS NETWORK ONLINE TODAY, July 18, 1996, *available in* 1996 WL 7900175; *ETBE Soars as Aviation Fuel in Paris Air Show*, 21ST CENTURY FUELS, July 1, 1995, *available in* 1995 WL 8572540.

199. *See* Perkins, *supra* note 5, at 4.

200. *Id.*

201. *See* 1994 Iowa Acts ch. 1119 (codified at IOWA CODE § 262.25A.3 (1997)).

operate on such blends.[202] The availability of flexible-fuel vehicles will presumably increase demand for these fuel blends.

The ethanol industry will continue to respond to legislative action. Federal tax credits run out at the end of this decade[203] and most state tax credits are nearing their end. Statutes authorizing credits, which many state legislatures adopted as emergency measures, were intended to be temporary incentives to help establish the industry, not permanent subsidies. Many provided lower levels of credit with the passage of time.[204] The Ohio, Nebraska, and Wyoming credit programs end in 2000, while the Minnesota tax credit was scheduled to end on October 1, 1997.[205]

The sunset clauses in these statutes follow a trend away from tax credit programs at the state level. This trend is desirable for several reasons. First, state tax credit programs are expensive, particularly in an era of government spending reductions.[206] An individual producer in Nebraska could be eligible for up to five million dollars in tax credits annually,[207] potentially shifting a greater tax burden to the taxpaying public.[208]

Second, providing ethanol tax credits is a highly political issue. Although most tax credits were intended to be temporary,[209] many are still on the books because politicians fear the consequences of eliminating subsidy programs.[210] Because of the political nature of ethanol subsidies, accountability problems may also exist.[211] In practice, political considerations surpass logical consideration, thus sustaining tax credits.

State legislatures with tight budgets should no longer bear the burden of subsidizing the ethanol industry through tax credits. Few justifications remain for sustaining direct financial assistance to an industry that is well-established, increasingly competitive, and

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202. *See* Fitzgerald, *supra* note 36, at 10.

203. *See supra* note 195 and accompanying text.

204. For example, the Minnesota tax credit program allowed a credit of fifteen cents per gallon of ethanol sold until October 1, 1995, eight cents for the following year, and five cents in the year after that, with no credit beyond that point. MINN. STAT. § 296.02(7a) (1996).

205. MINN. STAT. § 296.02(7a) (1996); NEB. REV. STAT. § 66-1344(3) (1995), *amended by* 1996 Neb. Laws 1121; OHIO REV. CODE ANN. § 5735.145(C)(1) (Banks-Baldwin 1996); WYO. STAT. ANN. § 39-6-216(d) (Michie 1994 & Supp. 1996).

206. In recent years, it has been difficult to find a state where budget cuts are not discussed with regularity during legislative sessions. *See generally, e.g.*, Ken Foskett, *Miller: State Must Cut Spending in '97; Legislative Promises Demand Tight Budgets*, ATLANTA CONSTITUTION, May 27, 1995, at B2; Tom Loftus, *Patton Says Cutting State Payroll Could Help Ease Tight Budget*, THE COURIER-JOURNAL (LOUISVILLE), Dec. 28, 1995, at 1b.; Marty Trillhaase, *Batt Presents a 'Tight' State Budget*, IDAHO STATESMAN, Jan. 11, 1996, at 1; *Governor Whitman Tightens State Budget in New Jersey* (National Public Radio broadcast, Jan. 30, 1996).

207. The Nebraska statute allows a 20 cent credit per gallon under certain circumstances. NEB. REV. STAT. § 66-1344(4) (1995), *amended by* 1996 Neb. Laws 1121. Up to 25 million gallons of ethanol produced annually at a single ethanol facility qualify for the credit. *Id.* § 66-1344(5).

208. *See* David C. Holtz and Monica Heitzmann, *"Privacy Purpose" Pollution Control Tax Incentives: Is the Public Getting What It's Paying For?*, 31 LAND & WATER L. REV. 401, 419 (1996) (explaining the ineffectiveness of incentives meant to abate pollution).

209. *See supra* notes 203-205 and accompanying text (discussing the supposed temporary nature of ethanol statutes).

210. *See* Anthan, *supra* note 23, at 1 (describing the backlash against U.S. Rep. Jim Nussle (R-Iowa) for failing to defeat a proposal to end federal tax credits).

211. *See generally* LaFave, *supra* note 156 (describing the lack of accountability for Minnesota corporate subsidies).

advancing in technology.[212] But Corn Belt states need not completely abandon ethanol; alternative means exist to promote the industry.

The interests of the ethanol industry and of individual states are best served by traditional market competition coupled with limited governmental intervention.[213] Market-based incentives are preferable to "conventional command and control regulation."[214] Decreasing regulation will relieve the burden on state budgets and make government assistance more equitable without abandoning the ethanol industry.

The role of an individual state should be one of facilitation, especially in developing a broad economic base for the industry. Dominant producers, like ADM, that derive the greatest benefit from current legislation, require minimal government assistance. Programs that provide education, technical assistance and business loans to the family farmer and small ethanol producer, who do not have the political clout to lobby government to the extent large producers do, are valuable to states and the industry. Some states have already established ethanol development authorities as well as research and education programs in conjunction with state universities.[215]

During the 1992 National Alternative Fuels Conference in Milwaukee, the governors of eighteen states formed the Governors' Ethanol Coalition.[216] The coalition was established to coordinate efforts to change policies nationwide regarding alternative fuels.[217] The coalition along with the National Renewable Energy Laboratory was instrumental in establishing the Ethanol Institute, a facility dedicated to conducting research and providing information to government, scientific, agricultural, and industrial groups.[218] Ethanol supporters promote the institute as a means to evaluate and analyze ethanol use in a consistent manner.[219]

In addition to these measures, states should use mandates to require ethanol use in limited circumstances. Legislators should begin by considering requiring ethanol use in government vehicles, as Iowa does.[220] This practice does not force the general public or

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212. Subsidies for another successful industry—tobacco—are routinely criticized. *See generally* Luk Joossens & Martin Raw, *Are Tobacco Subsidies a Misuse of Public Funds?*, 312 BRIT. MED. J. 832 (1996) (questioning the logic of subsidizing the tobacco industry).

213. *See* SCIENCE ADVISORY BD., U.S. ENVTL. PROTECTION AGENCY, REDUCING RISK: SETTING PRIORITIES AND STRATEGIES FOR ENVIRONMENTAL PROTECTION SAB-EC-90-021 (recommending increased use of market incentives to achieve the EPA's mission).

214. Richard Andrews, *Long-Range Planning in Environmental and Health Regulatory Agencies*, 20 ECOLOGY L. Q. 515, 582 n.108 (1993) (criticizing the traditional EPA approach to protecting public health). At least one economic theory even suggests that state subsidies have no place in a market economy. *See* Michael Levick. *The Production of Civil Aircraft: A Compromise of Two World Giants*, 21 TRANSP. L.J. 433, 448-49 (1993) (explaining the European view that government subsidies conflict with a market economy).

215. IOWA CODE § 159A.1 (1996), *amended by* 1994 Iowa Acts ch. 1119, § 33 (1994) (establishing a series of seminars and conferences implemented by Iowa State University).

216. *See* Melissa Pennings, *Corn Farmers v. Big Oil Companies: EPA Decision on Ethanol to Have Major Impact*. NORTHEASTERN WIS. BUS. REV., Aug. 1, 1992, *available in* 1992 WL 3248413 (describing the formation of the coalition).

217. *Id.*

218. *See Ethanol Institute To Be Established*, 5 OXY-FUEL NEWS, July 4, 1994, *available in* 1994 WL 2497236.

219. *See Ethanol Institute Holds Organizational Meeting*, 6 OXY-FUEL NEWS, Sept. 12, 1994, *available in* 1994 WL 8694544.

220. *See supra* notes 185-187 and accompanying text.

private industry to take any action and is insulated from discrimination charges by the market participant doctrine.[221] However, it moderately increases ethanol demand and shows that the state is committed to ethanol use.[222] States can remain flexible by allowing exceptions to the requirement in emergency situations or in case ethanol blends are temporarily available only at substantially higher prices.

States should also use mandates when legitimate environmental and health concerns can be addressed by using ethanol-blended gasoline. State government interest in public health justifies requiring increased oxygenate levels in metropolitan areas. The renewable resource and economic justifications for requiring ethanol, as opposed to MTBE,[223] will likely pass a rational basis standard so long as there is no discrimination concerning the origin of the ethanol. This is especially true in cities outside the Midwest where ethanol opponents cannot claim that requiring ethanol use is protectionist. Even in Chicago, Milwaukee, and the Twin Cities, such mandates would survive judicial scrutiny if statutes clearly state the interests served by ethanol use.

States must continue to cooperate with industry leaders and other states in efforts to ensure ethanol's success and to develop new markets. Overseas markets for ethanol will become increasingly available as the domestic market expands.[224] The Governors' Ethanol Coalition should adopt a leading role in coordinating the efforts of ethanol-producing states to take advantage of such new opportunities.[225] Promotion of other ethanol fuels, such as an eighty-five percent ethanol blend, is also necessary.

VI. CONCLUSION

Since ethanol's emergence into the market, state and federal governments have provided massive financial assistance to the ethanol industry.[226] The traditional form of this assistance is tax credits. Opponents criticize this assistance for both legal and policy reasons. Legislation promoting ethanol must take different forms.[227]

The states can aid the development of the ethanol industry by replacing direct assistance with indirect assistance.[228] Education and assistance programs will benefit farmers and small ethanol producers while stimulating local economies. An increased focus on the environmental and economic advantages of ethanol will generate a larger market share for ethanol and ensure its prominence in the world energy market.

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221. *See supra* notes 188-194 and accompanying text (discussing the market participant doctrine as applied to ethanol legislation).

222. Iowa actually requires all government vehicles, except those used in undercover law enforcement, to display a "brightly visible" sticker identifying that the vehicle operates with on ethanol-blended gasoline. *See* IOWA CODE ANN. § 364.20 (West 1996).

223. *See supra* note 49 and accompanying text.

224. *See* John Hoffman, *Pekin Ethanol Sale Shows Market Strength*, 247 CHEMICAL MARKETING REP. 3, 4 (1995) (explaining the effect of sugar shortages on foreign ethanol markets).

225. *See* Parker, *supra* note 159, at 2 (describing the growing Brazilian market for ethanol).

226. *See supra* Part II (detailing the development of the industry and government support).

227. *See supra* Part IV (describing types of legislative action and analyzing the criticisms of tax credit programs).

228. *See supra* Part V (presenting options available to state governments).