**FUEL EFFICIENCY: THE DISCONNECT BETWEEN ENVIRONMENTAL POLICY AND TAX POLICY**

John Marciano III

Environmental Policy

**INTRODUCTION**

Increasingly, the United States government is realizing the importance of self-reliance. With international security threats rising, energy independence has become increasingly significant. However, freeing the United States from energy dependence\(^1\) may have its drawbacks. Specifically, environmental impacts reign high in priority when discussing revamping the categories and volume of energy use.

Hybrid vehicles, alternative fuel vehicles, and fuel cell vehicles (hybrid-type vehicles) have been cited as significant tools, which could be used to combat the current energy entanglement while at the same time remaining conscious of and accountable to environmental risks. The National Energy Policy Development Group concluded that “[w]ith forward-looking leadership and sensible policies, we can meet our future energy demands and promote energy conservation, and do so in environmentally responsible ways that set a standard for the world.”\(^2\) Through President George W. Bush’s commitment to energy security and environmental protection, the Congress and the states have attempted to use hybrid-type vehicles to their full advantage via tax credits and other incentives.

Nevertheless, continuity in environmental policy and stability in tax policy have suffered because the overall plan for energy independence has followed a disheveled

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\(^{1}\) Currently, the United States imports approximately 60 percent of its energy through oil imports from the Middle East. C. Bryner, *The National Energy Policy: Assessing Energy Policy Choices*, 73 U. COLO. L. REV. 341, 365 (Spring 2002). This figure is expected to increase dramatically within the next two decades. *Id.*

\(^{2}\) NATIONAL ENERGY POLICY DEVELOPMENT GROUP, *NATIONAL ENERGY POLICY* ix (May 2001).
path. Competing agendas have counter-acted the intended effectiveness of tax credit and incentive programs for energy efficiency.

This paper will discuss the above tax credits and incentives and attempt to demonstrate how they have been and continue to be ineffective due policy disruptions via congressional and executive inaction, nominal action, and competing policies. Part one will discuss the general principles behind American environmental policy and environmental policy as a whole. Part two will discuss tax policy within the United States and its potential impact on social, economic and consumer demand. Part three will discuss hybrid vehicles, alternative fuel vehicles, fuel cell vehicles and fuel economy within the United States tax and environmental agendas. Part four will attempt to show how the interplay between the current tax scheme and the environmental and energy goals within the United States hinders the development and success of each. Finally, part five will conclude that the current and proposed energy programs of the United States disregard fundamental environmental and tax policy norms, which make them ineffective.

I. ENVIRONMENTAL POLICY

Achieving successful policy in any area requires three conditions to be met. There must be an alternative for the current state of affairs, there must be an ability to pay for the implementation of the alternative, and there must be a set of values willing to accept change.³

³ See generally, Devra Davis, When Smoke Ran Like Water: Tales of Environmental Deception and the Battle Against Pollution (Basic Books 2002).
One of the main tenets of environmental policy is achieving a quality of life whereby the citizens of a given place can live healthy and productive lives. Development that is combined with environmental policies has been described as “sustainable development.” It “requires a holistic and comprehensive approach to air quality, and one that is incorporated into decision making for production and consumption decisions from the start.” Instead of concentrating on each pollutant individually (an atomistic approach), which has thus far been the case, many environmentalists are focusing on sustainable development as a new (possibly more politically correct) method of addressing environmental concerns. Sustainable development provides not only for environmental concerns at the expense of economic needs, but it integrates economic factors into the dialogue in order to obtain a truly comprehensive and maintainable policy.

Those formulating environmental policy (politicians, lobbyists, environmental organizations, think tanks, etc.) look at the environment from varying perspectives when using the traditional atomistic perspective. Thus, environmental organizations are primarily concerned with pollution and its effects on the environment, while various lobbyists are primarily concerned with specific economic issues arising out of environmental legislation and regulation.

The move to sustainable development has helped to create a unity of thought, if not a unity of ideas, amongst many divergent groups. Environmentalists still desire reparative action and business persons still promote cost-effectiveness; however

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5 See Driesen, supra note 4, at 34.
recognition of the need for an alternative before policy is set has become universal. This alternative does not have to exist at the present, but it must be feasible in the future.

This idea enables the economy to progress and even flourish because environmental concerns can be addressed and business can have feeling of certainty. Business could not continue if any perceived environmental ill could halt production or use of a given product without presenting a possible alternative. On the other hand, environmental ills would seldom be remedied if available technology were the standard for permitting action. As a result, technology-forcing legislation and regulations can be promulgated without fears of catastrophic economic loss when environmental needs require and when technology may be developed to cure the malady.

Even when the alternative is available or may be made available in the near future, prohibitive cost can be a limiting factor in implementing environmental policy. For example, the Energy Policy Act of 2003 requires federal agencies to use alternative fuels instead of regular gasoline in dual-fueled vehicles, but this requirement may be waived by the Secretary of Energy if “the cost of the alternative fuel otherwise required to be used in the vehicle is unreasonably more expensive compared to gasoline.” This requirement points to the economic and political realities of environmental reform. The American government promotes the environment to the extent that it can within its own security requirements; economic viability both nationally and internationally remains one of its major security concerns.

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6 A long-term plan that offers a measure of certainty in terms of economic and environmental policy will provide a foundation upon which “companies can make investment decisions.” Bryner, supra note 1, at 389 (citing David Wessel, Utilities May Be Greener Than Bush, WALL ST. J. at A1 (May 10, 2001)).


8 See generally, National Energy Policy, supra note 2.
Likewise, even where an alternative is readily available and the cost is relatively low or non-existent, an environmental policy will not remain practicable if it is not buttressed by political will. As Devra Davis noted, in *When Smoke Ran Like Water*, in referring to the formation of the EPA and the 1970 Clean Air Act, “1971 looks like the high-water mark of government sympathy to environmental causes. Politicians of all stripes accepted the need for action by the federal government.”9 Air pollution at that time was becoming a significant problem as smog began to engulf American cities. Just as in any area of policy-making, nothing would be done without someone or some group promoting its institution; and further, that promotion has to be of a broad enough character for implementation to ensue.

II. **Tax Policy**

There are many reasons for and against taxes, but one of the main purposes is to promote policy agendas. Tax policy is founded on the ideals of efficiency and equity, which are both supplemented by the political will of “the individuals who are instrumental in shaping tax policy.”10 As with environmental policy,

> The tax system is not designed by a benevolent overseer who considers only the equity and efficiency aspects of taxation but rather is produced through a political system in which individuals have the opportunity to express their personal preferences, which often will be motivated more out of personal interest than a concern that the tax system, overall, be efficient and equitable.11

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9 See *Davis*, *supra* note 3, at 91-95.
10 *Randall Holcombe, Public Finance: Government Revenues and Expenditures in the United States Economy* 214, at http://garnet.acns.fsu.edu/~holcombe/ (last visited April 18, 2004), (to be reprinted as Public Sector Economics (Prentice Hall 2005)).
11 *Id.*
Still, “[t]hese days, however, no one is ready to propose new taxes on anything.”\textsuperscript{12} With the economy attempting to recover, policy-makers are apprehensive of derailing the economic improvement by imposing new taxes too soon.\textsuperscript{13}

Tax credits and other incentives, on the other hand may be seen as motivating factors in promoting new policy. In times of recession, an increase in disposable income through credits and deductions can increase investment and spending thereby aiding in revitalization. Moreover, this same potential increase in disposable income can greatly increase the government’s ability to influence decisions of taxpayers.

These tax credits and incentives approximate a negative sumptuary tax scheme as they indirectly prohibit one product or activity through substituting out the non-favored activity for the favored one. This is especially true in the case where the activity sought to be encouraged is promoted for reasons other than efficiency and equity. For example, Adam Smith noting irregular (but acceptable) motivations for an alcohol “sin” tax stated, “The consumption of ardent spirits particularly, no doubt very much on account of their cheapness, is carried on to an extreme, which is truly to be regretted, as well in regard to the health and morals, as to the economy of the community.”\textsuperscript{14} The nature of these types of taxes as ‘penalties’ gives them credence and acceptance since policy-makers are willing and politically able to endorse them.

\textsuperscript{12} See Davis, \textit{supra} note 3, at 271.
\textsuperscript{13} Economic considerations must be addressed in environmental policy-making, especially “as we struggle to get our economy moving again.” 148 Cong Rec. S1743-01, S1746 (Statement of Senator Bond (R.,MO)) (opposing new fuel efficiency standards that have potential to hurt an already struggling economy).
A. Efficiency in Tax Policy

The costs of tax policy have typically been thought of in two ways: shifting tax to different taxpayers and the excess burden of the said tax. An excise tax (such as a tax on gasoline) may be shifted from one taxpayer to another based upon the economic dynamic of their relationship. “A tax placed on suppliers in market [sic.] can be partially shifted to demanders and a tax placed on demanders can be partially shifted to supplies [sic.], so that in either case, suppliers and demanders end up sharing the burden of the tax.”¹⁵ This is not the case with vehicle fuels.

In normal situations, the amount paid by the demander and the amount received by the supplier, including taxes, are equalized despite who was taxed at the outset. For example, if a $100 excise tax were placed on the supplier of wheat to a baker, the $100 should be added to the price of the wheat, thus creating a situation where both parties bear the tax burden. However, when the relative elasticities¹⁶ of supply and demand are accounted for, the burden can be shifted proportionately to one party or the other. The inelastic nature of wheat demand (assuming uniform price increases and necessity of wheat) should mean that if the price increases, the demand for wheat would remain relatively steady due to its necessity. This dynamic would force the cost of the tax from the wheat producer to the baker who is unable to forego demanding the wheat.

In addition, costs of a good may be increased through the excess burden of taxation, which “arises because the taxpayers not only must pay the tax to the government, but also will alter their behavior in response to a tax to avoid the tax to some

¹⁵ See HOLCOMBE, supra note 10, at 182.
¹⁶ Relative elasticities entail the dynamic of changes in supply and their effect on demand. Since wheat is necessary for bread, the relative elasticity of demand can be said to be relatively inelastic; meaning that relatively large changes in demand cause relatively smaller changes in quantity demanded.
When a taxpayer alters his conduct in order to avoid tax, the government (thus, society) fails to benefit from the tax that would have been paid if the behavior was not modified. To minimize this cost, “one of the goals of tax policy is to minimize the excess burden of the tax.” This can be accomplished by placing a tax on a good with a relatively inelastic demand, such as the wheat in the above example or oil; there, the consumer has no alternative but to purchase the good thereby paying the tax.

B. Equity in Tax Policy

When designing tax policy, two principles of equity are usually taken into account to various degrees; these are the benefit principle and the ability-to-pay principle. “The benefit principle states that the people who benefit from the government’s expenditures should be the ones who pay for them.” This principle is almost like a use-tax for government services. If a taxpayer receives benefit from the service, it is felt that he should pay for it, just as he would have to pay for a service from a company. “[T]he charges act as a rationing device” when services and facilities get congested.

“The overall tax system is strongly oriented toward the benefit principle,” however its use is limited by the application of the ability-to-pay principle, which applies most often where the intended beneficiary of the tax is not a clearly definable person or entity. This principle is founded on the idea that there is a correlation between the benefits derived from government and income/wealth. A problem then arises in respect

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17 See Holcombe, supra note 10, at 187.
18 See Holcombe, supra note 10, at 189.
19 See Holcombe, supra note 10, at 204.
20 See Holcombe, supra note 10, at 204.
21 See Holcombe, supra note 10, at 205.
22 See generally, Simon Schwartzman, Brazil: Social Agenda, Daedalus (Spring 2000), at www.schwartzman.org.br/simon/daedalus.htm (last visited April 18, 2004).
to the amount of tax to be imposed on those with the ability to pay. The concepts of horizontal and vertical equity attempt to address this.

Horizontal equity means that persons and entities in the same economic situation should pay the same amount of tax, and vertical equity entails those of greater economic ability paying proportionately more than those of less ability.

III. HYBRID VEHICLES, ALTERNATIVE FUEL VEHICLES, FUEL CELL VEHICLES AND FUEL ECONOMY

A. Vehicles

Due to the size of the United States, its ever-sprawling cities and the American obsession with the automobile, “approximately 65 percent of the oil consumed in the United States is used for transportation.”\(^{23}\) This puts a strain on its ability to be self-sufficient on the energy front. Only 40 percent of oil consumption is from American sources; the rest comes mostly from the Organization of Petroleum Exporting Countries (OPEC) cartel.\(^{24}\) But while the lack of energy independence can stifle American national security and its economy, alternative fuel vehicles and hybrid vehicles are whittling away at this reliance. By 2001, there were “450,000 alternative fuel vehicles in the United States, and more than 1.5 million flexible-fuel vehicles that can use gasoline or a mixture of ethanol and gasoline.”\(^{25}\)

This is, in part, due to the current tax and environmental policies implemented by the Secretary of the Treasury and the Administrators of the Environmental Protection Agency and the National Highway Traffic Safety Administration (NHTSA). Section 30

\(^{23}\) NATIONAL ENERGY POLICY, supra note 2, at 6-8.
\(^{24}\) See Bryner, supra note 1, at 365.
\(^{25}\) NATIONAL ENERGY POLICY, supra note 2, at 6-8.
of the Internal Revenue Code provides a tax credit for the purchase of alternative fuel or low-emission vehicles.\textsuperscript{26} This credit, although non-refundable, reduces a taxpayer’s adjusted gross income by up to $4,000 in 2003, $3,000 in 2004, $2,000 in 2005, and $1,000 in 2006.\textsuperscript{27} In addition, each automobile manufacturer must establish what is called Corporate Average Fuel Economy (CAFE) for certain parts of their vehicle fleets. The average fuel efficiency of all passenger vehicles and light trucks weighing less than 8,500 lbs. that a manufacturer sells must meet 27.5 miles per gallon for a passenger vehicle and 20.7 miles per gallon for a light truck.\textsuperscript{28} Vehicles above 8,500 lbs. are exempt from the CAFE program.\textsuperscript{29} Although these policies have permitted alternative fuel vehicles and hybrid vehicles to enter the market place, many of these same policies have impeded the full possibility of the use of such vehicles.

\textbf{B. Proposals}

\textit{i. National Energy Policy}

Vice President Richard Cheney presented the National Energy Policy to President Bush on May 16, 2001. It precipitated the submission of the Energy Policy Act of 2003, Senate Bill 2095, (among others) due to its reformative stance and forward-looking approach. At the same time, it was widely criticized because of its open posture on energy development,\textsuperscript{30} such as the promotion of full exploitation of marginal oil wells

\textsuperscript{26} See generally I.R.C. § 30 (2004); compare 49 U.S.C. § 32905 (granting CAFÉ credits to manufacturers for the production of alternative fuel vehicles).

\textsuperscript{27} I.R.C. § 30(b)(1), (2) (2004).

\textsuperscript{28} See 49 U.S.C. § 32902(b) (2004) with 49 C.F.R. 531.5(a) (requiring passenger vehicles in a manufacturer’s fleet to average 27.5 miles per gallon); see also 49 U.S.C. § 32902(a) (2004) with 49 C.F.R. 533.5(a) (mandating light trucks in a manufacturer’s fleet to average 20.7 miles per gallon).

\textsuperscript{29} 49 U.S.C. § 32908(a) (2004).

within the United States. The criticism that has arisen is not well-founded in that the policy makes the environment an important and pivotal role in the use and generation of energy.

Even before September 11, 2001, the Bush administration was concerned with security of the American economy and way of life; it hoped to maintain these through reducing the United States’ dependence on foreign energy sources. Coordinate with this plan, the environment was called the “third challenge” for the energy policy.

One of the main methods of meeting this challenge was to develop and implement alternative fuel, fuel cell, and hybrid fuelled vehicles. These vehicles were to be promoted through the expansion of “existing alternative fuels tax incentives.” The administration states that “[o]ne of the factors harming the environment today is the very lack of a comprehensive, long-term national energy policy.” There must be reliable, affordable, and environmentally sound energy supplies, but they will not be reached overnight. Nevertheless, the oratory nature of the National Energy Policy coupled with the politics of the legislative process have reduced its comprehensive and long-term goals by creating non-contemplated short-term incentives and long-term disincentives.


Senate Bill 2095, the Energy Policy Act of 2003, is a compilation of Congress’ efforts since the announcement of the National Energy Policy in 2001 and is attempting to execute a comprehensive and forward-looking energy policy. Its goals are grand and

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31 Energy Tax Incentives Act, S. 2095 at § 1351 (108th CONG.) (providing a credit for marginal well production).

32 See generally, NATIONAL ENERGY POLICY, supra note 2 (stating reasons and need for energy independence).

33 NATIONAL ENERGY POLICY, supra note 2, at x.

34 NATIONAL ENERGY POLICY, supra note 2, at xiv.

35 NATIONAL ENERGY POLICY, supra note 2, at xiv.
in many ways remarkable in their bipartisanship, but the continued rehashing of the many bills and their metamorphosis into S. 2095 have reduced the Bill’s efficacy, nullifying its value.

IV. ANALYSIS

The question becomes what the real policy regarding the convergence of energy and the environment in the automotive sphere has become, and whether the policy is efficacious. In addition, “to fully appreciate the overall effect of the tax system, taxes must be viewed collectively” and in light of their effect on environmental policy. In the case of hybrid-type vehicles, energy policy collides with environmental and tax policy thereby diminishing the effectiveness of both tax policy and environmental policy in the area of energy regulation.

A. ADVERSITY TO ENVIRONMENTAL POLICY

i. Alternative to Low Efficiency, Gas-Powered Vehicles

Arguably, the alternative to low efficiency, gas-powered vehicles has not arrived yet. And, there is some doubt as to whether fuel cell vehicles will ever be commercially viable or whether electric vehicles produce an environmental benefit at all. However, commercially viable hybrid vehicles such as the Honda Insight and the Toyota Prius have been introduced recently and more are expected to follow including a Sport Utility

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37 See HOLCOMBE, supra note 10, at 217.
38 See Driesen, supra note 4, at 49.
Vehicle (SUV), the Ford Escape Hybrid, which is expected to reach the showroom floor with 38 miles per gallon efficiency in August 2004.39

In addition, even if certain vehicles were not viable options, others are in development.40 Technology can and does advance; the United States Congress and the President are attempting to facilitate this. As an example of technological advancement, stratospheric ozone depletion was addressed by “banning the most problematic production patterns, thereby creating substantial incentives to move toward more sustainable patterns of development.”41 The same has been happening in the field of emissions control where newer, more efficient vehicles have been developed, which produce fewer harmful emissions.42

However, since technology is evolving continuously, it is difficult to judge what its future will hold, and even more difficult to make policy regarding what the future might bring with it. Both the National Energy Policy and the Energy Policy Act of 2003 indicate that any technology proposed or required by environmental policy needs to be “technically practicable.”43 These policies are well-structured to enable the use of readily available or nearly available technology, but the terms “technically practicable” permit the possibility of a broad interpretation. Thus, “practicable” becomes politicized, and the

40 See Ford CEO, supra note 39.
41 See Driesen, supra note 4, at 51.
42 NATIONAL ENERGY POLICY, supra note 2, at 3-4 (stating that many innovative technologies have become standard design features. These include: “sophisticated three-way catalysts, onboard computers, oxygen sensors, and fuel injection systems for cars and advanced fuel systems for trucks”). Id. at 3-4.
energy policy that would have had wide-ranging and far-reaching impacts on improving the energy supply of the United States and maintaining its environment becomes nominal and simply rhetoric.

For example, the Corporate Average Fuel Economy (CAFE) standards that require vehicle manufacturers to ensure that their fleet of vehicles has an average fuel efficiency of a certain level. At the moment, passenger vehicles are required to maintain 27.5 miles per gallon and light trucks are required to maintain 21.0 miles per gallon fuel efficiency.\(^{44}\) There has been a standing controversy over the extent to which the CAFE standards should be increased, if at all.\(^{45}\) This has largely hinged on the characterization of current technology levels and the potential availability of subsequent models and features, and these debates largely rely on cost projections which are glossed by the political atmosphere.

\(\textit{ii. Cost of High Efficiency Hybrid-Type Vehicles}\)

It is clear that “[p]erhaps the greatest barrier to growth of renewable energy is cost.”\(^{46}\) This is accurate for any type of non-traditional energy source, such as alternative fuels and fuel cells, and it holds true with the implementation of hybrid vehicle technology as well. A main reason that new technologies are slow to be adopted is cost; “[b]ecause of the large economies of scale in automobile manufacturing, new technologies with limited early production runs often enter the market at higher initial costs.”\(^{47}\)

\(^{44}\) 49 C.F.R. § 531.5(a) (2004); 49 C.F.R. § 533.5(a) (2004).
\(^{45}\) One Bill has proposed that the National Highway Traffic Safety Administration should set the standard, while another Bill advocated imposing a flat 36 miles per gallon standard across both passenger vehicles and light trucks. See \textit{Generally}, 148 Cong. Rec. S1743-01.
\(^{47}\) \textit{National Energy Policy}, supra note 2, at 4-10.
The National Energy Policy recognizes the reality that component costs must be reduced and demand must be increased. This is especially true with new technology such as hybrid and fuel cell vehicles where a premium is attached to every new product. The average gas-electric hybrid vehicle currently costs $4,000 more than the equivalent non-hybrid vehicle, which makes cost ever more important in using them as an aspect of the implementation of environmentally sound energy policy.

That cost can take years to offset through lower gasoline costs. It is difficult for consumers to justify paying the operation costs up-front. These front-loaded costs may make the perceived costs to the consumer seem even higher, thus dissuading the average individual or corporation from purchasing such a product. Concurrently, the consumer unwillingness to internalize front-loaded costs may limit initial demand and result in limited preliminary production runs.

Many of these deficiencies may be combated with activities that attempt to create and preserve economies of scale. “Properly designed subsidies and incentive programs...can transition industries into commercial maturity.” Current policy had attempted to provide these subsidies and incentives, but the current presidential and congressional administrations have attempted to improve upon it. However, they have not efficiently targeted the supply and demand sides of the market.

48 NATIONAL ENERGY POLICY, supra note 2, at 4-10.
50 See Ford CEO, supra note 39 (quoting a survey by J.D. Power and Associates).
51 Id.
53 Id.
a. Demand

Current attempts to increase consumer demand rely on tax credits for the purchase of hybrid vehicles.\textsuperscript{54} However, these credits have two drawbacks: they are limited in amount and they phase out after 2006. The credits are limited to $4,000 for 2003, $3,000 in 2004, $2,000 in 2005, $1,000 in 2006, and $0 thereafter.\textsuperscript{55} The credit is insufficient to offset the front-loaded new technology cost that averages $4,000 because although it equals that cost in 2003, its effectiveness is stripped from it yearly thereafter.

In addition, the $4,000 average cost differential only applies to high-efficiency, gasoline-powered vehicles. President Bush’s new fuel cell initiative drastically increases the potential costs and limits the ability of consumer demand to create the needed economies of scale to make the project cost-effective. Certain hybrids and fuel cell vehicles are prohibitively expensive at this stage in their development. For example, the RAV4 zero emission vehicle produced by Toyota currently costs the automaker approximately $200,000 to produce; it is virtually built by hand.\textsuperscript{56} Although, Toyota and Honda currently incur losses on their hybrid vehicles,\textsuperscript{57} they cannot be expected to bear that expense forever, and that loss will limit their willingness to increase production and thereby economies of scale. Without an increase in the credit amount, the cost of creating these next-generation vehicles will not permit implementation of the administrations’ environmentally conscious energy policy.

\textsuperscript{54} I.R.C. § 30(a) (2004).
\textsuperscript{55} I.R.C. § 30(b)(2)(A)-(C) (2004); I.R.C. § 30(e) (2004).
\textsuperscript{56} See Bryner, supra note 1, at 50.
\textsuperscript{57} Debra L. Hart-Munchel, Hybrid Cars: How They Can Reduce American Air Pollution and Oil Consumption, But Why They Are Not Replacing Traditional Gas Guzzling Cars and Trucks Just Yet, 10 PENN. ST. ENVT’L L. REV. 35, 48 (2001).
Furthermore, the sunset provision of § 30 will emasculate it even further as there will be no method to offset the front-loaded costs. It is possible that the technology premium will be time-limited and not require an offset, but as these technologies are completely new, further developments and additional technology premiums will likely be imposed by manufacturers in order to recoup their developmental costs.

The Energy Tax Incentives Act, which is proposed by Senate Bill 2095 attempts to augment the credits currently available by extending the sunset provision for hybrid vehicles until 2007 and creating a fuel cell specific credit which extends until 2011. The one year extension of the hybrid credit is insufficient as the technology will likely progress at a rate which requires hybrid technology to be promoted until at least 2020. This would be more valuable because hybrid technology has been said to be a stop-gap for energy needs while fuel cell technology is perfected, and fuel cell technology may require an additional ten years in a best-case scenario and potentially another ten years after that should technological hurdles arise.

Actually, while the Energy Tax Incentives Act creates a separate fuel cell vehicle tax credit of $4,000 for most passenger vehicles, the hybrid credit would be lowered to a quarter of that for passenger vehicles. While this might be perfectly logical were Congress, in fact, intent on using hybrid vehicles as a stop-gap until fuel cells were developed as a means of encouraging hybrid vehicles over gasoline-only vehicles, but encouraging fuel cell over hybrid vehicles.

59 See generally, NATIONAL ENERGY POLICY, supra note 2.
However, that lowered cost-retrieval system produces an incongruous effect since there are no fuel cell vehicles with commercial production capabilities at the moment. In fact, the automakers are still perfecting hybrid vehicle technology as evidenced by their reluctance to admit the feasibility of SUV hybrids until the Ford Escape Hybrid’s introduction at the New York Auto Show on April 12, 2004. Therefore, hybrid vehicle incentives will sunset too early and cause a regression to low-efficiency gasoline powered vehicles instead of providing the desired stepping stone to fuel cell vehicles.

Moreover, the true cost of high-efficiency vehicles comes to light when viewed in terms of the tax credits, granted by § 30, which pale in comparison to the deductions which are available for certain heavier, low-efficiency gasoline vehicles. Section 179 permits business deductions of up to $100,000 for the purchase of many of the largest SUVs, those weighing more than $8,500 lbs. While this deduction may be recaptured by the Secretary of the Treasury if used for a non-business vehicle, the major manufacturers are now billing these vehicles as fully tax deductible.

The effect of these deductions is to create a perceived cost to buying a smaller, high efficiency vehicle. The credit that was designed to promote the purchase of hybrid-type vehicles actually alerts some consumers to their true cost when compared to the low-efficiency vehicle deductions, thereby preserving the idea of the high-cost of fuel efficiency. This impression remains valid even in the event that a consumer would not have qualified for the business deduction.

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60 See 148 Cong. Rec. S1743-01, S1751 (statement of Sen. Stabenow (D., MI)) (stating that only the smallest passenger cars could meet a 36 mpg standard) with 148 Cong. Rec. S1743-01, S1758 (statement of Sen. McCain) (pointing out that “every single step of the way-from CAFÉ standards, to airbags, to seatbelts-the automobile manufacturers have said they were unable to comply, at least initially, whether it be in safety or whether it be in CAFÉ standards or any other improvement”); Ford Ceo, supra note 39.
63 Porsche Advertisement, PITTSBURGH AUTO SHOW (March 2004).
b. Supply

In addition, consumers will only be willing to internalize the front-loaded costs of a hybrid-type vehicle. This leaves manufacturers to bear the remaining economic burden associated with research, development, and production of completely new technology. It is uncertain whether automakers are capable of bearing this burden, but certain programs can combine light coercion with incentives to promote and achieve the production and sale of fuel cell and hybrid vehicles.

The National Energy Policy and the Energy Policy Act of 2003 (Senate Bill 2095) would provide market incentives in order to promote hybrid-type vehicles by mandating that certain fleets of vehicles (government fleets and particular corporate fleets of more than 20 vehicles that are centrally fuelled or leased) purchase hybrid type vehicles. If successful, these fleets would enable the manufacturers to establish economies of scale in order to bring the cost of hybrid-type vehicles down and even increase consumer demand as well. Of course, this would depend on the incentive programs adhering to consistent inducements and encouragements, which is not the case.

Since cost is the prime motivator of business activity, the intended market will not be created if these fleet incentives are counter-acted by opposing policies. The cost-conscious business and governmental fleet operator would engage in behavior which would skirt their obligations to purchase hybrid-type vehicles because § 703 of the Energy Policy Act of 2003 allows for credit against the amount of hybrid-type vehicles required to be purchased where the fleet operator purchases medium or heavy duty

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64 Elizabeth Rigby, Ford to Reinstate Managers’ Bonuses, FIN. TIMES, Mar. 12, 2004, at 21 (discussing the fact that Ford is only recently bouncing back from a period of “heavy losses,” where it cut jobs, matching contributions to pension funds, and management bonuses).

trucks. A fleet operator purchasing a vehicle weighing over 14,000 lbs. would be allowed three credits, with each credit being treated as the purchase of one hybrid-type vehicle that the operator is required to purchase. The purchase of a vehicle weighing over 8,500 lbs. would permit two credits. In this manner, the economic incentive to purchase hybrid-type vehicles (and thereby create a larger market) would be eviscerated simply by the purchase of SUVs similar to the Chevrolet Suburban.66 This renders the fleet requirement even more impotent in encouraging fuel economy and efficient vehicles because the manufacturers of these vehicles are not required to abide by CAFE standards that would apply to lighter passenger vehicles within the fleet.67

Furthermore, this situation would provide an easier incentive to manufacturers who have already fought modernization and improvement of their vehicles at every step of the way68 since the imposition of efficiency standards to continue their pattern of obstinacy. This alternative would permit manufacturers to offer incentives to fleets to purchase bigger vehicles as well as to allow automotive dealers to put bigger vehicles into lease service and still receive hybrid-type vehicle credits.

Likewise, Corporate Average Fuel Economy (CAFE) requirements mandate that passenger vehicles and light trucks average a certain fuel efficiency level.69 These standards create a sumptuary tax on inefficient vehicles; thus a sin tax is imposed on manufacturers to the extent they produce and sell too many inefficient vehicles. If that were the extent of the program, there would be economic incentive to effectuate the environmental and energy goals of increased efficiency.

Alas, that is not the case and would not be the case were the National Energy Policy implemented or if the Energy Policy Act of 2003 were enacted as legislation. The NHTSA would effect changes in the CAFE requirement as it has in the past.\textsuperscript{70} However, it did not change the mandate until recently for light trucks and did not change it for passenger vehicles. Thus the effectiveness of the CAFE program is limited; fleet efficiency peaked in 1988 for passenger vehicles and in 1987 for light trucks. The NHTSA has set the standard too low,\textsuperscript{71} which has distorted the market, so that once the efficiency requirements of 1975 were met, no further improvements had to be made. The sumptuary tax of penalties for non-compliance, which was supposed to encourage efficiency, was unable to effectuate change and unable to play any role at all in providing an economic benefit for bringing about the environmental aspects of the energy policy.

The National Energy Policy purported to recommend increased standards by having the NHTSA set the fuel economy level; however, the need to conserve energy and effects on fuel economy were only part of the equation considered. As a result, the CAFE levels stagnated under political pressure from the automotive manufacturers.\textsuperscript{72} The desired “high standards” have not materialized and would not materialize under the current proposals, so market incentives (a central point in the President’s Energy Policy)\textsuperscript{73} have not played a role in creating market forces to determine the most effective way to meet the standards.

\textsuperscript{71} \textit{See} 148 Cong. Rec. S1743-01, S1757 (statement of Sen. McCain) (stating that the automobile manufacturers merely want the NHTSA to determine the efficiency standards because “they believe they have the ability to have more impact and control the outcome”).
\textsuperscript{72} \textit{Id}.
\textsuperscript{73} \textit{NATIONAL ENERGY POLICY}, \textit{supra} note 2, at 3-12.
iii. Political Will

Before any environmental policy is implemented, “[congress] must be willing to assign the private sector, rather than government, the responsibility to reconcile environmental goals with economic development.” 74 That is, in the fuel efficiency realm, automobile manufacturers must determine the level of economic development versus the level of environmental protection that Congress has mandated. Congress’ limited role in the promotion of environmental policy has been to designate market-based incentives and technology-forcing incentives in order to enable the economic sector to determine the most efficient method of meeting environmental standards.

a. Market-Based Incentives

In many cases, there is not a great enough political will behind a policy that will continue for any great length of time. This puts environmental legislation particularly precarious position, since it is needed in many cases and will need to be updated. Market-based incentives may augment the current political will and create an ongoing interest in the subject.

The current CAFE standards are set by the Administrator of the NHTSA, as stated above; and the automobile manufacturers have believed (in many cases) that they can influence the decisions of the administrator through political pressure. 75 It has been difficult to gain their support due to the costs imposed by requiring greater fuel efficiency, and their tremendous influence stemming from their control of more than 6.6 million American jobs has limited the ability of the Administrator to increase efficiency

74 Driesen, supra note 4, at 60.
75 See Sen. McCain Statement, supra note 71.
requirements. From 1996 to 2001 (covering model years 1998 to 2003), Congress acted to restrain NHTSA from increasing the fuel efficiency.

Market incentives can function well; however, they can only operate as well as they are monitored, and they must be set at levels sufficient to provide incentives. Senator Kerry (D., Mass.) and Senator McCain (R., Ariz.) attempted to accomplish that by proposing a significantly higher CAFE standard of 35 miles per gallon for both light trucks and passenger vehicles. They were met with particularly strong opposition by opponents from automobile manufacturing states who accused Senators Kerry and McCain of striving to increase unemployment. In persuading the Senate to adopt their proposal, that the NHTSA continue to monitor efficiency, Senators Bond (R., MO) and Levin (R., MI) conjured up images of long caravans of golf carts taking children to soccer practice.

The images of higher unemployment and lack of availability of larger vehicles enabled the current bill, S. 2095, to include a watered down provision that grants the NHTSA the power to set the maximum feasible average fuel economy. The NHTSA must fully take into account economic practicability and the effects of compliance on

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77 Final Rule, 49 C.F.R. Part 538, NHTSA-2001-10774; Notice 3 RIN 2127-AI41, Automotive Fuel Economy Manufacturing Incentives for Alternative Fueled Vehicles (“prohibiting the agency from using any funds to prescribe corporate average fuel economy standards for automobiles ‘in any model year that differs from standards promulgated for such automobiles prior to enactment of this section.’”). Id.
78 See 148 Cong. Rec. S1742-01 (statement of Sen. Kerry) (stating that auto workers “could build the hybrid electric SUVs with all the room and all the power one would want and twice the mileage if Detroit will choose to ask them to do so). 
80 See 148 Cong. Rec. S1742-01, S1746 (statement of Sen. Bond.) (explaining the “hard truth” to a constituent who needs a larger vehicle to transport children to soccer practice that they would have a string of golf carts carrying the children to the field).
automobile industry employment levels. The NHTSA determined CAFE levels are significantly lower than Senator Kerry’s proposal of 35 miles per gallon even though the National Academy of Science (NAS) determined that 35 miles per gallon was economically feasible in light of employment levels. Moreover, while Senator Kerry has given the 35 mpg standard as feasible within the scientific limits set by the NAS, Senators Levin and Bond have quoted all three big American automobile manufacturers (Daimler-Chrysler, General Motors, and Ford) stating that the only place to find SUVs would be in museums and that “CAFE is a job killer.”

It is obviously difficult to overcome rhetoric of that type especially if it is seemingly supported by scientific or economic datum. However, that rhetoric does not comport with the National Energy Policy’s goals of self-sufficiency in the energy realm, nor does it comport with environmental concerns addressed by the National Energy Policy. Just a three mpg increase in fuel efficiency would save 1 million gallons of oil per day in consumption. This would more than offset the recent OPEC cut of exactly 1 million barrels of oil per day.

The political will is not behind the imposition of higher efficiency standards and it is also not behind the credits for hybrid-type vehicles. The debate has been framed between American and foreign automobile manufacturers. The question has been asked whether one would give foreign manufacturers the jobs lost to domestic manufacturers.

It is difficult to deny the strength of over 6 million workers and this is the political

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82 49 CFR § 533.5(a); 49 CFR 531.5(a); c.f. NATIONAL RESEARCH COUNCIL, EFFECTIVENESS AND IMPACT OF CORPORATE AVERAGE FUEL ECONOMY (CAFE) STANDARDS 70, (National Academy Press 2002).
84 NATIONAL ENERGY POLICY, supra note 2, at 4-10.
86 See generally, 148 Cong. Rec. S1743-01 to S1774.
87 See Id. at S1754.
question behind the debate, but the fact is that the point of market-based incentives is to set standards high and permit “market forces to determine the most effective way to meet them.”88 This cannot happen in the current political atmosphere, where the automobile manufacturers and their state representatives have shifted the political wind to make people fear dire economic impacts of greater fuel efficiency or alternative fuel vehicles.

b. Technology Forcing Incentives

The National Energy Policy also looks to promote better technologies through its language, but these words seem mostly nominal. In the same breathe, the Policy cautions that “development of new-car production models requires at least three to four years, which limits the rate at which new technologies can enter the market.”89 It goes on to say, “Once those new vehicles are in the showroom, it then takes several more years before they constitute any sizeable percentage of total vehicles.”90 This seems to signify that even though there is an immense incentive for the country to encourage increased efficiency and alternative fuels, it will not happen for a while. In which case, the phase-outs of the current tax credits seem even more ridiculous. The National Energy Policy states that there should be credits for the purchase of hybrid-type vehicles until 2007,91 and S. 2095 mirrors that proposal, but that only extends the current scheme by one year.

If hybrid-type vehicles are to be true stepping-stones to fuel cell vehicles, they must be encouraged in a manner that would both encourage their production and encourage their consumption. The United States government spent nearly $8 Billion on

88 NATIONAL ENERGY POLICY, supra note 2, at 3-12.
89 NATIONAL ENERGY POLICY, supra note 2, at 4-4.
90 NATIONAL ENERGY POLICY, supra note 2, at 4-4.
91 NATIONAL ENERGY POLICY, supra note 2, at 4-12.
its vehicles in 1999,\textsuperscript{92} which would equal 320,000 vehicles at $25,000 each. Currently, there are only 450,000 alternative fuel vehicles in the United States.\textsuperscript{93} Thus, requiring further technological efficiency enhancements in vehicle fleets would cause an economic burden, but were the United States government to be truly committed to the prospect of fuel efficiency, it would attempt to offset these burdens through essentially doubling the alternative fuel vehicles on the road with only one year’s vehicle acquisitions. The CAFE standards, if set too low, only serve to counteract the sumptuary tax nature of the penalties, and thereby lessening the political will to improve technology. The technology-forcing incentives would merely be technology-hoping incentives, if there were any incentive at all.

\textbf{B. ADVERSITY TO TAXATION POLICY}

“Contemporary economists would describe a tax intended to discourage consumption of a specific commodity as adjusting for a negative externality.\textsuperscript{94} Those costs regarding efficient vehicles would involve the environmental dangers and damages posed by low-efficiency gasoline vehicles. They are not easily determined,\textsuperscript{95} but the fundamental tax policy goals of efficiency and equity may enable one to bring the question of cost more into view.

\textit{i. Efficiency}

“The thrust is on the need for policy coordination so as to prevent destructive competition taking place which erodes and eliminates tax bases.”\textsuperscript{96} Unless there is some

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\textsuperscript{92} \textit{National Energy Policy, supra} note 2, at 4-6.
\textsuperscript{93} \textit{National Energy Policy, supra} note 2, at 6-8.
\textsuperscript{94} \textit{Davie, supra} note 14.
\textsuperscript{95} \textit{See generally, Jason F. Shogren & Michael A. Toman, Climate Change Policy, in Public Policies for Environmental Protection} (Paul R. Portney & Robert N. Stavins eds., 2000).
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cooperative arrangement jointly developed by competing levels of government, harm will be done.”

The tax policy regarding hybrid and alternative fuel incentives has fomented this “destructive competition,” and it has reduced the efficiency of these measures dramatically.

Demand for oil is relatively constant (inelastic); even when prices are high drivers consume at the same rate. This is exemplified by the fact that while current prices are at near record highs, sales and use of Recreational Vehicles (RVs) have hit unprecedented levels. Because demand is so constant, the tax burden is shifted to those vehicle purchasers who choose to continue to buy non-hybrid/non-alternative fuel vehicles. They do not receive a tax credit, and the extra cost of purchasing a vehicle with no tax credit is fully attributed to the purchaser and not dispersed equally through the manufacturer, distributor and purchaser.

The low fuel cost will not engage these consumers to purchase a hybrid-type vehicle because average fuel efficiency has a low priority in vehicle selection. Other factors such as vehicle safety, towing capacity, load capacity, and overall size weigh more heavily in their decision to choose a larger non-hybrid-type vehicle.

In addition, the credit will not change such a purchasing choice because it merely brings the price of a hybrid-type vehicle down to the price of a similar non-hybrid vehicle. The price is not lower, even including a credit. For example, a typical hybrid vehicle costs more than a comparable non-hybrid, but the credit is only $4,000 for now. And, any effect the current credit might have on consumption of hybrid vehicles would

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97 Id.
98 Dateline NBC, NBC (April 11, 2004).
be short-lived, as the current credit is set to expire December 31, 2006 and proposed hybrid vehicle credits are designed to phase-out in 2007.

The inefficiency continues due to the availability of other tax options for non-hybrid-type vehicles. Even though demand is inelastic in terms of gasoline demand, vehicle model demand is relatively inelastic within a given class of vehicles (e.g. SUVs). The current tax structure provides tax deductions for certain SUVs that meet vehicle weight requirements. These deductions are not anticipated to end with the proposed legislation, but they are limited in that they may not be taken if the applicable SUV deductions are taken under Internal Revenue Code §§ 179 or 179A.99

This means that indirect tax imposed on non-hybrid-type vehicles through offering an incentive to purchase hybrid-type vehicles increases the excess burden and thus the inefficiency of the tax system. Where a vehicle purchaser would either pay tax or create “permissible”100 excess burden if an SUV deduction did not exist, the inefficiencies of the system would be limited to shifting the burden fully to the purchaser. However, the inefficiency is exacerbated by permitting the consumer to purchase a vehicle with the opposite effect as that desired by the policy behind the hybrid-type tax credits. The consumer is persuaded, by the tax realities, to purchase an SUV with lower fuel efficiency due to the fact that he might receive a deduction valued as much as ten times as much as the tax credit available for hybrid-type vehicles.101

Furthermore, under the proposed Energy Policy Act of 2003, certain governmental and commercial fleets would be required to purchase a particular

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99 Energy Tax Incentives Act, S. 2095 at § 1300 (108th CONG.).
100 Congress has determined that the excess burden created by the incentive to purchase a hybrid-type vehicle fits within the broad policy of the tax system as a tax expenditure. Therefore, that excess burden has been deemed “permissible” by Congress.
percentage of hybrid-type vehicles to facilitate the government’s program of providing a market for such vehicles.\textsuperscript{102} This would seem logical and efficient in terms of implementing the policy of facilitating the manufacturing and use of fuel efficient vehicles; however Fleet Credits would be available to offset any need to purchase hybrid-type vehicles. For every heavy duty vehicle (14,000lbs. or more) purchased, three credits would be issued and for every medium duty vehicle purchased, two credits would be issued.\textsuperscript{103} Each credit would be treated “as the acquisition of 1 alternative fueled vehicle that the fleet or required individual is required to purchase.”\textsuperscript{104}

\textit{ii. Equity}

The federal government spends money through credits for hybrid vehicles, and potentially will be incurring costs by implementing alternative fuel and fuel cell vehicle credits. With equity as part-in-parcel of tax policy, it is necessary to determine its role within credits for these hybrid-type vehicles.

The benefit of such a credit can aptly be described as benefiting the United States in general, and individual vehicle purchasers. The country is benefited through increased national security due to decreased dependence on foreign oil and bolstered economy through assurance of a stable energy source and by promoting technological development, and individual purchasers are benefited through the tax credits themselves.

Identifying the benefits granted through said tax credits, permits one to determine that their true effect creates an indirect use-tax for gas and clean air because it lowers the tax of those purchasing hybrid-type vehicles and forces those purchasers of non-hybrid-type vehicles to bear a higher increased tax burden. The purchasers of non-hybrid-type vehicles

\textsuperscript{103} \textit{Id.} at § 703.  
\textsuperscript{104} \textit{Id.}
vehicles do not receive a decreased adjusted taxable income by virtue of the purchase of that vehicle.

However, the government does not want to discourage use of oil or vehicles;\textsuperscript{105} it merely wants more efficient use.\textsuperscript{106} An excessively high burden on the use of energy or vehicles can slow the economy.\textsuperscript{107} The whole point of efficient energy use, though, is to promote sound economic policy to encourage market development.

As important as which taxpayer is benefited from a specific tax policy is which as the ability to pay. This is especially true when the intended beneficiary is not clearly definable, as here (benefits of national security and economic stability inure in the general population). And, tax policy attempts to rectify the coordinate disconnect in the benefit principle, but both current energy policy and proposals for change have missed the mark.

Credits for hybrid-type vehicles by themselves might be permissible under ideal tax policy, but the overall schedule of credits and incentives works against this. In most cases, a hybrid-type vehicle will cost more (even including the credited amount) than an equivalent non-hybrid-type vehicle. In addition, the current tax scheme permits the credit to expire in 2006\textsuperscript{108} which thereby increases the inequity by forcing those less able to purchase a hybrid to pay the community costs.

Furthermore, the credits on the more expensive hybrid-type vehicles coupled with the depreciation deductions permitted on heavier (and more expensive) SUVs amounts to a double jolt of inequity, which is imposed upon the purchaser of the non-hybrid-type

\textsuperscript{105} See generally, NATIONAL ENERGY POLICY, supra note 2.
\textsuperscript{106} Id. at 3-2, 4-1.
\textsuperscript{107} Id. at 4-9, 4-11, 6-13.
\textsuperscript{108} I.R.C. § 30(e).
vehicle that is often less expensive than the comparable hybrid vehicle and most likely less expensive than a vehicle for which depreciation deductions are allowed due to weight.

The inequity is further identified when one perceives the situation through horizontal and vertical equity lenses. From a tax policy perspective, it does not seem reasonable to tax two persons with the same economic situations in different manners. This stems from the belief in the correlation between benefits derived from government and income/wealth.¹⁰⁹ The current tax situation, which is continued through the proposed Energy Bill and National Energy Policy, promotes inequity by granting tax credits to those who purchase hybrid-type vehicles and no benefit is granted to persons of equal economic power who do not make the purchase. Although this inequity is not great due to the low value of the current and proposed credits $3,000 and potentially only $1,000,¹¹⁰ the inequity is multiplied by the vertical inequity that abounds when one considers tax deductions available to purchasers of certain light trucks and SUVs and the hybrid-type credits available to purchasers of such vehicles. In most cases, both qualifying light trucks/SUVs and hybrid-type vehicles will cost more than similar vehicles and the credit creates the effect of taxing the purchaser of a less expensive vehicle more especially in light of the fact that the common arrangement is that persons with less economic capacity purchase less expensive vehicles. One with greater economic capacity should be taxed at a rate proportionately higher than one with less capability.

¹⁰⁹ See Schwartzman, supra note 22.
¹¹⁰ I.R.C. § 30(b).
V. Conclusion

In the American consumption economy, which is driven so much by current trends, it is difficult to determine whether tax credits and incentives are truly beneficial to the problems of energy dependence and emissions pollution. Even though the National Energy Policy claims “it is clear that the lack of a comprehensive energy policy has environmental costs”\textsuperscript{111} and that environmental concerns are amongst the highest priorities in cultivating a sustainable energy plan, the provisions of the policy and those of the Energy Policy Act of 2003 prevent a coherent approach. The programs are comprehensive in their hypocrisy and duplicative in their oratory commentary.

Thus, a truly holistic and comprehensive energy policy that promotes both security based energy needs and environmental concerns will not be brought forth from the current scheme. It will only develop from a concerted effort amongst environmentalists, the automotive industry, the energy industry, Congress and the Presidential administration. And, the tax structure cannot be parsed together piece-meal if the policy goal of increased vehicle efficiency is to stand any chance of being realized.

\textsuperscript{111} NATIONAL ENERGY POLICY, \textit{supra} note 2, at 3-1.