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Project Independence Formulation, Change, and Fragmentation

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I. Introduction

The question, then, is what choices does a high energy civilization have to continue its benefits and still protect the planet and people that live on it.¹

In the realm of United States governmental complexities, policy innovations are generally the result of a crisis or need.² Within the institutions of government and the society as a whole, consensus relating to the existence of the crisis or need must be omnipresent to legitimize and effectuate policy. Government and society often recognize the acute or crisis situations which require emergency innovations. However, when long range planning becomes the criteria for policy execution, the need is transmuted into incrementalism. Herein lies the determinant in the failure of Project Independence as a response to the depletion of the nonrenewable resource — petroleum — and energy self-sufficiency in the United States.

The purpose of this study is to examine the following objectives: (1) the formulation and change in the theoretical considerations of Project Independence; (2) the fragmentation of policy implementation within the United States as a result of major obstacles — the petroleum industry, national security priorities, environmentalists, and American consumers; and finally, (3) the future prospects for self-sufficiency in the interdependent global system.

In the analysis and assessment of petroleum production, available resources, and/or consumption, the statistical data available was frequently inconsistent. For national security reasons, countries often enhance or reduce capability factors according to individual policy. Since a detailed analysis of

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¹ Energy Policy Project of the Ford Foundation, *A Time to Choose*, (Cambridge: Ballinger Publishing Co., 1974), p. 224.

² Nelson Polsby, "Policy Initiation in the American Political System." *Perspectives on the Presidency*, ed. Aaron Wildavsky, (Boston: Little, Brown and Company, 1975), p. 226.

the oil industry is not proposed in this study, only two policy positions are discussed — the Oil Depletion Allowance and the Oil Import Quota. Tables 1, 2, and 3 present a United States profile in petroleum supply, demand, imports, exports, and reserves.

II. *Project Independence — Formulation and Change*

After the outbreak of Arab-Israeli hostilities in October, 1973, the United States faced an unprecedented energy shortage as the result of the political use of oil by the OAPEC³ nations. In response, former President Richard M. Nixon announced formally that the need for energy self-sufficiency was critical for America's independence. Moreover, Nixon asserted that the national goal of energy independence would be accomplished by 1980 through "Project Independence."⁴ The United States, thereafter, would meet its energy needs from America's own energy resources.

The crisis situation provided the stimulus for policy innovation. However, by its very nature, Project Independence was a long range goal, and incrementalism set in before a comprehensive policy could develop.

Prior to the 1970's the United States had been concerned about petroleum and a national energy policy in a somewhat "de facto sense."⁵ The recognition of a need to develop a comprehensive national energy policy was nonexistent. Moreover, regulations and/or laws which did exist were beneficial primarily to the oil industry.

Following the oil crisis and Nixon's Project Independence speech, the impetus for an energy policy emerged.⁶ Initially, Congress passed the Emergency Petroleum Act of 1973 allocating specific temporary presidential authority to deal with shortages of crude oil. The purpose of the Act was to minimize the adverse effects of such shortages on the American people and the domestic economy.⁷

In January 1974, Nixon delivered a legislative message to Congress specifically addressing the energy crisis. Nixon proposed the establishment of the

³ OAPEC nations (Organization of Arab Petroleum Exporting Countries) include Abu Dhabi, Algeria, Bahrain, Kuwait, Egypt, Libyan Arab Republic, Qatar, Saudi Arabia, Syrian Arab Republic and Iraq; not to be confused with OPEC (Organization of Petroleum Exporting Countries) which includes Venezuela, Saudi Arabia, Kuwait, Iran, Iraq; subsequent expansion included Indonesia, Libya, Qatar, Abu Dhabi, Algeria, Nigeria, Ecuador and Gabon (associate member). The OAPEC nations instituted the Arab Oil Embargo which resulted in suspension of oil exports to the United States and The Netherlands. For a discussion of international oil and the U. S. role, see Robert B. Krueger, *The United States and International Oil*, (New York: Praeger Publishers, 1975), Part I, II.

⁴ *The New York Times*, November 8, 1973, p. 32.

⁵ Robert B. Krueger, *The United States and International Oil*, (New York: Praeger Publishers, 1975), p. 83.

⁶ *Ibid.*

⁷ U. S. Congress, Public Law 93-159, November 27, 1973. The 55 m.p.h. speed limit recommendation was a direct result of this policy. However, in our system of government, enforcement remained at the state level. Not all states enforced the recommendation.

TABLE 1. United States Petroleum Supply and Demand
(Thousands of Barrels)

	1974		1975		Per Cent Change 1974/1975
	Total	Daily Average	Total	Daily Average	
Total Stocks, Jan. 1	1,008,307	—	1,121,116*	—	—
<i>New Supply:</i>					
Domestic Crude Prod.	3,056,094	8,373	2,920,000	8,000	- 4.5
Dom. Lease Cond. Prod.	143,234	392	133,900	367	- 6.4
Domestic NGL Prod.	616,098	1,688	594,500	1,629	- 3.5
Other hydrocarbons	13,057	36	12,600	34	- 5.6
Total U.S. Production*	3,828,483	10,489	3,661,000	10,030	- 4.4
Crude Oil Imports	1,269,155	3,477	1,489,900	4,082	+ 17.4
Product Imports	953,024	2,611	695,700	1,906	- 27.0
Total Imports	2,222,179	6,088	2,185,600	5,988	- 1.6
Total New Supply	6,050,662	16,577	5,846,600	16,018	- 3.4
<i>Domestic Demand:</i>					
Motor Gasoline	2,386,177	6,538	2,436,200	6,674	+ 2.1
Aviation Gasoline	16,215	44	14,400	40	- 9.1
Jet Fuel—Naph. type	81,171	223	77,400	212	- 4.9
Jet Fuel—Kero. type	281,429	771	290,500	796	+ 3.2
Kerosene	64,352	176	60,000	164	- 6.8
Distillate Fuel Oil	1,072,812	2,939	1,043,300	2,858	- 2.8
Residual Fuel Oil	957,811	2,624	888,600	2,435	- 7.2
Others	1,209,504	3,314	1,130,600	3,098	- 6.5
Total Domestic Demand	6,069,471	16,629	5,941,000	16,277	- 2.1
<i>Exports:</i>					
Crude Oil	1,074	3	2,100	6	+100.0
Products	79,417	217	71,500	196	- 9.7
Total Exports	80,491	220	73,600	202	- 8.2
Total Demand	6,149,962	16,849	6,014,600	16,479	- 2.2
Unaccounted for Crude	- 5,827	- 16	+13,400	+ 37	—
Crude Oil Losses	4,789	13	4,916	13	—
Net Processing Gain	175,255	480	160,000	438	- 8.8
Total Change in Stocks	+65,339	+179	+ 484	+ 1	—
Total Stocks, Dec. 31	1,073,646	—	1,121,600	—	—

* New basis.

SOURCE: 1974, Bureau of Mines; data for 1975 estimated on basis of Bureau of Mines data for first eight months and subsequent weekly reports compiled by the API.

NOTE: Percentage changes are calculated on a daily average basis.

NOTE: *The Oil and Gas Journal* (1976) reports U. S. crude production at 8,765,000 for 1974, 8,351,000 for 1975, and a -4.7% change for the 1974-1975 period.

TABLE 2. Crude Petroleum: Changing Structure of Production and Exports, 1955-1973

	1955	1960	1970	1971	1972	1973*
<i>Production</i>						
World (millions of tons)	767	1,045	2,275	2,402	2,533	2,007
Percentage contributed by						
United States	43.8	33.3	20.9	19.4	18.4	16.9
<i>Exports</i>						
World (millions of tons)	254	382	1,165	1,267	1,380	1,062
Percentage contributed by						
United States	0.6	0.1	0.1	—	—	—

SOURCE: United Nations World Economic Survey, 1973.

* 1973 figures are for the first nine months.

TABLE 3. United States Crude Resources*A. Estimated Proven Oil Resources*

	<i>Oil & Gas Journal 1/1/74</i>		<i>World Oil 1/1/74</i>	
	<i>bmt*</i>	<i>bbo*</i>	<i>bmt</i>	<i>bbo</i>
United States	4.7	34.7	4.8	35.3

B. Estimated Recoverable, Undiscovered Crude Oil Potential

	<i>Offshore</i>		<i>Onshore</i>		<i>Grand Total</i>	
	<i>bmt</i>	<i>bbo</i>	<i>bmt</i>	<i>bbo</i>	<i>bmt</i>	<i>bbo</i>
United States	4.1	30	7.5	55	11.6	85

* Billion metric tons, billion barrels of oil, 7.33 barrels = 1 metric ton.

SOURCE: *World Oil* (September, 1975)

NOTE: Estimated proven reserves are quantities recoverable in the future under existing economic and operating conditions.

Undiscovered potential includes resources yet to be discovered in explored and unexplored areas under current and future economic and technological conditions.

Federal Energy Administration (FEA) to coordinate and expand programs dealing with the current energy emergency.⁸ In addition, the essential goals of Project Independence were outlined emphasizing first, a rapid increase of energy supplies thereby maximizing the production of oil, gas, coal and shale reserves and accelerating the use of nuclear power; second, conservation by eliminating nonessential energy use and improving the efficiency of energy utilization; and third, development of new technologies through energy research and development programs.⁹ Nixon also recommended a relaxation in air quality standards to meet the goals of Project Independence.¹⁰

Nixon's energy message proposed essential independence from foreign suppliers by 1980. Notwithstanding the drastic schedule which generated a degree of skepticism, the public was officially notified that in a finite world, petroleum — a nonrenewable resource — was being consumed too rapidly. The possibility of a world without oil before the end of the century was a reality to be comprehended.¹¹

The rigidity and single-minded approach of Project Independence led to conflicts and contradictions where the rapidity of changing circumstances confronted basic policy objectives in other areas. Two examples were evident where first the goal of an adequate supply had to be obtained at a reasonable price and second, where the objective of sufficient supply at a fair price had to be balanced against environmental considerations.¹²

One month after Nixon's message to Congress, the Washington Energy Conference convened to examine the international energy situation, to evaluate the implications, and to determine the viable alternatives open to meet the energy crisis.¹³ Henry A. Kissinger, representing the United States, stated the American position in the global system as one of interdependence. He introduced the term "Project Interdependence" which later became former President Gerald R. Ford's policy foundation. Kissinger emphasized that Project Independence was only an intermediate goal, with Project Interdependence as an overall long range goal for the survival of the world economic system.¹⁴

⁸ U. S. *Congressional Record*, Vol. 120, No. 3, January 23, 1974, H. 153.

⁹ *Ibid.*

¹⁰ *Ibid.*, H. 155.

¹¹ Jahangir Amuzegar, "The Oil Story: Facts, Fiction and Fair Play," *Foreign Affairs*, 51, No. 4, (July 1973), p. 678.

¹² Robert B. Krueger, *op. cit.*, p. 100-101.

¹³ Communique of the Washington Energy Conference, February 13, 1974, *Atlantic Community Quarterly*, 12, No. 1, (Spring 1974), p. 117. The countries represented at this conference included: Belgium, Canada, Denmark, France, the Federal Republic of Germany, Ireland, Italy, Japan, Luxembourg, The Netherlands, Norway, the United Kingdom and the United States. Also participating in the conference was the Secretary General of the OECD (Organization for Economic Cooperation and Development) which included, in addition to the above countries, Australia, Austria, Finland, Greece, Iceland, Portugal, Spain, Sweden, Switzerland, and Turkey.

¹⁴ Henry A. Kissinger, "The Washington Energy Conference, The American Challenge," *Atlantic Community Quarterly*, 12, No. 1, (Spring 1974), p. 23.

As the flow of oil from the OAPEC countries resumed, the crisis situation within the United States appeared to ease. However, in May Congress passed the Federal Energy Administration Act of 1974 establishing the Federal Energy Administration (FEA) to reorganize and consolidate government functions.¹⁵ The purpose of the FEA was to handle expeditiously energy problems and resources and to report to the President and Congress a comprehensive plan to alleviate the energy shortages.¹⁶

With Nixon's resignation in August 1974 came a change in administration and a transition in policy. At the World Energy Conference, convened in September, 1974, former President Ford discussed the concept of Project Independence in terms of Project Interdependence which he depicted as a comprehensive world energy program where American resources would benefit all mankind.¹⁷

By November, 1974, the first Project Independence report was delivered to Congress by Dr. John Sawhill. Dr. Sawhill explained that prior to 1950, the United States was an oil-surplus nation — totally self-sufficient.¹⁸ However, imports of crude oil and petroleum products accounted for 15 per cent of total domestic consumption, and by 1973 imports had increased to 35 per cent.¹⁹ Moreover, oil accounted for 46 per cent of United States domestic energy consumption.²⁰ The foundation of Project Independence was the maintenance of an assured supply of energy both in time of war as well as in time of peace.²¹ Having assessed such risks as high domestic energy prices, inflation, supply interruptions, a potential drop in the real gross national product, environmental deterioration, and depletion of domestic reserves, Dr. Sawhill maintained that the United States could be independent rather than totally self-sufficient.²² Adequate and secure supplies, together with a significant reduction of imports, would provide the necessary degree of independence, assuming of course that the sources of oil imports would not resort to political manipulation of the vital commodity.

In his State of the Union Message on January 15, 1975, former President Ford extended the energy independence deadline to 1985. Additionally, Ford proposed a restoration of surplus in total energy.²³ Following Ford's direction, the Congress passed the Energy Policy and Conservation Act on December 22, 1975. The essential thrust of the Act was the creation of a strategic

¹⁵ U. S. Congress, Public Law 93-275, May 7, 1974.

¹⁶ *Ibid.*

¹⁷ Robert B. Krueger, *op. cit.*, p. 88.

¹⁸ U. S. Congress, Serial No. 93-54, Project Independence Report, November 21, 1974, p. 65.

¹⁹ *Ibid.*

²⁰ *Ibid.*

²¹ Robert B. Krueger, *op. cit.*, p. 88.

²² U. S. Congress, Serial No. 93-54, *op. cit.*, p. 67.

²³ *The New York Times*, January 16, 1976, p. 24. President Ford also requested a relaxation of clean air standards to increase the use of coal.

petroleum reserve capable of reducing the impact of severe energy supply interruptions.²⁴ The restoration of surplus (stockpiling) and the creation of the strategic petroleum reserve must be equated with an increase in imports which, in fact, was to take place. (See Table 1, Crude Imports.) This shift of the Ford Administration was not a total retreat from the policy objectives of Project Independence, but rather an assumption that the crisis had eased and that long range policy goals might then emphasize self-sufficiency rather than complete independence.

III. *The Petroleum Industry*

Because petroleum is a vital resource which affects all aspects of life for the individual as well as the nation, the simplistic response of Nixon's Project Independence as a cure-all encountered major obstacles. Among the obstacles was the petroleum industry.

The oil companies do not, per se, represent a monopolistic power over the petroleum market.²⁵ However, the industry possesses an inordinate amount of political power, significantly vast to shape its own economic system and goals not necessarily similar to or identical with the public interest.²⁶ Where the economic and political power of the oil industry is mutually existent, the "legislative and administrative environment" may be strategically manipulated.²⁷ The American system of government is characterized by a fragmented policy process of multiple subsystems linking segments of the bureaucracy with congressional committees and interest groups. The key to policy making power is access to these subsystems.²⁸

The United States oil industry is enormous. For example, it is three times larger than the iron and steel industries, twice as large as the automotive industry in assets.²⁹ The employment capabilities are immense where large segments of the population are directly affected by the maintenance of jobs and financial security.³⁰

Within the industry power structure, associations exist which exercise power at multiple levels of government. The oil lobby extends its influence from the local level of government, through state and federal governments

²⁴ U. S. Congress, Public Law 94-163, December 22, 1975.

²⁵ Energy Policy Project of the Ford Foundation, op. cit., p. 230. The major oil companies include: Gulf Oil Company, Exxon, Standard Oil of California, Texaco, Mobil Oil Company, British Petroleum, and Royal Dutch Shell (the parent company of Shell Oil Company). These companies are the seven largest oil companies in the world and control most of the free world's oil. For this study, only the American companies (all of the above majors except British Petroleum and including Shell Oil Company), the small companies as well, are considered.

²⁶ *Ibid.*

²⁷ *Ibid.*, p. 238.

²⁸ *Ibid.*, p. 239.

²⁹ *Ibid.*, p. 240.

³⁰ *Ibid.*

and on through foreign governments.³¹ The elusive operations of the oil lobby have resulted in the disproportionate representation of congressmen from energy-producing states securing chairmanship positions on influential committees.³²

The American Petroleum Institute (API) is comprised of representatives from the total industry although dominated by the majors. The API conducts research and reports directly to Congress.³³ The National Petroleum Council (NPC) functions as an oil-advisory group for the Secretary of the Interior. The NPC, composed of industry representatives, is appointed directly by the Secretary.³⁴

The federal government has adopted a laissez faire policy in its relations with the oil industry. Where the maintenance of the private enterprise system has existed, two specific regulatory procedures have proven beneficial to the industry.³⁵ Special tax relief has been provided for the industry in the form of an Oil Depletion Allowance. The Allowance grants directly to the petroleum companies a 22 per cent income tax deduction based on the gross value of oil produced.³⁶ The Allowance applies up to 50 per cent of net income and is a highly controversial policy. The industry maintains that the Depletion Allowance insures growth of the industry. Opponents of the industry argue that the Allowance represents a tax discrimination and withholds important financial resources from the government.³⁷

Until 1973, the preferential treatment of the oil industry had been demonstrated through the use of the Oil Import Quota. Through application of the Quota on the amount of crude oil entering the country, the government supported and assured the domestic companies a major portion of the growing

³¹ *Ibid.*, p. 241. A study by Rep. Les Aspin (D-Wisconsin) demonstrated that as a major contributor to political campaigns, the oil industry contributed \$4,981,840 to former President Nixon's 1972 re-election campaign. Gulf, Phillips, and Ashland admitted to illegally donating a total of \$300,000 in corporate funds to the President's campaign.

³² *Ibid.*, p. 251.

³³ *Ibid.*, p. 241.

³⁴ *Ibid.*

³⁵ Over the years, other policy measures have included the Connally Act of 1935, otherwise known as the "Hot Oil" Act — the federal government had the authority to restrict or prevent movement in interstate commerce of "oil produced in violation of state law;" the Interstate Commerce Commission has the power to regulate both service and rates of interstate pipelines; and finally, the federal government, as the owner of oil-bearing lands both on and off shore, has the power to regulate the production by whatever means it desires. In practice, however, producers who operate on public domain are subject to the enforcement procedures within the state where the lands are located. Resources for the Future Staff Report, *U. S. Energy Policies: An Agenda for Research*, (Baltimore: The Johns Hopkins Press, 1963), p. 40. See also, David Howard Davis, *Energy Politics*, (New York: St. Martin's Press, 1974), p. 42-86.

³⁶ Resources for the Future Staff Report, *U. S. Energy Policies: An Agenda for Research*, (Baltimore: The Johns Hopkins Press, 1963), p. 40. For 43 years, the Allowance remained at 27 per cent.

³⁷ *Ibid.*, p. 41.

TABLE 4. United States Total Gross Consumption of Petroleum Resources by Major Sources and Consuming Sectors (In Trillions of Btu's Per Year) Business-As-Usual — Petroleum at \$11 Per Barrel

<i>Year</i>	<i>Consuming Sector</i>	<i>Without Conservation</i>	<i>With Conservation</i>
1972	Household/Commercial	6,667	6,667
	Industrial	5,668	5,668
	Transportation	17,264	17,264
	Elect'rl. Generation	3,134	3,134
	Synthetics	233	233
	TOTAL	32,966	32,966
1977	Household/Commercial	5,825	5,467
	Industrial	7,001	6,866
	Transportation	17,863	16,797
	Elect'rl. Generation	3,432	3,251
	Synthetics		
	TOTAL	34,121	32,381
1980	Household/Commercial	5,749	5,370
	Industrial	7,567	7,359
	Transportation	18,435	17,115
	Elect'rl. Generation	3,166	2,640
	Synthetics		
	TOTAL	34,916	32,485
1985	Household/Commercial	5,914	5,380
	Industrial	8,543	8,055
	Transportation	20,565	17,720
	Elect'rl. Generation	2,954	2,352
	Synthetics		
	TOTAL	37,976	33,507

SOURCE: U. S. Congress, Serial No. 93-54, Project Independence Report

NOTE: Btu (British Thermal Unit) is the amount of energy needed to raise the temperature of one pound of water by one Fahrenheit degree. 5.8 million Btu's = one 42-gallon barrel of oil.

market.³⁸ In 1959, President Eisenhower established mandatory oil import controls limiting the amount of foreign oil permitted to refiners and later to petrochemical producers.³⁹ In principle and practice, the federal government prevented large quantities of cheap foreign oil from entering the United States, thereby permitting the major companies to exploit the national resources available. In effect, higher domestic outputs were encouraged as consumption increased; price competition was restricted by foreign oil import quotas.⁴⁰ The import quotas existed until April 1973, when former President Nixon ordered abolition of the restrictions.⁴¹

The policy innovations of Project Independence never took into account the question of government intervention in the national and international activities of the petroleum companies. The oil industry has, at times, propelled its own interests above those of the nation. Having maintained critical positions of influence as advisors to the Secretary of the Interior and to congressmen, the industry became intricately involved in government actions and inactions on energy policy.

IV. National Security Priorities

The genesis of Project Independence was the maintenance of national security.⁴² The evolution of national security in current terms has come to include economic and social well-being as well as military requirements. In other words, adequate and secure supplies of oil are inseparable from national security priorities.⁴³

Functioning as an oil-deficient country, the United States had not depleted its energy supplies in the early 1970's. Rather, by a complex series of policy miscalculations and inactions, the United States had embarked on a course of increased foreign dependency.⁴⁴

With the acknowledgment that our finite world could not continue rapid consumption of its nonrenewable resources, a policy of complete self-sufficiency contradicted long range national security policies. On the one hand, total self-sufficiency would require an enormous share of national resources; however, total dependence on foreign oil, although economically

³⁸ *Ibid.* From post World War II until the Oil Embargo, consumption of oil increased rapidly. The increased use of the automobile, the growth of suburbia, the convenience and availability of oil — all contributed to the rise in consumption.

³⁹ Joseph S. Szlyliowicz and Bard E. O'Neill, ed., *The Energy Crisis and U. S. Foreign Policy*, (New York: Praeger Publishers, 1975), p. 56.

⁴⁰ *Ibid.*

⁴¹ *Ibid.*, p. 57. Prior to the 1972 election, Nixon ordered a Cabinet Task Force investigation into the oil import restriction problem. Oil lobby influences were politically successful in aiding the incumbent President. Therefore, Nixon initially rejected the removal of import quotas. By April 1973, the election was over and the potential energy shortage was evident.

⁴² Robert B. Krueger, op. cit., p. 91.

⁴³ *Ibid.*

⁴⁴ Joseph S. Szlyliowicz and Bard E. O'Neill, op. cit., p. 39.

advantageous, would increase United States vulnerability in national security.⁴⁵

As depicted in Dr. John Sawhill's report on Project Independence, it was questionable whether self-sufficiency would solve energy-security problems in the very near future. A policy of self-sufficiency would regard the present without planning for future needs. The exploitation of oil fields for current consumption would leave the future unprotected. National security priorities have been plagued by the indecisive course of action. A balance between self-sufficiency and preservation of future needs should be considered essential for successful policy implementation.

V. *Environmental Concerns*

Energy independence and stringent conservation are concomitant as envisioned by the Project Independence Report. (See Table 4.) Moreover, energy independence requires a shift from our basic oil economy to other sources of energy which, by their very nature, will increase the hazards of environmental quality. The collision of environmental goals and energy needs are no more evident than in Project Independence.

The Energy Supply and Environmental Coordination Act of 1974 was intended to provide for a means whereby an adequate supply of fuels would be obtained without jeopardizing the environment.⁴⁶ However, the coordination effect modified the priorities set for environmental quality. The Act extended motor vehicle emission standards two years by amending the Clean Air Act.⁴⁷ In his 1975 State of the Union Message, President Ford requested additional modifications specifically compromising air quality goals for the use of coal.⁴⁸ Where coal has been in abundant supply, United States policymakers have compromised air quality standards for energy needs by permitting an increase in the amount of sulphur emitted into the air.⁴⁹

In the endeavor to increase energy sources, environmental quality has been jeopardized further by oil pollution resulting from offshore oil spills. Such pollution has had a devastating effect on salt marshes which are the most biologically productive environments on earth.⁵⁰

The fragmentation of policies has complicated the coordination of energy

⁴⁵ Robert H. Connery and Robert S. Gilmour, ed., *The National Energy Problem*, (New York: The Academy of Political Science, 31, No. 2, December 1973), p. 135-136.

⁴⁶ U. S. Congress, Public Law 93-319, June 22, 1974.

⁴⁷ *Ibid.* For requirements under the Clean Air Act, see 84 Stat. 168C. Emission standards were set for 1975. P. L. 93-319 extends these standards to 1977.

⁴⁸ *The New York Times*, January 16, 1975, p. 24.

⁴⁹ Robert H. Connery and Robert S. Gilmour, op. cit., p. 39. "Air quality is generally a function of pollutant emissions, the assimilative capacity of the environment, the control strategies in effect and ambient-background levels. The dynamic interplay of these parameters is the basis for an intermittent control strategy." p. 179.

⁵⁰ Energy Policy Project of the Ford Foundation, op. cit., p. 187. The Alaska pipeline, once an environmental concern, was passed by Congress when the shortage of oil became evident.

and the environment.⁵¹ State governments are the regulators of policy control, and coordination has been ineffective on that level. Moreover, a basic perception of the interrelationship of nonrenewable energy resources and the environment has been lacking at all levels of the decision-making process.⁵² For example, energy development has been attempted in the Rocky Mountain area; however, opposition from state governments and environmentalists have forestalled pursuits. The Energy Research and Development Administration (ERDA) has been allocated sufficient dollars for the development of synthetic fuel although Congress has not investigated the impact on the environment.⁵³ Where the area receives less than 10 inches of precipitation a year, state governments and environmentalists have doubted that sufficient quantities of water exist in the region to support synthetic fuel projects without endangering the environment.⁵⁴ The environmental movement has become an obstacle to Project Independence in that its goals for the preservation of environmental quality and conservation of resources has outweighed the government's priorities.

VI. *The American Consumer*

Where American life-styles have been predicated on the belief that infinite resources will always be available, consumers face a crisis brought about by the scarcity of energy resources. The ability of Americans to recognize and comprehend that its resources are limited is the foundation for the future.⁵⁵ Only then may the nation develop the ability to deal with and plan for realistic goals.

The low cost of energy prior to the embargo precipitated changes in lifestyles for all consumers. Attempted constraints on the availability of energy would permeate all Americans' life-styles, requiring adjustments necessitated by inflation and the critical need for conservation which is resented and fraught with political pitfalls amid conflicts of interest.⁵⁶ It has been reported that the average American household consumes a total in excess of 340 Btu's of energy each year.⁵⁷ Six per cent of the average American's income was allocated for gas (natural), electricity and gasoline.⁵⁸ Moreover, a correlation existed between income and energy consumption the higher the household income, the higher the consumption of energy.⁵⁹

⁵¹ Robert H. Connery and Robert S. Gilmour, *op. cit.*, p. 184.

⁵² *Ibid.*, p. 191-192.

⁵³ *U. S. News & World Report*, December 22, 1975, p. 43-44.

⁵⁴ *Ibid.*

⁵⁵ Robert H. Connery and Robert S. Gilmour, *op. cit.*, p. 24.

⁵⁶ *Ibid.*, p. 37.

⁵⁷ Energy Policy Project of the Ford Foundation, *op. cit.*, p. 115. A Btu (British Thermal Unit) is the amount of energy needed to raise the temperature of one pound of water by one Fahrenheit degree. 5.8 million Btu's = 1 42-gallon barrel of oil.

⁵⁸ *Ibid.* This figure may be higher now.

⁵⁹ *Ibid.*, p. 128.

Consumers are advocates of energy conservation "so long as they do not have to change their life-styles, give up their oversized car, or pay more for a well-insulated house."⁶⁰ Long range conservation goals require the support of a large constituency. Without such support, implementation cannot be effectuated.⁶¹

VII. Conclusion

In an era of national and global interdependence, the parameters of United States energy policy must reflect the realities of world management for nonrenewable resources. Project Independence negated this view and was subsequently transformed into Project Interdependence. Nationally, the conflicts between the political process, consensus and environmental quality have resulted in the breakdown of effective policy implementation. Challenges of security, power, and economic stability will inevitably confront the United States in the future. To meet such challenges, a reorganization of dysfunctional policies must encompass realistic goals.

At present, the United States consumes approximately 17,222,400 barrels of oil per day.⁶² Although discrepancies exist in the quantity of crude oil imported, the United States has increased its imports from approximately 6.4 million barrels per day in 1973 to 7 million barrels per day estimated for 1976.⁶³ In addition, the United States has increased its dependence on Middle East and North African oil.⁶⁴ Within a few years, 50 per cent of United States imports will be from these two areas.⁶⁵

If self-sufficiency is not the desired course, United States policy must examine other alternatives. A coordinated policy effort for the benefit of the nation as a whole appears essential. Policy must consider not only the oil industry, but also national security, the environment, and consumers. The reduction and leveling off of energy growth would require a concerted effort over a long period of time, but success could be attained without a devastating impact on the economy.⁶⁶ Although energy prices would be higher, the money, instead of being channeled for oil corporation profits, could be used to initiate or project growth in areas of public service.⁶⁷ In addition, a shift to alternative sources of energy would require serious consideration. As renew-

⁶⁰ Robert H. Connery and Robert S. Gilmour, op. cit., p. 53.

⁶¹ Robert B. Krueger, op. cit., p. 104.

⁶² U. S. Department of Interior, Bureau of Mines, *Minerals Yearbook*, 1973, p. 924. See also, *Table 1* and *U. S. News & World Report*, April 5, 1976, p. 36-37.

⁶³ *U. S. News & World Report*, April 5, 1976, p. 36-37, as quoted from the U. S. Bureau of Mines and American Petroleum Institute. See also, *Table 1. The Oil and Gas Journal*, (February 16, 1976), p. 28, reported U. S. production at 8,351,000 b/d. With consumption at approximately 17,222,400 b/d, imports may range between 7,500,000 b/d and 8,800,000 b/d.

⁶⁴ *The Oil and Gas Journal*, (January 5, 1976), p. 54.

⁶⁵ *Ibid.*

⁶⁶ Energy Policy Project of the Ford Foundation, op. cit., p. 111.

⁶⁷ *Ibid.*

able resources, solar and organic energy could become major contributors as energy for the next century.⁶⁸

The preservation of the environment interrelated with energy requirements demands a reordering of the commitment on the part of the American consumer and the federal government. The quality of future life, or possibly the existence of life itself, extends from policy measures instituted now.

⁶⁸ *Ibid.*