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OA/ID Number: 29154
Folder ID Number: 29154-005

Folder Title:
National Energy Strategy (1 of 2) 1991 [2]

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Withdrawal/Redaction Sheet

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Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
01a. Memo	From James D. Watkins to POTUS Re: Attached Report on the Energy Situation (1 pp.)	11/27/90	P5	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: National Energy Strategy (1 of 2) 1991 [2]

Open on Expiration of PRA
(Document Follows)
By JP (NLGB) on 10/28/05

Date Closed:	1/4/2005	OA/ID Number:	29154-005
FOIA/SYS Case #:	1998-0004-F[2]	Appeal Case #:	
Re-review Case #:	2005-0426-S	Appeal Disposition:	
P-2/P-5 Review Case #:		Disposition Date:	
AR Case #:		MR Case #:	
AR Disposition:		MR Disposition:	
AR Disposition Date:		MR Disposition Date:	

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

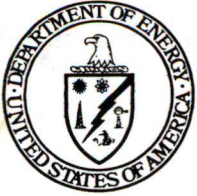
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The Secretary of Energy
Washington, DC 20585

November 27, 1990

MEMORANDUM FOR THE PRESIDENT

THE CHIEF of STAFF
has seen

SUBJECT: THE ENERGY SITUATION

Mr. President:

Domestically and internationally, the market has efficiently managed the loss of Iraqi and Kuwaiti oil supplies. No physical shortages have been reported anywhere, but we are closely monitoring the availability of fuel supplies for the upcoming winter months.

Congressional, State and consumer concerns about higher fuel prices continue to generate calls for government intervention. These concerns are likely to intensify when Congress reconvenes.

We are proceeding on schedule with the completion of the National Energy Strategy (NES). The Economic Policy Council is likely to complete its deliberations on the NES by early December. We will seek your decision on the final scope of the NES by mid-December.

A detailed report of conditions in the market, and of the status of the Administration's energy response measures, is attached for your information.

[Signature]
James D. Watkins
Admiral, U.S. Navy (Retired)

Attachment

cc:

The Honorable John H. Sununu

The Honorable Brent Scowcroft

P.S. Steve Wakefield was successful in the long-standing Pt. Arguello dispute (Chevron vs. Santa Barbara) -- 20,000 barrels/day of unexpected new crude to the market -- just announced today.

Withdrawal/Redaction Sheet

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Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
01b. Report	The Energy Situation (3 pp.)	11/27/90	P/S	

Collection:

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Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: National Energy Strategy (1 of 2) 1991 [2]

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Market Conditions and Status of Energy Response Measures

Market Conditions

The estimated loss of 4.3 million barrels/day of Iraqi/Kuwaiti oil has been essentially offset by surge production from major suppliers. Saudi Arabia accounts for fifty percent of surge production. U.S. net imports are down about 1.5 MMb/d from the same period last year, and demand has declined about 5 percent since August.

Refinery operating capacity is down from unprecedented high levels observed through October. Product stocks are above levels of last year at this time, except for propane stocks which are tight and are being closely monitored. State Governors are being kept fully apprised of fuel stocks, and of any issue that may impact upon supply availability.

Crude prices on the spot and futures markets remain volatile, due to uncertainty about future Middle East events. Crude prices, which reached \$40 /barrel in Mid-October, have remained in the low \$30/barrel range for most of November.

Industry has heeded your call for price restraint. Retail gasoline prices have risen on average 32 percent since August 2, while crude prices have risen 49 percent. Some companies, however, primarily independents, have chosen to shut down refinery capacity because of difficulty in recovering costs. In addition, independent marketers are charging that the majors' price restraint is, in effect, putting them at an extreme competitive disadvantage since they have no oil production operations to offset losses in refining and marketing.

Jet fuel supplies and prices are a subject of special concern to Secretary Skinner. However, spot market prices for jet fuel are lower in the U.S. than in the other trading centers of Amsterdam, Tokyo, or Singapore. In addition, jet fuel prices have dropped significantly from \$1.41 on October 15 to \$0.95 on November 23.

Emergency Preparedness

The test sale of Strategic Petroleum Reserve (SPR) stocks has proceeded smoothly. Five million barrels of SPR oil were offered for sale. Bids were accepted for 3.9 million barrels, the last deliveries of which will be completed by the end of November.

All SPR systems operated as expected. We are confident that, should it become necessary, the SPR can be drawn down at its design capacity of 3.5 million barrels per day.

Administration's Energy Response Measures

The short and mid-term response measures announced by DOE in August and September represent the initial results of the National Energy Strategy (NES). The Economic Policy Council is currently reviewing the NES policy options. By Mid-December, we expect to seek your decision on the final contents of the NES.

Implementation of these near term response measures has produced generally positive results. Energy efficiency and conservation has been encouraged by the public information campaign we have undertaken in association with the Advertising Council.

Four television announcements are being sent to all stations in the country. Six radio announcements have been sent to 7,000 radio stations. Print ads have been sent to 9,000 newspapers and other advertising will appear on 3,000 billboards.

The DOE public information campaign has set the tone for corporate responses to the Middle East situation. Texaco, Amoco, and ARCO have begun their own national oil conservation campaigns.

Firestone/Bridgestone and other corporations will be displaying DOE posters on energy efficiency. Texaco will include a DOE/Ad Council brochure in its credit statement mailings beginning in early 1991.

Five million brochures on efficient oil heating will be distributed to consumers in the Northeast and Midwest in cooperation with the Petroleum Marketers Association. The National Association of Manufacturers' 13,000 members will receive information urging renewed commitment to energy efficiency.

On the supply side, operators of Prudhoe Bay are increasing production from 1.7 million b/d in August to 2.0 million b/d by December. Half of this increase is due to completion of maintenance programs. The other half is in response to Administration calls for higher production. The increase can be maintained for 5-6 months.

Other fields in Alaska, such as Pt. McIntyre and Niakuk, can be brought on line if a number of State and Federal permitting obstacles can be resolved. DOE has proposed the establishment of a Federal interagency task force charged with expediting resolution of regulatory requirements. The task force should be operational no later than December.

On November 27, Chevron Corporation announced that it was commencing preparations for production from the Pt. Arguello project off Santa Barbara, California, consistent with the DOE compromise proposed to local authorities. The field, which is the largest oil discovery in the United States in 20 years, is capable of producing up to 100,000 barrels per day. (Chevron Corporation press release attached).

Producers of California heavy oil are responding to favorable long-term oil price forecasts. California air quality standards encourage the use of natural gas to provide steam for enhanced oil recovery. We are working with the Federal Energy Regulatory Commission to resolve regulatory obstacles to the construction of new natural gas interstate pipelines to California and elsewhere. We are also examining whether additional natural gas from the Elk Hills Naval Petroleum Reserve can be released to the California market.

Withdrawal/Redaction Sheet

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Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
01c. News Letter	From Chevron Corporation Re: Point Arguello Partners (2 pp.)	11/27/90	P/5	

Collection:

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Chevron Corporation

Public Affairs (415) 894-4440, 894-4581, 894-1200, 894-4246
P.O. Box 7137, San Francisco, CA 94120-7137

News

FOR IMMEDIATE RELEASE



**POINT ARGUELLO PARTNERS PREPARE FOR STARTUP;
20,000 BARRELS PER DAY TO BE PIPELINED
IN ACCORD WITH DOE PROPOSAL**

SAN FRANCISCO, Nov. 27 -- Partners in the long-stalled, 300-million-barrel Point Arguello offshore oil project today announced plans to prepare for startup of production and the utilization of pipeline transportation to carry up to 20,000 barrels per day of oil to refineries outside Southern California. Point Arguello is permitted to produce a maximum of 100,000 barrels of oil per day, equivalent to approximately half of U.S. imports from Kuwait prior to the Iraqi invasion..

In a letter sent today to Secretary of Energy James D. Watkins, Kenneth T. Derr, chairman of Chevron Corporation, on behalf of the 18-company Point Arguello consortium, thanked the Department of Energy for its efforts to negotiate a compromise between the project and Santa Barbara County officials which would have brought the Point Arguello crude into production quickly, while addressing environmental concerns.

Consistent with commitments made by the partners to DOE in its efforts to secure a compromise, Derr said the partners are willing to do their part to respond to the President's call for increased domestic production. Production of up to 20,000 barrels of oil per day from Point Arguello will begin as quickly as possible.

Preparations to reactivate the project's mothballed facilities -- including three offshore platforms, onshore and offshore pipelines, onshore oil and gas processing plants, storage tanks and a marine terminal -- will take several months.

Santa Barbara County officials' rejection of DOE's compromise and of Chevron's proposal for interim tankering using only double-hulled vessels has made it impossible to use refineries in the Los Angeles area, where the partners can process Point Arguello crude. There are no feasible pipelines to this destination currently.

(Note: On Nov. 9, DOE proposed that Chevron and its partners pump 20,000 barrels per day via pipelines to destinations other than Los Angeles; to tanker any excess production; but guarantee that all tankering would end within four years, or sooner, if heated pipelines to Los Angeles became available. Although this would likely add to the project's already staggering costs, the partners were willing to accept the DOE proposal. Santa Barbara County officials, however, declined to accept the compromise, and on Nov. 12, rejected the project's application to use double-hulled tankers to transport the oil to Los Angeles refineries.)

- MORE -

- 2 -

Chevron officials said the partners will appeal the decision by the Santa Barbara County Board of Supervisors to the California Coastal Commission, and are hopeful the Commission's broader view, including recognition of the national interest in increasing domestic oil production, will result in a favorable decision.

Derr noted that earlier attempts by Chevron to build a pipeline to carry Point Arguello crude to the Los Angeles basin, the largest market for motor fuels in the world, were thwarted by elected officials there, leading the partners to request interim tankering. Santa Barbara County officials prefer that the thick offshore oil be blended with light crude to allow it to flow through a new connecting line which would have to be built and tied into an existing, limited-volume line to Los Angeles.

"Officials in Kern County, where the blending connection would be required, have already criticized that scheme as posing environmental and economic impacts that are excessive and unfair," Derr said. "It would require either stealing away light crude from the San Joaquin Valley already used for blending -- resulting in refinery shutdowns and shutting-in heavy crude production there -- or importing blending stock, on tankers, and trucking it over L.A. freeways to Kern County. These options provide no environmental benefit, pose unnecessary public safety risks and don't enhance domestic energy production."

#

11/27/90

Contact: G. Michael Marcy -- (805) 658-4445

LSS:bv

L A Iacocca
Chairman of the Board
Chief Executive Officer

November 1, 1990

Energy Policy

The Honorable James D. Watkins
Secretary of Energy
U. S. Department of Energy
1000 Independence Avenue, S.W.
Washington, DC 20585

Dear Admiral Watkins:

I understand that the Department of Energy is close to circulating options for the National Energy Strategy to the Economic Policy Committee. I have been concerned by rumors about those options, including those contained in the enclosed New York Times article of October 28. Although it is late in your process, I would like to raise some issues which I hope you will consider.

Different approaches to conservation have vastly different impacts on domestic production and employment. Because the Europeans and the Japanese have had severe gasoline and engine displacement taxes on their vehicles, and because of the difference of geography, they produce a fleet of much smaller, and, therefore, more fuel-efficient vehicles. A guzzler tax and sipper credit scheme would have the effect of subsidizing the import of these smaller vehicles, and penalizing the production and sale of American-made vehicles. Attempting to mitigate these concerns with a program within size classes will result in a regulatory nightmare and endless "gaming" of the system, with little or no conservation.

I feel like a broken record saying it; but if we really want gasoline conservation, we must raise the price of gasoline. If that is not "politically doable," I hope DOE won't recommend some fallback position which damages the domestic industry or distorts market forces for no meaningful benefit.

The CAFE issue raises similar concerns. I do not know how DOE could begin to make a recommendation on what is feasible since DOE has never studied the cost to the industry of various CAFE scenarios. To do that, you need to know the product plans of each company and what it would cost to prematurely replace products before market-driven life cycles would do so. I have no

The Honorable James D. Watkins
Page 2
November 1, 1990

problem with the Administration considering what CAFE is feasible, so long as "feasible" includes a technical and economic assessment.

Similar competitive issues exist with CAFE as with the guzzler/sipper tax scheme. Unless the CAFE burden is spread fairly among all companies, say through a percentage increase approach applied to each company, it will give a competitive advantage to Japanese and Korean imports. In fact, a flat increase to say 33 miles per gallon looks very much like a policy designed by MITI to further cripple the U.S. industry since it would place a 7 mpg burden on the U.S. companies, and only a 2 or 3 mpg burden on the Japanese companies.

I hope you will not offer up NES options which would put the U.S. auto industry at a competitive disadvantage, nor support policies which are inferior to the obvious conservation policy -- higher energy prices.

Thank you for your consideration. You have a tough challenge facing you, one that's critical to our nation's future. I believe we need energy conservation, and hope we will get a national policy that promotes it in a way that makes sense.

Sincerely,



Lee A. Iacocca

Attachment

cc: ✓ The Honorable John H. Sununu
The Honorable Samuel K. Skinner

Market Forces Seen as Backbone of New Bush Energy Policy

By ROBERT D. HERSHEY Jr.

Special to The New York Times

WASHINGTON, Oct. 27 — The Bush Administration's long-awaited national energy strategy will include incentives for efficiency and for renewable fuels and other fresh Government initiatives, but it will continue the Reagan Administration's fundamental reliance on market forces, Energy Department and industry officials say.

Planning for the strategy, begun at a time of what Energy Secretary James D. Watkins calls energy complacency, is heading toward completion with American troops in the Persian Gulf protecting Mideast oil fields. An interim report was published in April and some options were added in the af-

As an example of one kind of initiative that is regarded favorably, Ms. Stuntz cited a proposal that would not only impose a tax on cars with very poor gasoline mileage, as at present, but would also encourage consumers, through rebates, to buy cars that get exceptionally good mileage.

Incentives for Consumers

She said automobile companies were ordered, under penalty of fines, to produce fuel-efficient cars but "we don't really give consumers an incentive" to buy them.

The report delves in detail into such questions as how big a rebate would be required to produce a certain volume of vehicle sales and what the effect would be on domestic and foreign automobile companies and jobs.

At the same time, Scott Sklar, executive director of the Solar Energy Industries Association, said department analysts were willing to make allowances for the heavy capital investment required for renewable sources of energy like solar systems.

"That's a major step forward," Mr. Sklar said. "Bush really does believe that all the options belong at the table."

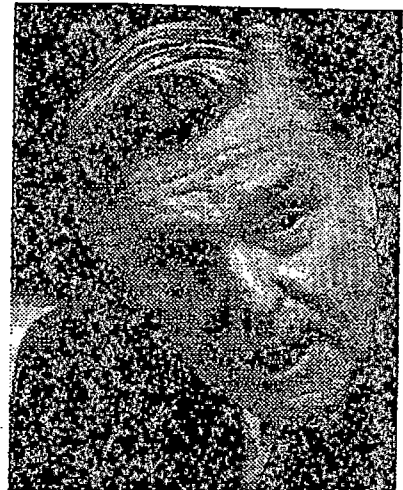
Pains have been taken to build the strategy from the ground up, with 18 public hearings, 448 witnesses and 22,000 pages of written submissions. But preliminary reaction from trade associations and others who have been able to review some of the proposals ranges from hope to outright disapproval.

"There isn't any kind of guiding principle stated there," said Richard L. Lawson, a former Air Force general who heads of the National Coal Association, after seeing a substantial amount of the work. "There has to be something to provide rigor" to the exercise, he said, adding, "Until I have a statement of the problem, I don't know what to do with it."

Effort Called Balanced

But Nicholas Bush of the Natural Gas Supply Association, an industry group, called the effort "extremely balanced" and said there is a reasonable chance for it to provide a solid "framework for doing something."

The options quickly put forward as a result of the Iraqi invasion included simple measures like buying lower-octane gasoline and inflating tires to specification for better mileage as well as proposals to add tax credits for oil exploration and to expedite permits for natural gas pipeline projects.



The New York Times

James D. Watkins, the Energy Secretary, said the United States' new energy strategy "can most likely be achieved through a combination of efforts."

Indeed, much of the emphasis in the emerging strategy is on curbing demand and enhancing supply rather than injecting a fresh government presence.

"I think what you can expect is a new effort to look at existing barriers that are blocking effective market operation," Ms. Stuntz said. "We're not done deregulating the energy business by a long shot. Nobody who's ever tried to build a facility or spent any time at the Federal Energy Regulatory Commission needs to be convinced of that." The commission has authority over various aspects of natural gas and over electricity at the wholesale level.

Bigger Threat to Security

The Iraqi invasion also complicated national security by making oil prices far more volatile than they have been historically. In recent weeks, the price of crude oil rose steeply, then plummeted, then rose again.

Reducing the United States vulnerability to a volatile oil market, Secretary Watkins told a recent conference in London, "can most likely be achieved" through a combination of efficient oil production and consumption, by "greater fuel-switching, especially to plentiful and more geographically dispersed natural gas, and dedicated efforts to develop alternative transportation fuels."

Ms. Stuntz says she remains optimistic that a coherent program can be adopted. Critics would be offered a trade of some hydropower initiative or access to the Arctic National Wildlife Refuge for, say, curbing electricity demand or more money for research into fuel alternative.

"There is a core of people who appreciate that approach," she said. "They're willing to deal on that basis."

Rebates may be in store on fuel-efficient vehicles.

termath of the Iraqi invasion of Kuwait.

The planning is far more comprehensive than the 1987 study on energy security that found, essentially, that low oil prices were helping to make the United States overly dependent on foreign oil.

Linda G. Stuntz, the chief overseer of the project that is to put 85 or more options on President Bush's desk in early December, said last week that the free market, while essential, "was not in and of itself sufficient" to produce effective energy policy.

"It's not sufficient when you have Congress putting large tracts of the outer continental shelf off limits, when you have concerns about gas emissions that may substantially affect your ability to use fossil fuels," said Ms. Stuntz, the department's deputy under secretary for policy, planning and analysis.

Initially, the strategy was to consist of recommendations, not just options for Presidential consideration. But that approach underestimated the politics of an elaborate process involving many agencies, including the Environmental Protection Agency and the Departments of Transportation, Interior and Housing and Urban Development. Most importantly, the White House chief of staff, John H. Sununu, is said to have insisted that the final shaping of policy be left to the President.

Ms. Stuntz said that Mr. Bush, as a founder of an oil company, is capable of making the policy selection himself if provided the necessary information.

While Bush policy makers insist that near-exclusive reliance on the market was overdone in the 1980's, they are not inclined to subsidize, mandate or otherwise promote energy sources and technologies that are uneconomic.

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THE WHITE HOUSE

WASHINGTON

December 17, 1990

MEMORANDUM FOR GOVERNOR SUNUNU

FROM: ROGER B. PORTER *RBP*
SUBJECT: National Energy Strategy

THE CHIEF of STAFF
has seen

As the President considers the various options for his National Energy Strategy, three key points become crucial:

1. The decision to rely on market forces during the recent disruption has proved to be enormously successful.

The termination of Iraqi and Kuwaiti oil exports in August was roughly equivalent to the disruption caused by the Iranian revolution of 1979. Ten years ago, America's reaction to the Iranian disruption involved gasoline allocation rules, price controls, and government intervention, none of which were used in the current crisis. By relying on market forces, the U.S. has avoided the gasoline lines and economic disruption that the earlier crisis precipitated.

Furthermore, the earlier crisis provoked the government into spending tens of billions of dollars on alternative energy sources that ultimately were wasted. To date we have avoided this squandering of our nation's resources.

2. The work behind the NES has established that the United States and our allies will continue to be dependent upon imported oil for the foreseeable future, even if extreme conservation and development measures are undertaken.

Under current projections, U.S. oil imports are forecast to rise from 42% of domestic consumption in 1989 to 62% in 2000 and nearly 70% in 2010. The U.S. could, at great economic cost, slow this trend with a series of conservation and domestic production measures. However, such policies would not only generate unacceptable GNP losses and unemployment increases, they would ultimately not even shield the U.S. economy from future disruptions in the world oil market.

Thus, energy independence is not a realistic objective for national policy. Instead, we must focus on measures to reduce our economic and national security vulnerability to disruptions in world oil supply. These measures, coupled with prudent investments in energy conservation, research and development,

and domestic energy sources, should minimize the economic and security costs of our dependence on foreign oil.

The NES modeling exercise has also shown that a series of periodic energy supply disruptions will not alter the long term rate of growth of the U.S. economy. Instead, these disruptions cause cyclical downturns which are followed by speedy recoveries once the disruption is ended. This result suggests that investments in flexibility rather than investments in long term energy alternatives have the highest payoffs. These investments include international diversification in oil sources, the maintenance of excess production and refining capacity, and the retention of excess reserves such as the SPR throughout the world.

3. A careful cost benefit analysis suggests that the "consensus" options in the NES have a significant impact as well as being our best investments. The adoption of options beyond these consensus items imposes costs that go far beyond any reasonable national security premium which should be incorporated into our energy and foreign policies.

The NES has agreed upon some three dozen specific energy initiatives as part of the Consensus Package. These include some deregulatory options which should greatly enhance efficiency in the use and distribution of electricity and natural gas. These options also include stepped up use of nuclear power and a better balance between our domestic energy and environmental initiatives.

The NES did some careful background work on the appropriate "premium" to be attached to reliance on foreign energy supplies, but chose not to ascribe a specific dollar premium to imported oil for a number of reasons. For example, it would be inappropriate to directly ascribe the costs of the Desert Shield operation to our reliance on oil imports. We are engaged in an effort to reverse aggression by a dictator and by so doing, to preserve a new world order of peace and international cooperation. Further, many of the troops now stationed in the Middle East would be stationed elsewhere. Their existence serves as a general deterrence to aggression.

However, we can use Desert Shield to provide some maximum orders of magnitude for an energy security premium. The U.S. consumes roughly 6.3 billion barrels of oil annually. If the U.S. were to be involved in a \$12 billion military operation annually in defense of the oil fields, the national security premium would be \$2 per barrel. In addition, there are economic costs to the disruption and costs involved in maintaining the

Strategic Petroleum Reserve. An NES working group placed the absolute upper bound on these costs at about \$4 - \$5 per barrel. It should be stressed that this is maximum estimate that assumes a continuing national security confrontation.

This \$4-\$5 premium is well below the costs of most of the options not adopted in the NES consensus package. Many of those options exceed \$20 per barrel as a premium. We would be far better off if we used those scarce resources for investments with clear payoffs such as greater domestic capital formation.

Energy

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EXECUTIVE SECRETARY

Diana M. Flastrom

September 11, 1990

Honorable James D. Watkins
Secretary
Department of Energy
1000 Independence Avenue S.W.
Washington, D.C. 20585

Gov. Sullivan

Re: S.I.P.E.S.
National Energy Policy

Dear Admiral Watkins,

The Society of Independent Professional Earth Scientists (S.I.P.E.S.), the world's largest organization of Independent Earth Scientists, predominantly Geologists, Geophysicists and Engineers mostly engaged in oil industry endeavors, strongly recommends the adoption of our Energy Policy.

Methods, ways and means of materially reducing domestic energy dependence on foreign sources of hydrocarbons are completely addressed. Foreign imports not only can be reduced but the domestic energy industry can be self-sufficient with no effect on Industrial growth in only a very few years.

The 1500 member/businesses of S.I.P.E.S. respectfully requests fifteen minutes of your time for our team of four specialists to present our Energy Policy. Please be assured that the presentation will be done in a most professional manner in the accepted standard of quadrillions of B.T.U.

Very truly yours,

Lucius C. Geer
Lucius C. Geer
S.I.P.E.S. - #408
V.P. Natural Resources
(713) 655-8800
(713) 247-0127 Fax

CC: Honorable Henson Moore, Deputy Secretary
Honorable Bill Archer, (R), Texas (Ways & Means)
Ranking

BILL ARCHER
7TH DISTRICT, TEXAS

RANKING MINORITY
MEMBER

WAYS AND MEANS
COMMITTEE

JOINT COMMITTEE
ON TAXATION

Congress of the United States
House of Representatives

Washington, DC 20515
September 19, 1990

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Honorable James D. Watkins
Secretary
Department of Energy
1000 Independence Ave., S.W.
Washington, D.C. 20585

Gov. Sununu

Dear Jim:

I believe you have already received a copy of the enclosed request for an appointment from Mr. Lucius C. Geer of the Society of Independent Professional Earth Scientists (SIPES). Mr. Geer and his colleagues have requested an appointment at your convenience to discuss their recommendations for a national energy policy. I believe their plan holds great promise and would greatly appreciate your consideration of their request for an appointment.

As always, Jim, thanks for your help. With best regards,

Sincerely,



Bill Archer
Member of Congress

BA/thl

Enclosure

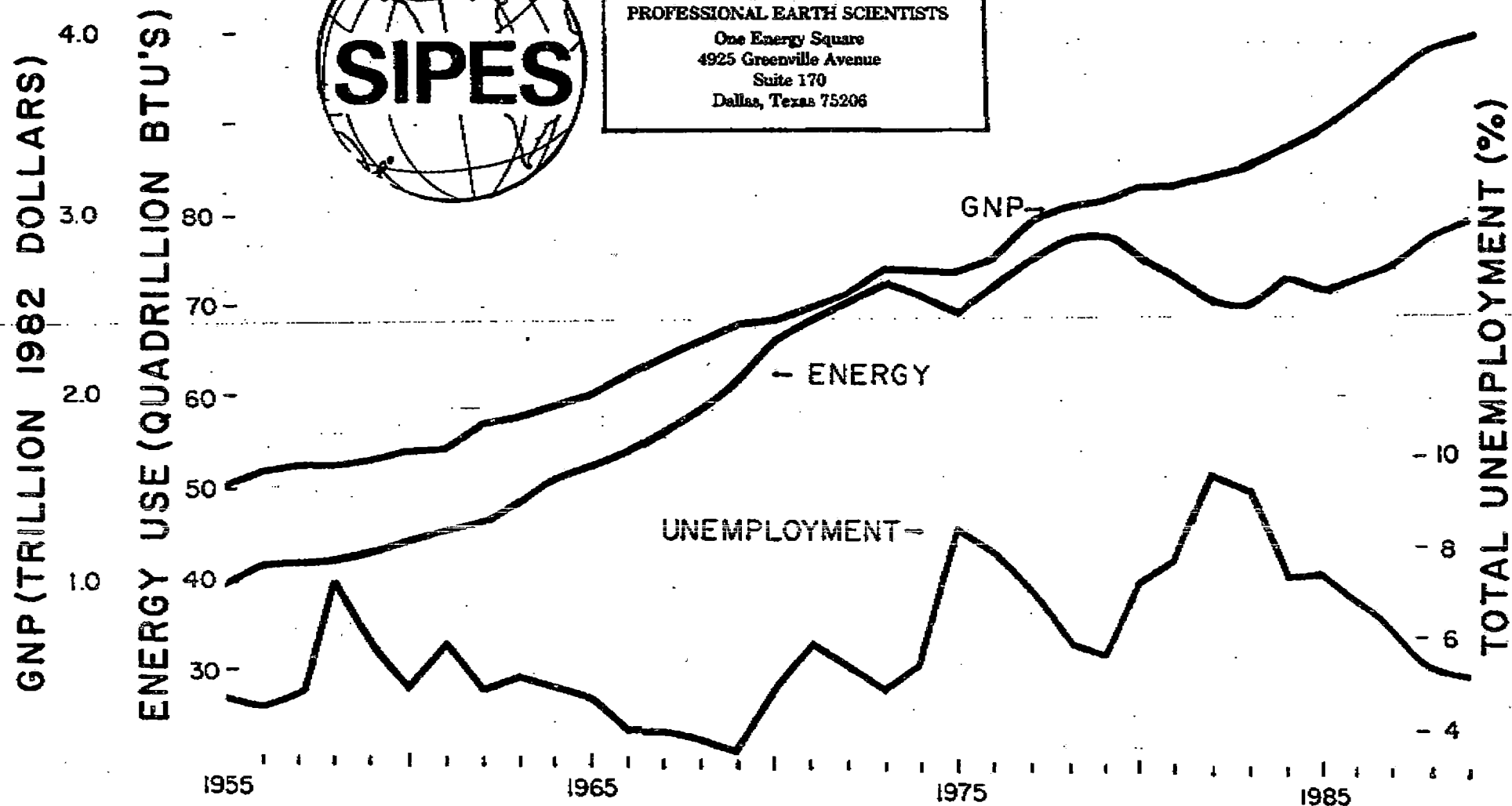
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ENERGY, UNEMPLOYMENT & ECONOMIC GROWTH 1955-1986



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Diane M. Plutram

S.I.P.E.S.

SUBMITS A NATIONAL ENERGY POLICY

AND URGES ITS ADOPTION

The Society of Independent Professional Earth Scientists (S.I.P.E.S.), the world's largest organization of Independent Earth Scientists, predominantly Geologists, Geophysicists and Engineers mostly engaged in oil industry endeavors, strongly recommends the adoption of the attached Energy Policy.

Several firm given criteria must be enacted and maintained to place in force those economic and participation forces to make the policy succeed. They are:

1. Nuclear Energy Plants must be standardized and pre-permitted subject only to inspection of construction.
2. The price of a barrel of crude oil must be stable and at least in the mid-twenties of dollars per barrel at the well site. 2000 active rigs are needed.
3. Clean burning gas injected, predominantly western coal, must be brought on stream in a maximum way, if necessary by fiat. Corresponding scrubbing, ore hopper car construction and railroad right-of-way enhancement must be maximized.
4. Hydro capacity increases must be administratively encouraged.

USA Energy Distribution by Source **Quadrillion Btu**

Year	Oil	Gas	Ngl	Coal	Hydro	Nuclear	Exotic	Import	Total
1985	18.992	16.906	2.241	19.325	2.939	4.149	0.213	10.339	75.104
1986	18.376	16.471	2.149	19.510	3.017	4.471	0.231	13.082	77.307
1987	17.675	17.049	2.215	20.142	2.593	4.906	0.244	13.926	78.750
1988	17.279	17.485	2.260	20.737	2.314	5.661	0.235	14.981	80.952
1989	16.117	17.611	2.158	21.332	2.745	5.687	0.217	16.880	82.747
1990*	15.200	17.840	2.052	23.124	3.140	6.114	0.201	16.896	84.567
1991(p)	15.250	18.000	2.060	24.200	3.220	6.300	0.210	14.058	83.298
1992(p)	15.750	18.500	2.100	26.300	3.350	6.600	0.225	10.057	82.882
1993(p)	16.150	19.400	2.200	28.500	3.650	8.400	0.235	4.347	82.882
1994(p)	16.750	20.300	2.300	30.000	3.970	9.400	0.245	0.000	82.965
1995(p)	17.600	21.000	2.400	31.500	4.350	10.250	0.255	0.000	87.355
% of 1990	17.97	21.10	2.43	27.34	3.71	7.23	0.24	19.97942	.
% of 1995	20.15	24.04	2.75	36.06	4.98	11.73	0.29		

* estimated

(p) projected

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
03a. Letter	From James D. Watkins to John Sununu Re: Attached Material on National Energy Strategy (1 pp.)	12/17/90	P/s	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: National Energy Strategy (1 of 2) 1991 [2]

Open on Expiration of PRA
 (Document Follows)
 By JP (NLGB) on 10/28/05

Date Closed: 1/4/2005	OA/ID Number: 29154-005
FOIA/SYS Case #: 1998-0004-F[2]	Appeal Case #:
Re-review Case #: 2005-0426-S	Appeal Disposition:
P-2/P-5 Review Case #:	Disposition Date:
AR Case #:	MR Case #:
AR Disposition:	MR Disposition:
AR Disposition Date:	MR Disposition Date:

RESTRICTION CODES

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The Secretary of Energy
Washington, DC 20585

December 17, 1990

The Honorable John H. Sununu
Chief of Staff to the President
The White House
Washington, D.C. 20500

Dear Governor *John*:
Sununu:

At the Wednesday, December 12, 1990, Economic Policy Council (EPC) review of the National Energy Strategy (NES), you expressed skepticism regarding our estimates of the role that renewable energy could play in the future. Over the past 18 months, we have extensively analyzed the current and future potential of the renewable energy technologies under numerous scenarios. This analysis and the underlying assumptions have been provided or approved by the Troika agencies. The technology assumptions concerning renewable energy employed in our estimates are achievable and conservative.

I have enclosed a table summarizing the current contribution of renewable energy sources and our estimates for the year 2010 in the "Current Policy Base" case and assuming three policy initiatives (a renewable production incentive, hydropower regulatory reform and accelerated introduction of municipal solid waste to energy facilities). The major renewable energy assumptions associated with the "Current Policy Base" case and three additional renewable energy scenarios also are enclosed for your information. Extensive further backup is available upon your request.

Sincerely,

Jim
James D. Watkins
Admiral, U.S. Navy (Retired)

Enclosures

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
03b. Table	Contributions of Renewable Electric Technologies (1 pp.)	n.d.	P-5	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: National Energy Strategy (1 of 2) 1991 [2]

Open on Expiration of PRA
(Document Follows)
By JP (NLGB) on 10/28/05

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AR Disposition:	MR Disposition:
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Contributions of Renewable Electric Technologies
(in Quads of Primary Energy Displaced)

	1990	2010 Current Policy Base Case	2010 Additional Policies
Hydroelectric	3.2	3.4	3.9
Municipal Solid Waste	0.2	1.0	2.0
Geothermal	0.3	0.9	2.3
Biomass	0.2	0.5	1.3
Wind	0.1	0.2	0.4
Solar Thermal	*	0.05	0.06
Photovoltaic	*	*	*
TOTAL	4	6	10

* less than 0.05 quads

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
03c. Report	Increased Renewables in the National Energy Strategy (3 pp.)	n.d.	P -5	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: National Energy Strategy (1 of 2) 1991 [2]

Open on Expiration of PRA
 (Document Follows)
 By JP (NLGB) on 10/28/05

Date Closed: 1/4/2005	OA/ID Number: 29154-005
FOIA/SYS Case #: 1998-0004-F[2]	Appeal Case #:
Re-review Case #: 2005-0426-S	Appeal Disposition:
P-2/P-5 Review Case #:	Disposition Date:
AR Case #:	MR Case #:
AR Disposition:	MR Disposition:
AR Disposition Date:	MR Disposition Date:

RESTRICTION CODES

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Increased Renewables in the National Energy Strategy

Our estimates of the production of renewable electric technologies are computed utilizing the economic criteria provided or approved by the Troika agencies. The same criteria were used to estimate the penetration of coal, nuclear, and other electric generating technologies. Two cases are presented: (1) renewable contributions in the "Current Policy Base" case, and (2) renewable contributions assuming three policy initiatives:

- A production incentive for new renewable electric technologies;
- Regulatory reform that would facilitate the licensing of new hydroelectric facilities and ensuring efficient operation of existing sites;
- Accelerating the introduction of facilities that convert municipal solid waste to electricity.

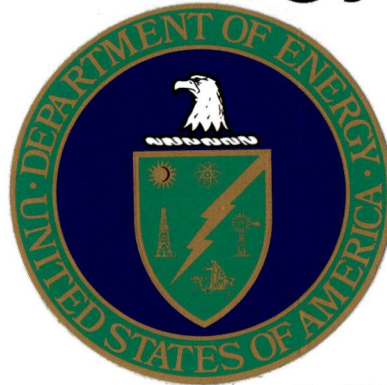
Most of the energy supplied by renewables represents growth in technologies that already supply significant amounts of electricity. A brief description of each renewable energy source follows:

- (1) **Hydroelectric** power now contributes 3.2 quads (Q) of electric energy and would provide 3.4Q in 2010 making conservative assumptions about expansion. Given regulatory reform, an additional 0.5Q of competitive hydroelectric power would be available from existing dams by adding additional turbines (75%) and improving the efficiency of obsolete equipment (25%).
- (2) **Municipal Solid Waste (MSW) to Energy** provides an economic substitute for landfill and other MSW disposal techniques. Improved methods for removing heavy metals and other contaminants from combustion products, improved gasification and combustion technologies, biological techniques for combined treatment of MSW and municipal sewage, and a variety of other emerging technologies can make MSW to energy less expensive and more attractive for the environment. Complex permitting and environmental rules have slowed exploitation of a resource that may be as large as 5Q. Given a favorable regulatory climate, 2Q of MSW could be produced by 2010 at competitive prices.

- (3) **Geothermal** power now contributes 0.3Q of electric power with new facilities producing at less than 6 cents/kwh. More than half comes from the dry steam at the Geysers field in California with the remaining being produced from hydrothermal flash steam. Most of the 0.6Q of additional geothermal energy that appears in the Current Policy Base case is derived from hydrothermal flash steam using binary cycles and other new technologies. The cost of producing energy from hydrothermal resources has fallen during the past decade because improved geological techniques have allowed firms to locate the most productive reservoirs and generating equipment has been optimized for the temperatures and fluid characteristics. Many new reservoirs would be economic today given the proposed production incentive and expanded markets would accelerate cost reduction. The 1.4Q of additional geothermal production that appears with the introduction of a production incentive in 2010 would use approximately 1/3 of the attractive hydrothermal sites now known to exist.
- (4) **Biomass** electric power using waste from pulp, paper, and lumber operations and a small number of plants powered by harvested wood now contribute 0.2Q of electric power at an average cost of 6.2 cents/kwh. The 0.3Q growth in the Current Policy Base case is based on the fact that expanded use of waste and wood to electricity is economic in many parts of the nation. The technology is well established and while improved technology could significantly reduce production costs, no advanced technologies have been assumed anywhere in the analysis. The addition of the production incentive simply increases the number of areas where wood to electricity is economic adding 0.8Q to the Current Policy Base case in 2010.
- (5) **Wind** electric power now contributes approximately 0.1Q of electric power at production costs of 8.6 cents/kwh. Most wind power was economic during the 1980s because of favorable tax treatment. This led to improved system reliability and led to engineering improvements that reduced system costs. New wind technologies are competitive today at highly favorable wind locations without incentives. The Current Policy Base case shows wind contributions growing to 0.2Q in 2010. The production incentive would increase the number of areas where wind would be attractive and accelerate expected cost reductions because of faster learning in the field resulting in an additional 0.2Q of wind contribution by 2010.

- (6) **Solar Thermal** technologies are operating at a profit in a limited number of sites in California today. Further cost reductions are needed for this technology to operate profitably without incentives. Only small contributions are forecast in both the Current Policy Base (0.05Q) and the production incentive case (0.06Q). The learning experienced in commercial facilities, together with encouraging work in research and development, suggests that steady cost reductions are likely. The rate of cost reduction depends on research progress and field experience.
- (7) **Photovoltaic** technologies are advancing steadily in specialized and remote locations. The analysis presented in the NES, however, shows no central electric contribution from photovoltaic technology by 2010 in the Current Policy Base or with a production incentive policy.

National Energy Strategy



Secretary of Energy
Admiral James D. Watkins

DRAFT

DEC 17 1990

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DEC 17 1990

EMERGING THEMES FROM STRATEGY OUTCOMES

I. Energy Security

- **Global nature**
- **Domestic importance**
- **Reduced vulnerability possible**
- **Energy independence not possible**
- **Reducing oil imports to below 50% achievable by 2000**

II. Growth Strategy -- Electricity

- **Supply and demand-side balance essential**
- **Conventional / alternative energy development emphasized: diversification, oil backed out**
- **Coal, gas, nuclear remain strong centerpiece**
- **Regulatory reform essential and thoroughly addressed -- Federal model for State reform**
- **Technology development and transfer to U.S. industry, key to achieving growth and environmental quality objectives**
- **Federal, State and private efficiency incentives / measures critical to balance**



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III. Science and Technology - Keys to Real Change

- **Increased domestic production of oil and gas** ✓
- **Enhanced energy efficiency / diversity of technological choices and competition** ✓
- **Transportation sector: alternative fuels / new technology / diversified travel modes**

IV. Environmental Quality Enhanced

- **Clean Air Bill incorporated**
- **Greenhouse gas generation reduced, while resolving scientific issues responding to global climate change issues**



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DEC 17 1990

EXTENSIVE PROCESS

- **President's Charter for NES -- July 26, 1989**
- **Open Process -- August 1989 to August 1990**
 - **18 Hearings, 448 witnesses, 46 States**
 - **2,000 written submissions**
- **Interim Report -- April 1990**
- **7 months intensive interagency (EPC) analysis**
- **Three EPC Principals meetings**

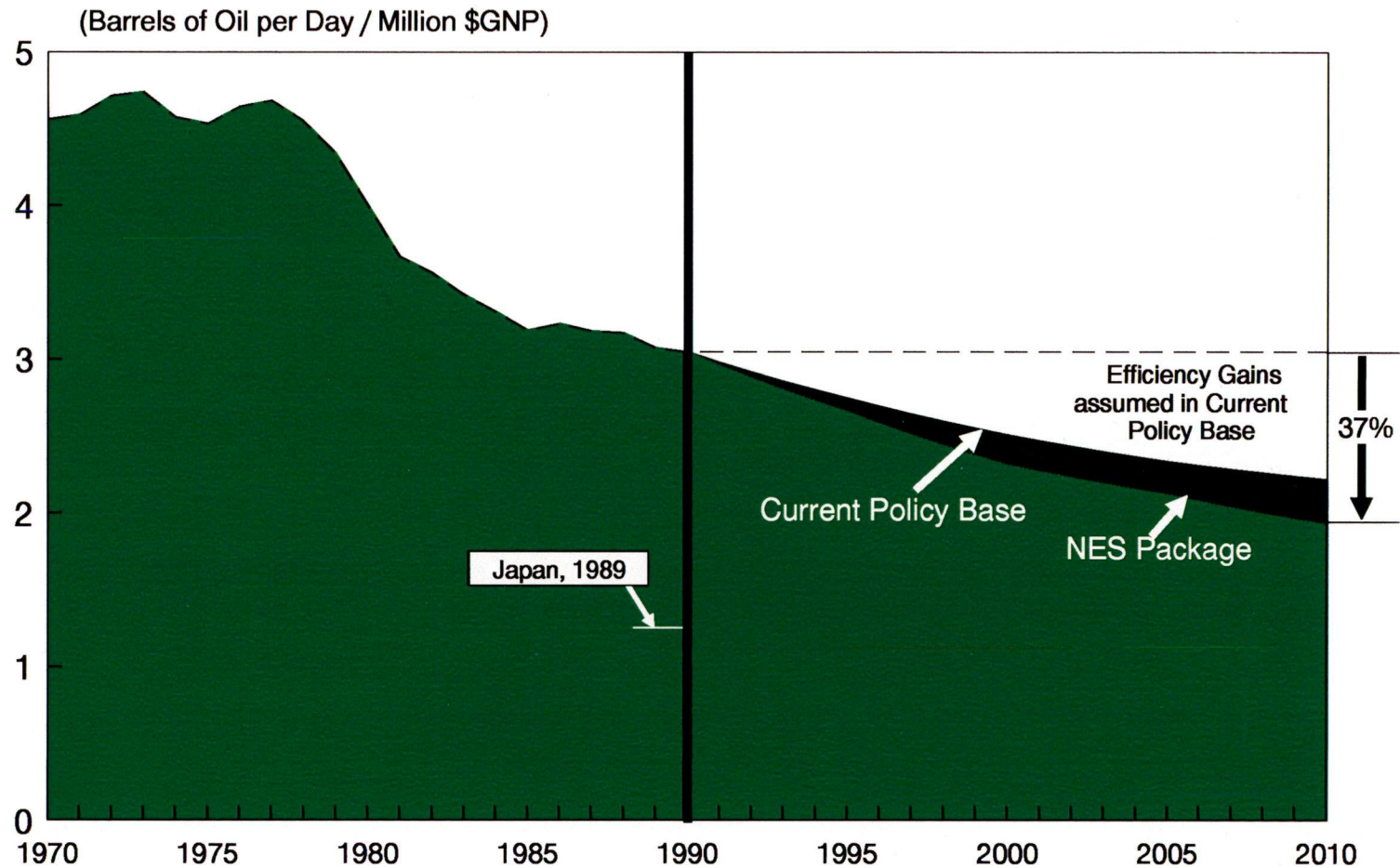
DOE NES PACKAGE CONTAINS

- **46 Options in Consensus or Final Negotiation**
- **4 Non-Consensus Options**
 - **Incentives for Transportation Efficiency**
 - **Mass Transit/Ride Sharing**
 - **Incentives for Electricity Efficiency**
 - **Utility Rebate Nontaxable/Federal IRP**
 - **Use of Alternative Transportation Fuels**
 - **CNG, Ethanol, Methanol, Propane, and Electric Cars**
 - **Incentives for Renewable Energy Resources**
 - **Solar, Geothermal, Wind, and Biofuels**

Reduced Economic Vulnerability DOE NES Package

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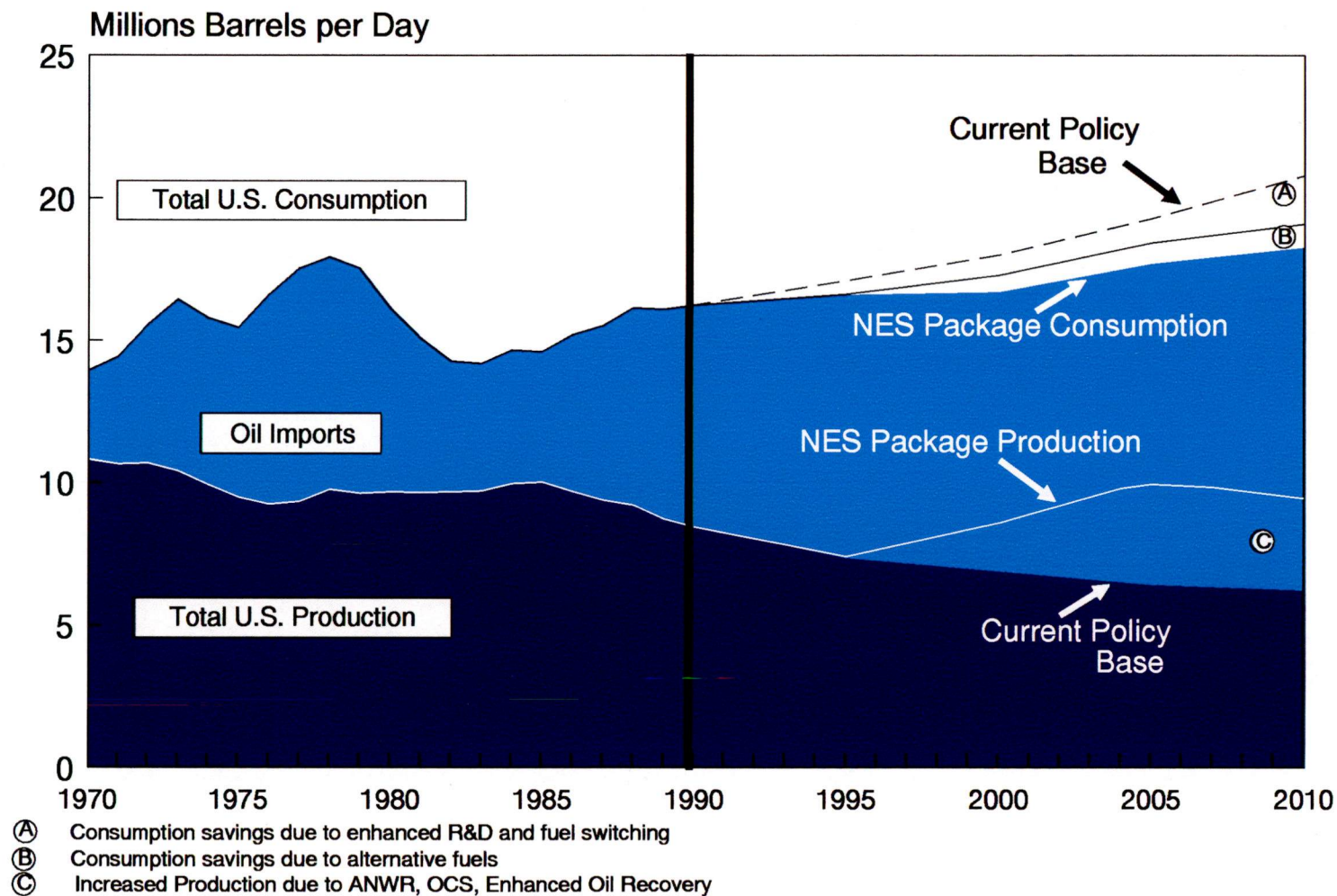


U.S. Oil Production and Consumption

DOE NES Package

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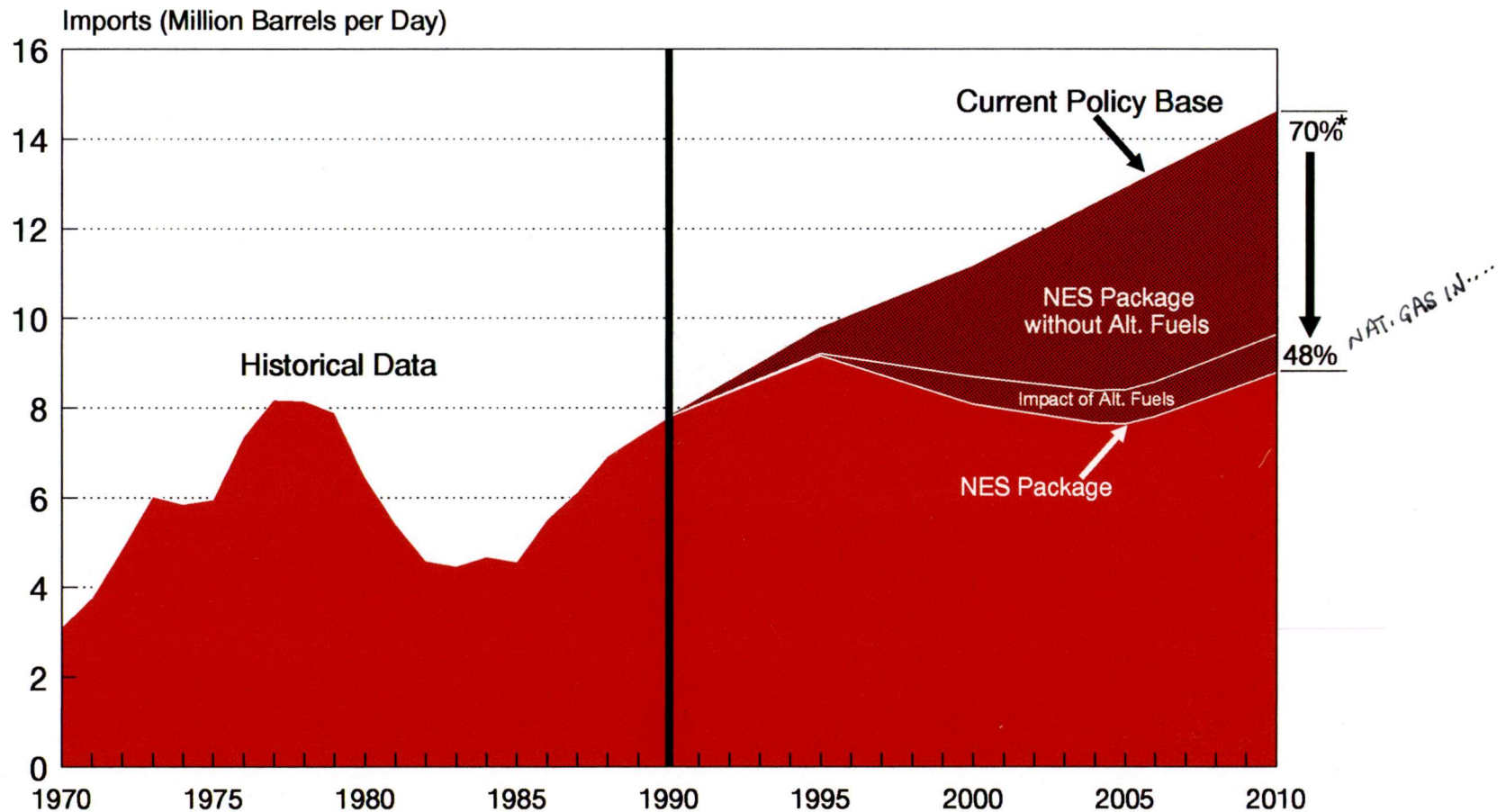


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Reduced Oil Imports DOE NES Package

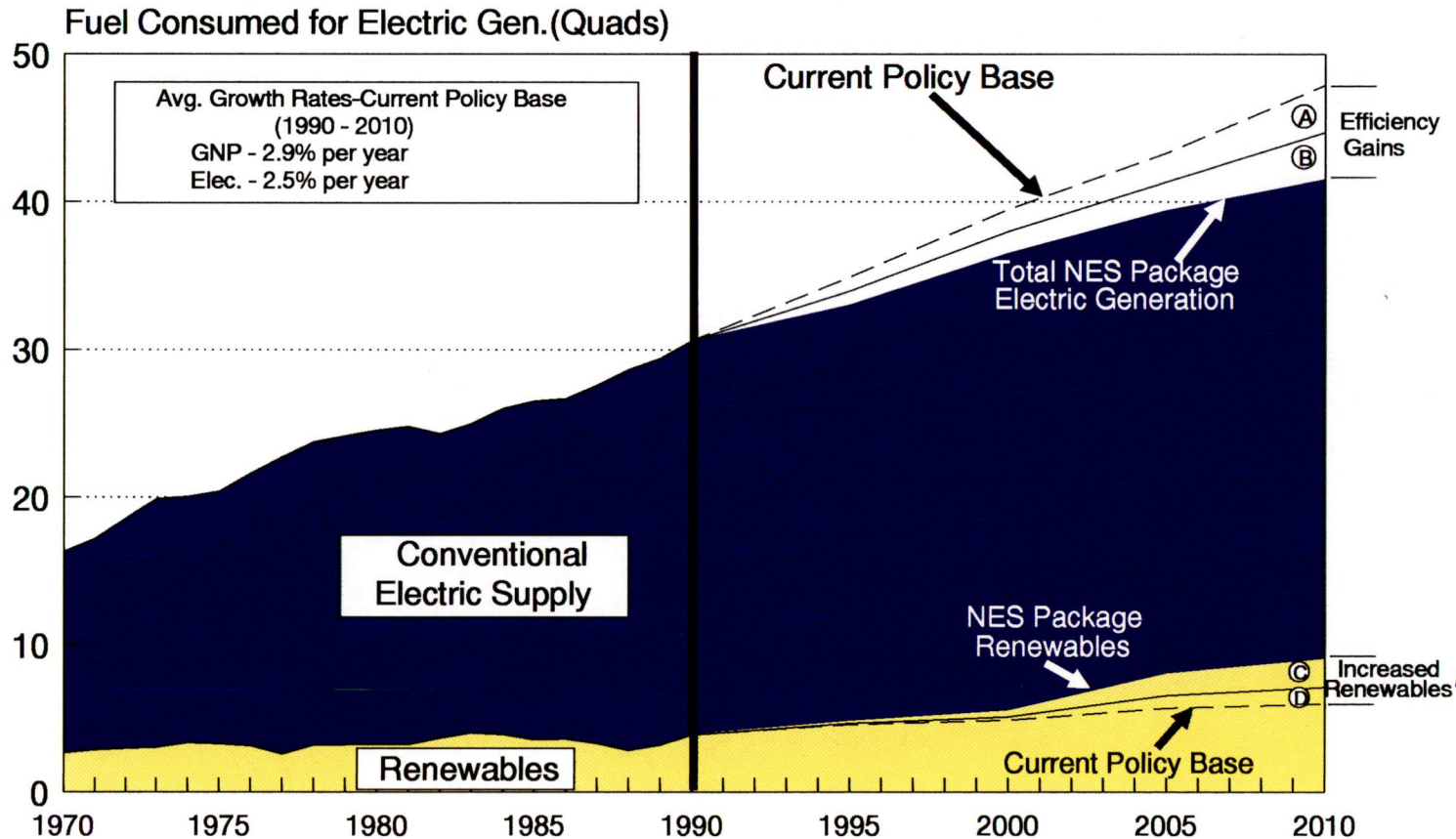
DEC 17 1990



*Note: Imports as percent of total oil consumption.

Strengthened Electric Supply DOE NES Package

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DEC 17 1990



- (A) Favorable tax treatment of utility rebates for energy efficiency and IRP
- (B) Building Efficiency and Equipment Standards, and other misc. non-consensus options

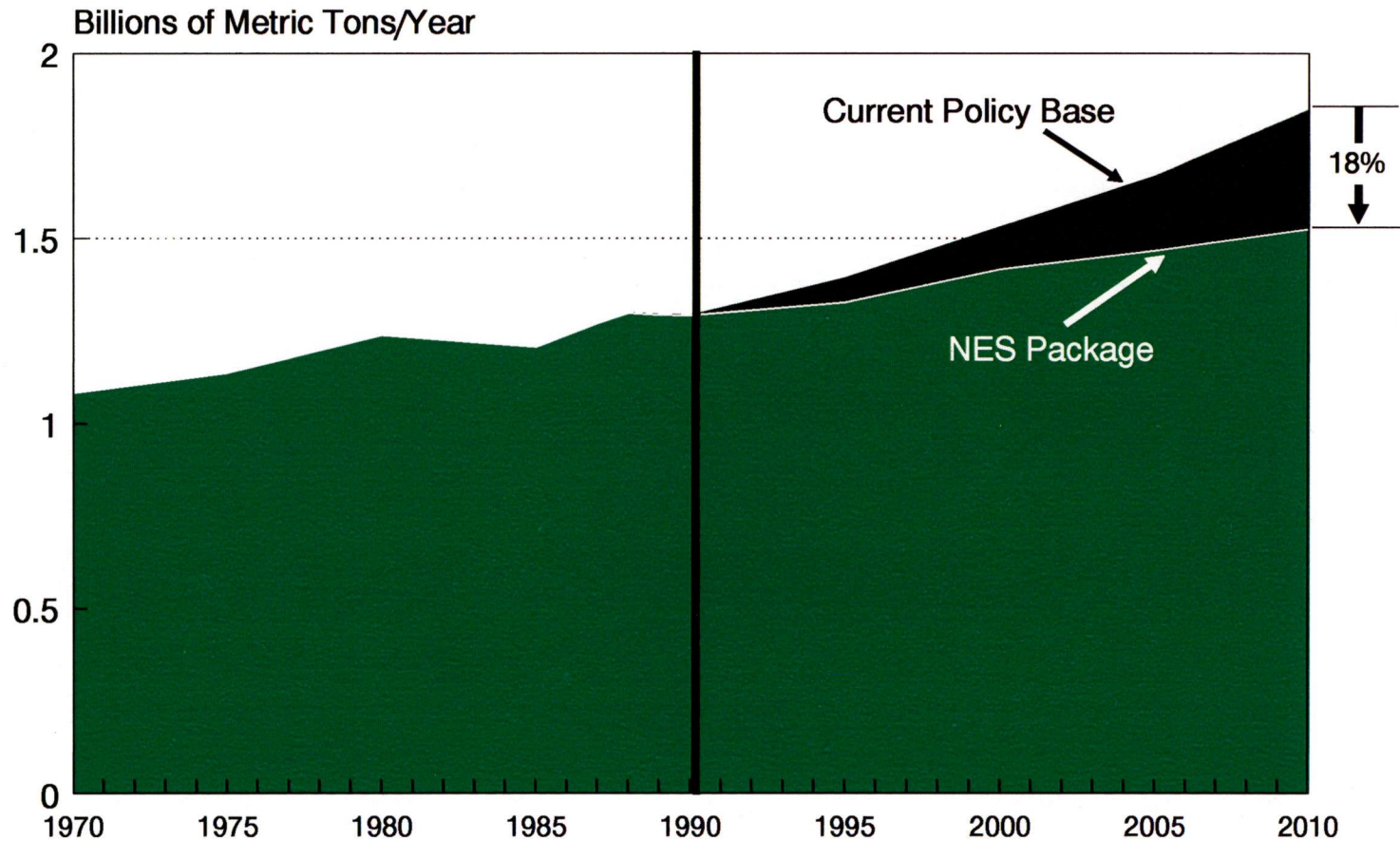
- (C) Revised Renewable Energy Prod. Incentive
- (D) Hydropower Reg. Reform, Municipal Solid Waste

POSSIBLE USE ???

Reduced Carbon Dioxide Emissions DOE NES Package

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OUTCOMES OF DOE NES PACKAGE

- **Reduced vulnerability to future oil shocks by 1/3 over next 20 years -- significantly more thereafter**
- **Reduced imports to less than 50% of consumption between 1995 and 2005**
- **Foreign Policy must continue to play powerful role in addressing unstable energy suppliers**
- **Electricity sector, measure of our economy, will be diversified through significant deregulation and technology development**
- **Provides incentives for and challenges scientific community to play significant role, and converts their research to Made-in-U.S.A. products to enhance economic competitiveness.**
- **Remains sensitive to environmental balance with energy production**
- **Secures adequate energy supplies at reasonable cost to all Americans**

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DEC 17 1990

Back-Up Information

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DOE NES PACKAGE (50 of 57 Options)

CONSENSUS OPTIONS (38)

Allow Access to OCS Consistent with President's
1990 Decisions
Allow Access to ANWR
Alaskan North Slope Development
Gas Pipeline Construction without Federal
Certification
Gas Pipeline - Coordinated NEPA Review
Deregulate Pipeline Sales Rates
Reform Pipeline Rate Design
Improve Pipeline Transportation
Eliminate DOE Import/Export Regulation
CAFE Study
Accelerate Scrappage of Older Cars
Low Income Home Efficiency
Stimulate Oil & Gas Prod. Outside Persian Gulf
PUHCA Reform - Greater Competition
Transmission Access for Wholesalers
Facilitate Expansion of Nuclear Power
Nuclear Waste - Comprehensive Solution
Encourage Clean Coal in Electric Utilities
Municipal Solid Waste to Energy
Reform PURPA - Remove Size Cap
Reform PURPA - Relax Co-firing Limits
Mortgage Financing Incentives
Improve the Efficiency for Public Housing
Reducing Environmental Impacts of Energy Systems
Global Climate Change - Integrate NES
Added Global Climate Change Research
Reduce Delays in Siting and Permitting
Emissions Trading for Environmental Compliance

CONSENSUS OPTIONS (Continued)

Modified New Source Applicability
Encourage Waste Minimization in Industry
Dual Regulation of Radionuclides
Re-align Federal R&D Priorities
DOE Basic Research Capabilities
Leverage NES-Related R&D Resources
Reform the National Technology Transfer Service
Spur the Export of Energy Technologies
Math/Science Education Initiative
Enhanced R&D

NEGOTIATIONS ON-GOING (8)

NPR Leasing
Oil Pipeline Deregulation
Hydropower Regulatory Reform
Nuclear Waste - Alternative to Federal Management
Equipment Standards or Labeling
Strengthen Building Energy Efficiency Standards
Fund for Federal Efficiency Investments
Energy Impact Analysis for Environmental
Rulemaking

NON-CONSENSUS OPTIONS (4)

Policies to Stimulate Mass Transit/Ride Sharing
Alternative Fuels Package
Revised Renewable Energy Production Incentive
IRP and Tax Free Treatment of Utility Rebates

A-1

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
04: List	Not Included in DOE NES Package (3 pp.)	12/17/90	P/5	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: National Energy Strategy (1 of 2) 1991 [2]

Open on Expiration of PRA
 (Document Follows)
 By JP (NLGB) on 10/28/05

Date Closed: 1/4/2005	OA/ID Number: 29154-005
FOIA/SYS Case #: 1998-0004-F[2]	Appeal Case #:
Re-review Case #: 2005-0426-S	Appeal Disposition:
P-2/P-5 Review Case #:	Disposition Date:
AR Case #:	MR Case #:
AR Disposition:	MR Disposition:
AR Disposition Date:	MR Disposition Date:

RESTRICTION CODES

Presidential Records Act - [44 U.S.C. 2204(a)]

P-1 National Security Classified Information [(a)(1) of the PRA]
 P-2 Relating to the appointment to Federal office [(a)(2) of the PRA]
 P-3 Release would violate a Federal statute [(a)(3) of the PRA]
 P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA]
 P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [(a)(5) of the PRA]
 P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA]

C. Closed in accordance with restrictions contained in donor's deed of gift.

PRM. Removed as a personal record misfile.

Freedom of Information Act - [5 U.S.C. 552(b)]

(b)(1) National security classified information [(b)(1) of the FOIA]
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 (b)(7) Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
 (b)(8) Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
 (b)(9) Release would disclose geological or geophysical information

DRAFT

DEC 17 1990

NOT INCLUDED IN DOE NES PACKAGE (7)

OPPOSED BY EPC (6)

Higher Corporate Average Fuel Economy (CAFE)
Standards
Motor Fuels Tax
Variable Oil Import Fee
Revise Gas Guzzler Tax/Gas Sipper Rebate
Petroleum Taxes to Pay for SPR
Carbon Tax

OPTION OPPOSED BY DOE (1)

Phase-out Federal Electricity Subsidies
(Power Marketing Administrations)

A-2

DRAFT

DEC 17 1990

MOTOR FUELS TAX

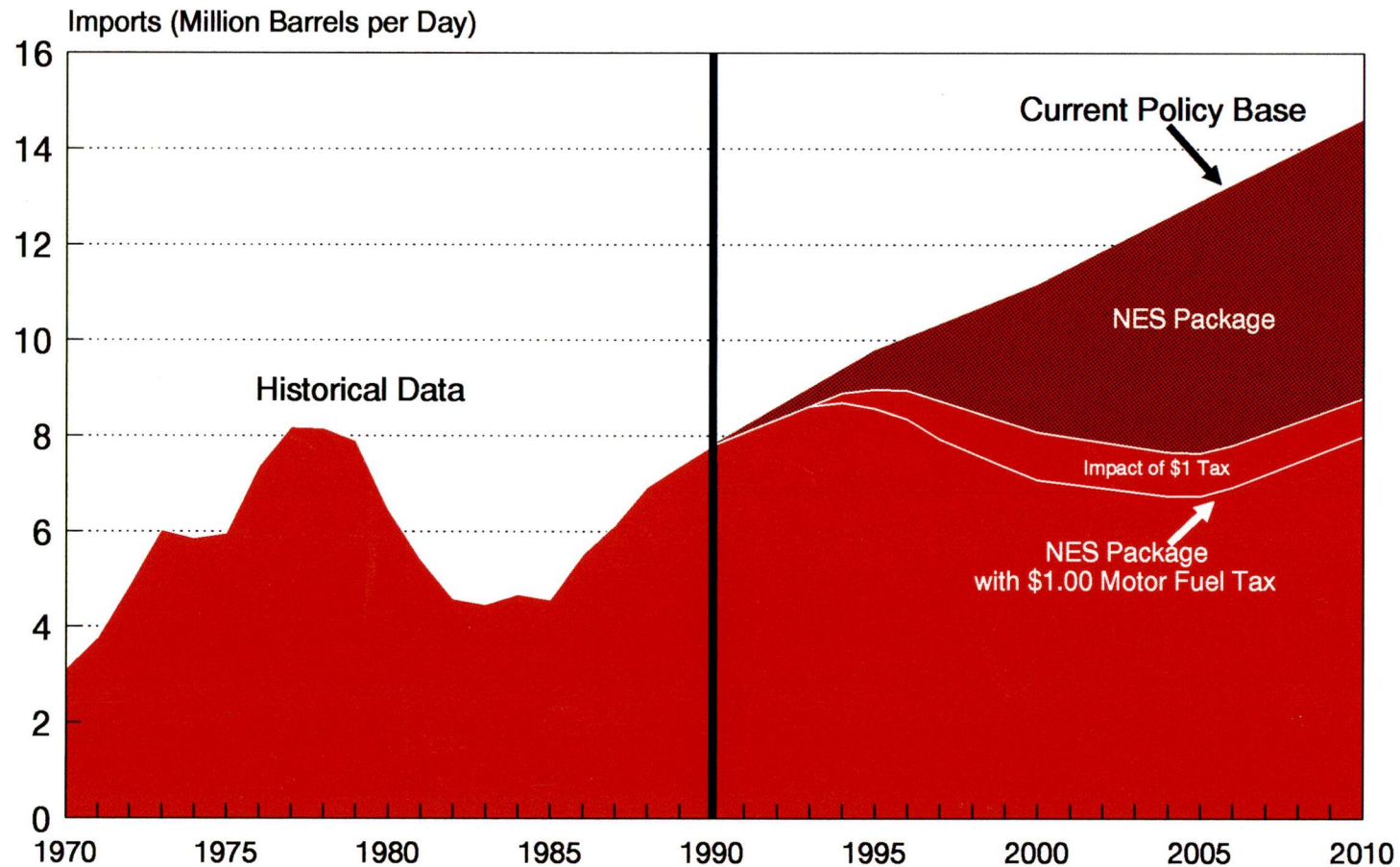
(Illustrative Impacts)

- **\$1 Motor Fuels Tax**
- **Phased-In over 4 years, 1993 - 1996**
- **Near-Term Oil Savings**
 - **1 million B/D by 2000**
- **Revenue Impacts**
 - **\$600 billion over 10 years**

B-1

Reduced Oil Imports

DOE NES Package + Motor Fuels Tax



*Note: \$1.00 Motor Fuels Tax, phased-in 1993-1996.

DRAFT

DOE NES PACKAGE COSTS

(5-YEAR FEDERAL BUDGET IMPACTS)

DRAFT

DEC 17 1990

- **Estimated 5-Year Overall Cost of Package:**
\$ 2.0 billion
- **Estimated 5-Year Revenue (OCS, ANWR, and NPR Leasing):**
\$ 3.4 billion
- **Estimate 5-Year Cost of All Remaining Options: ***
\$ 5.4 billion

*** Note: Largest 5-Year costs incurred for Revised Renewable Energy Production Incentive (\$2.7 billion) and Enhanced R&D (\$1.2 billion)**

Withdrawal/Redaction Sheet

(George Bush Library)

Document No. and Type	Subject/Title of Document	Date	Restriction	Class.
05. Draft Report	From DOE Re: A National Strategy: Setting the Course on Energy (16 pp.)	12/17/90	P/5	

Collection:

Record Group: Bush Presidential Records
Office: Chief of Staff, White House Office of
Series: Sununu, John, Files
Subseries: Issues Files
WHORM Cat.:
File Location: National Energy Strategy (1 of 2) 1991 [2]

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A National Strategy: Setting The Course On Energy

Introduction:

As recent events have demonstrated, energy is closely linked to economic prosperity at home and abroad. The market oriented energy policies of the 1980s have substantially improved the ability of the U.S. economy to withstand disruptions in world oil markets. Oil import costs as a percentage of GNP fell from 2.8 percent in 1980 to 1.0 percent in 1989. Nevertheless, the U.S., as the largest oil consumer in the world, remains vulnerable to world oil market disruptions. In addition, the drive to enhance global environmental quality places new pressures on energy production, distribution and consumption.

Recognizing that energy policy should not be shaped by crises, the President directed the development of a National Energy Strategy (NES) in July 1989. As he requested, the NES balances our increasing need for energy at reasonable prices, our commitment to a cleaner and safer environment, our determination to foster economic growth, and our goal to reduce our vulnerability and that of our friends and allies on potentially unreliable energy supplies. The NES continues the successful policy of market reliance, recognizing, however, that all energy markets are influenced by political or regulatory interventions designed to achieve other objectives, often in the areas of environmental quality and National security.

The NES, developed in concert with the American people, charts a course for reduced vulnerability to oil disruptions, a more efficient and technologically diverse electricity sector, an unconstrained natural gas industry, enhanced environmental quality, and availability of ample supplies of reasonably priced energy to fuel a growing economy. It has been shaped by consideration of the role that petroleum plays in the security of the U.S. and other nations; by the influence that regulation in the electricity sector exerts on technology choices, economic efficiency and environmental quality; and by the promise of science and technology. Goals are established by the NES, and the means to achieve them, in energy security, electricity, science and technology and the environment.

ENERGY SECURITY:

The goal of the NES is to reduce our vulnerability to oil market disruptions. Measures to achieve this goal include:

- o Securing and maintaining unrestricted flows of oil from all major producing regions
- o Reducing the importance of oil use in the U.S. economy by using oil more efficiently and replacing it with other fuels
- o Developing and maintaining contingency mechanisms, including international strategic oil reserves and stocks, and "excess" world production capacity
- o Reducing underlying tensions that threaten major world oil producing regions, via foreign policy mechanisms
- o Diversifying the sources of supply outside the Persian Gulf into producing regions such as the U.S. (OCS, ANWR), the Western Hemisphere, Europe and Asia

The United States uses oil to transport people and goods (62%), in buildings (8%), in industry (25%) and to generate electricity (5%). The availability of world oil supplies for the foreseeable future will be substantially influenced by a limited number of producers holding both large reserves and excess production capacity.

Sixty-five percent of the world's known oil reserves lie in the Persian Gulf region, where oil can be produced at lowest cost. Recent events have once again illustrated the risks inherent in reliance on a key energy source that is found in greatest abundance in this historically unstable area of the world.

Moreover, oil imports play a substantial role in the U.S. balance of trade. The U.S. trade deficit for the third quarter of 1990 was \$30.7 billion, driven in part by higher oil prices. In the past four years, oil's share of total imports has more than doubled, from 23 percent in 1986 to 52 percent in the first nine months of 1990.

Between August 1 and December 1, 1990, U.S. consumers paid \$21 billion more to oil producers (\$8 billion to foreign

producers) than would have been the case without the Iraqi crisis. Worldwide, \$83 billion were transferred from oil consumers to oil producers in the same period.

Under a policy of market reliance, and given existing Federal/State barriers to new exploration and development, U.S. imports of oil are forecast to rise from 42% of domestic consumption in 1989 to 62%, or about 11 mmB/D in 2000, and to nearly 70% in 2010. The U.S. oil and gas import bill is forecast to rise by between \$25 to \$30 billion (in 1989 real dollars) in 2000, and by about \$90 billion in 2010. Gulf producers will supply an estimated 30% of the world's oil in 2000.

The United States could, at great economic cost, modify this trend by instituting a series of policy measures aimed at radically curtailing oil imports. These measures would include an oil import fee; large taxes on gasoline, subsidies for the production of liquid fuels from coal, shale and gas; rapid introduction of alternative transportation fuels; and sharply higher fuel efficiency standards that would force auto makers to build and consumers to buy smaller cars. The combined impact of these measures would be to reduce oil imports dramatically or substantially depending on the level, type, and phase-in of subsidy or taxation. But the result would be unacceptable GNP losses and unemployment increases. Moreover, these policies would not shield the U.S. economy from future oil market disruptions.

Energy independence is neither an achievable nor a useful goal. First, the U.S. is concurrently a large producer and consumer of oil, so that whatever the direction of international oil price fluctuations, some part of our economy is negatively affected. Second, an increase in the world price of oil, brought about by any event, anywhere, would raise the price of U.S. oil, and the price of oil to our allies and trading partners, regardless of the degree of import dependence. In 1979, for example, Great Britain, which was almost totally self-sufficient in oil, suffered the same oil price shock as other Western nations. Japan, which was (and is) totally dependent on foreign oil experienced virtually no economic downturn.

Oil use in the U.S. economy, measured as the ratio of barrels per day of oil used per \$1 million of annual GNP, has been substantially reduced over the last 30 years (from 4.5 to about 3.1). Japan, however, uses about 1.2 barrels per day per \$1 million of annual GNP.

There are many reasons for this disparity. Some are structural and can never be changed. For example, Americans travel greater distances because of the large land area, and because development patterns have induced more dispersed settlement. Japan is roughly the size of California, but has a population about half the size of the U.S. Reflecting geography and development patterns, the U.S. has 5.1 times as many highway miles as Japan.

Other aspects of U.S. oil consumption lend themselves to improved efficiency and fuel diversity, which can be brought about by policy changes, and the application of new or improved technology for private and public transportation. Policies and R&D need to address U.S. energy consumption patterns which are shaped, for example, by the fact that nearly 90% of American passenger travel is by private vehicle, compared to less than 45% in Japan.

Taking the above supply and demand factors into account, real improvement in U.S. energy security requires efforts on two fronts: (1) support the environmentally responsible development of oil production capacity around the world, including the U.S., and increase strategic reserves; and (2) reduce the use of oil in the U.S. economy through increased efficiency and fuel switching, and by broader use of alternative fuels to decrease the transportation sector's near total reliance on petroleum.

A. Specific measures to increase strategic reserves and production capacity around the world, including U.S. production:

1. Improve the investment climate in nations such as the Soviet Union to encourage the necessary foreign investment to rehabilitate and expand the hydrocarbon industry; stimulate exploration and production in promising developing countries; and increase capacity in all Western Hemisphere producing Nations.
(Option 24)
2. Substantially increase the level of worldwide strategic reserves by the year 2000; review the conditions under which these reserves would be used so as to affect the expectations of oil market participants and maximize the deterrent value of the reserves. Expansion of the U.S. strategic reserve (*) would be funded, at least in

* Non-Consensus Option

part, by leasing the Naval Petroleum Reserve and using the proceeds to acquire SPR stocks. (Option 23)

3. Development of ANWR, Alaska's North Slope, and areas of the OCS unrestricted by Presidential decision, under strict environmental safeguards. (Options 2, 3, and 4)
 4. Expanded aggressive research and development for enhanced oil recovery; deregulation of oil pipelines. (Options 60 and 25)
- B. Specific measures to reduce the use of oil in the U.S. economy through higher efficiency and fuel switching, and by broader use of alternative fuels to decrease the transportation sector's near total reliance on petroleum.
1. Assess the impact of Clean Air Act and safety requirements on manufacturers' ability to increase auto and light duty truck fuel efficiency, without restricting consumer choice, or adversely affecting competition in the transportation market. (Option II)
 2. Enhance research and development of auto efficiency technology and develop new technology for intra and inter city movement of people and goods. (Option 60)
 - 3.* Establish Federal/State incentives to scrap old cars and remove tax disincentives to mass transit and ride sharing. (Options 12 and 14)
 - 4.* Remove cap on fuel efficiency incentives to manufacturers of alternative fuel vehicles by amending the Alternative Motor Fuels Act of 1988; expand alternative fuel use in all commercial light and heavy duty vehicle fleets, including Federal fleets. (Option 18)
 5. Reform natural gas pipeline construction regulations and pipeline rate design; deregulate pipeline sales rates; improve non-discriminatory access to pipeline transportation; and eliminate DOE import/export regulation. (Options 5 through 9)

* Non-Consensus Option

Taken together, these measures will reduce oil imports to 48% of U.S. consumption in 2000 and in 2010.

Domestic oil production will increase by 1.7 mmB/D above levels projected for 2000, largely due to enhanced oil recovery, triggered by new investments in Federal R&D. Domestic production will increase by 3.3 to 5.3 mmB/D above projected 2010 levels, due primarily to EOR (2.5 mmB/D), increased OCS (0.4 - 1.3 mmB/D)¹, and ANWR (0.4 - 1.5 mmB/D)¹.

U.S. oil consumption will decrease by 1.3 mmB/D in 2000, largely due to displacement of oil by gas in electric utilities and by reduction in electricity demand (0.5 mmB/D); accelerated technology (0.1 mmB/D) and alternative fuels (0.7 mmB/D). In 2010, oil consumption will decrease by 2.2 mmB/D, due mainly to accelerated technology (0.7 mmB/D) and increased penetration of alternative fuels (1.0 mmB/D), increased natural gas use and reduction in electricity demand (0.5 mmB/D).

Natural gas consumption will increase by 1 tcf in 2000 and by 1.1 tcf in 2010.

The projected cost of oil imports is reduced by about \$30 billion ('89 real dollars) in 2000, due to reduced oil import levels and an assumed oil price of \$27.90/barrel. In 2010, the projected cost of oil imports is reduced by about \$80 billion per year ('89 real dollars) due to reduced import levels and an assumed oil price of \$37.20/barrel.

ELECTRICITY

The goals of the NES are to provide more reliable, lower cost service to consumers, increase efficiency in the electricity sector and foster fuel and technology diversity, including renewable energy technologies, in electricity generation and end use.

In 1970, electricity accounted for 24% of primary energy consumption. This figure is expected to rise to 36% in 1990 and to 42% in 2010. Because our economy is becoming increasingly electrified, the technologies and systems used to produce and deliver electricity must be efficient, reliable and protective of the environment.

¹ Range represents mean conditional to 5% probability case and currently envisioned Interior Department leasing schedule.

The Nation presently has about 700 gigawatts (GW) of installed electric generating capacity. It is estimated that, under conservative assumptions, a minimum of 200 GWs of new capacity will be required to meet demand in the next 20 years.

The electric utility industry is one of the most highly regulated sectors of the U.S. economy. Thus, what capacity will be built, by whom, with what technology/fuels, and with what environmental consequences, will to a large degree depend on the Federal/State regulatory regime that governs investment decisions in electricity supply and demand.

Statutory and regulatory provisions impede construction of new hydroelectric capacity or expansion of capacity at existing dams. The State-Federal impasse on construction of a high-level nuclear waste repository, an exceptionally cumbersome nuclear licensing process, and the loss of public confidence in our ability to manage the technology, have contributed to halting the development of new nuclear capacity.

New coal technologies offer substantial efficiency increases and emissions reduction benefits, but excessively risk-averse regulators and utilities will make it difficult for these new technologies to enter the marketplace, especially given the requirements of the Clean Air Act Amendments of 1990. Use of wind, solar, geothermal, and biomass technologies, though promising for the longer term, is constrained to varying degrees by location, economics, or technical limitations that will not be fully overcome before 2000. Siting new generating facilities of any kind has become all but impossible in some parts of the country.

On the supply side, competition among wholesale electricity producers, on a regional or inter-regional scale, was not considered feasible when PUHCA was passed. Since the enactment in 1978 of PURPA, limited competition has emerged, but under PUHCA some of the most able potential competitors cannot participate, a result seemingly at odds with the public interest in reliable supplies of electricity at the lowest reasonable cost.

On the demand side, wide-ranging experimentation is taking place at State and local levels to increase efficiency and reduce consumption. Key factors that influence demand choices include technology, efficiency standards, prices, regulatory policy, tax policy, and consumer behavior. For each of these elements an

opportunity exists for Federal and State governments to achieve progress through constructive partnerships.

Integrated Resources Planning (IRP) (also known as "Least Cost Utility Planning") is the process increasingly used by public utility commissions to determine the relative cost-effectiveness and desirability of new investments in electricity supply additions and demand reductions. Although the development of this process has been supported by the Federal government, its adoption by Federally-owned power producers and marketers has been limited. Moreover, Federal tax policy currently impedes the achievement of efficiency improvements from utility investments in demand side management.

Successful implementation of measures proposed in the National Energy Strategy will free electric utility markets from outdated regulatory and statutory barriers to greater competition; revitalize technology choices whose benefits have been overwhelmed by regulatory uncertainty, imbalance, and cost; eliminate Federal tax disincentives to efficiency investments; impose discipline on the currently fragmented nuclear and hydroelectric licensing processes; establish clearer Federal/State responsibility for setting performance standards; and improve the environmental performance of electricity generation.

Specific measures to achieve a more efficient, technologically diverse electricity sector include:

A. Regulatory/Statutory Reform

1. Amend PUHCA to increase wholesale power generation options with protection for consumers. (Option 26)
2. Amend PURPA to permanently eliminate size caps for all renewable generation sources selected by a competitive bidding process, and reduce co-firing limits. (Options 36 and 37)
3. Pursue wholesale transmission access under current authority to assure that greater competition in supply is not hampered by uncertain access to transmission. (Option 27)

- 4.* Reform hydropower licensing in order to reduce current uncertainty and costs; deregulate licensing of small dams of up to 5 MW; expand capacity at existing Federal and non-Federal dams. (Option 29)
5. Reform nuclear power licensing and obtain legislation to implement the high level waste repository. (Options 30 and 31)

B. Technology Development and Transfer

1. Accelerate renewable energy R&D to reduce cost and increase market penetration rates. (Option 60)
2. Accelerate deployment of clean coal technologies through regulatory treatment. (Option 33)
3. Develop standardized advanced light water reactors design certified by the NRC. (Option 30)
4. Accelerate energy efficiency technology R&D and transfer. (Option 60)
- 5.* Transform the renewable energy tax credit due to expire in 1991 into a production tax credit (Option 34)

C. Federal, State and Private Efficiency Measures

- 1.* Eliminate taxation of utility efficiency rebates. (Option 38)
- 2.* Require IRP processes for all Federal power producers; increase financial assistance for State IRP. (Option 38)
- 3.* Extend current appliance standards and labeling to commercial lighting and other equipment. (Option 39)
4. Assist States in promulgating and implementing improved building standards. (Option 40)
5. Encourage more widespread use of mortgage incentives for energy efficient housing. (Option 41)

* Non-Consensus Option

- 6.* Create a self-financing fund for Federal efficiency investments. (Option 42)
7. Increase emphasis on home weatherization under existing low income energy assistance programs. (Option 16)
8. Improve the energy management of Federally funded public housing. (Option 43)

These measures would reduce electricity consumption by up to 7% in 2000 relative to projected no action base case, and by 12% in 2010. This is equivalent to generation of power from about 80 (1000 Megawatt) power plants in 2000 and about 150 plants in 2010, although the reduction in capacity needs will lag reduction in energy use by several years. The measures would increase renewable electricity generation capacity by 12% in 2000 and 40% in 2010, and nuclear power generation capacity by 10% in 2010.

SCIENCE AND TECHNOLOGY

The goal of the NES is to expand the role that energy science and technology plays in achieving energy, economic and environmental objectives.

Technology development, application and management is the foundation of future U.S. economic and energy security. New technology is also a prerequisite to achieving global environmental objectives.

The primary responsibility for technology development and commercialization lies with the private sector. But the Federal government plays a critical role in basic and applied scientific research, which is the basis for technological breakthroughs. Through its extensive system of National research laboratories and its support of academic and private research, the Federal government substantially influences the scope and pace of energy technology development.

The results of laboratory research do not always reach the market place in a timely fashion, nor are they necessarily applied in areas of special national concern. To the extent that investments in technology development or improvement are likely

* Non-Consensus Option

to yield near term economic benefits, private firms have strong incentives to undertake them. In areas where future prospects are clouded by price and other economic or policy uncertainties, private investments are less likely.

Three areas of technology development are key to the successful implementation of the NES:

- o Technologies that reduce the transportation sector's near total reliance on oil either by increasing efficiency of oil use, introducing alternative fuels and technology, and diversifying travel modes;
- o Technologies that increase production of domestic energy resources, especially oil and gas; and
- o Technologies that improve energy efficiency and increase technological choice and competition in all sectors of the economy.

Cooperative technology development efforts between industry and government reduce private sector investment risks and increase the likelihood of timely commercialization of R&D results. Specifically proposed in the NES are: greater industry-led, cost shared research, expanded use of R&D tax credits, and encouragement of major innovation through a national prize/award program.

The NES will foster investment in a diversified portfolio of research that will offer the possibility of major breakthroughs, or major improvements, in technologies deemed critical to meeting U.S. energy, economic and environmental objectives in the late 1990's and in the first decade of the 21st century.

Specific high pay-off R&D measures under consideration for the NES, and subject to budget negotiations between the agencies involved and OMB, comprise:

1. Advanced Oil Recovery Technologies: Expanded R&D aimed at reducing per barrel recovery costs to \$20 - \$30.
2. Advanced Transportation Fuels From Biomass Technologies: Expand research aimed at reducing the production cost of ethanol to \$.60/gal.
3. Aeronautics and Air Systems: Research on new materials and engine designs

4. Basic research to support advanced energy technologies.
5. Electric Vehicles: Expanded R&D on batteries to increase vehicle range and performance.
6. High Speed Rail and Magnetic Levitation (Maglev) transportation: Research on advanced propulsion and guideway construction methods.
7. Industrial Technologies: Research aimed at reducing oil use in energy intensive industrial processes.
8. Intelligent Vehicle/Highway Systems: Implementation of the DOT Intelligent Highway System Initiative as a means to reduce oil consumption and increase safety.
9. Telecommuting: R&D to promote technical solutions to increased use of telecommunications that could reduce work related travel.
10. Vehicle Propulsion: Enhanced R&D on ceramic components to increase market potential for more efficient alternative vehicles such as gas turbines.

Additionally, the NES recognizes that America's energy security, future energy technology growth, and workforce competitiveness are directly linked to the quality of our national mathematics and science education. By all accounts, American student achievement in these areas is below desired levels. The National Education Goals, developed by the President and the Governors following the Charlottesville Education Summit, provide a framework for achieving excellence in American education, and include the goal that "By the year 2000, U.S. students will be first in the world in science and mathematics achievement."

The National Energy Strategy contains key recommendations for improving and increasing the technical competence of the American workforce through improved math, science, technology and engineering education. The Federal role -- a mere 6% of total funding at the precollege level -- must be integrated with that of the States and the private sector to achieve maximum results. Special emphasis must be placed on recruiting women and underrepresented minorities into the technical workforce, to recruiting and preparing qualified math and science teachers for our schools, and to broadening the base of public science literacy.

The Secretary of Energy also chairs the Committee on Education and Human Resources of the Federal Coordinating Council on Science, Engineering and Technology. This sixteen agency group is preparing the first coordinated report and budget for direct Federal spending on math and science education, which will accompany the President's FY 1992 Budget submission to Congress in February.

The budget cost of the NES enhanced R&D measures has been estimated at a total of \$1.2 billion for five years (DOE only). Based on the NES current policy case, oil consumption in 2030 is expected to be 25.4 mmB/D. By 2005, if fully successful, the enhanced oil recovery R&D could produce an additional 1.4 - 3.1 mmB/D. Overall, the proposed R&D initiatives could achieve combined oil savings of 5 to 8 mmB/D by 2030.

ENVIRONMENTAL QUALITY

The goal of the NES is to improve environmental quality through policies that emphasize clean, efficient energy sources and technologies, without sacrificing economic growth or affordable energy.

Energy policies that do not enhance environmental quality and protect public health cannot be sustained. Environmentally sensitive energy policies, plus science and technology, can substantially reduce the impacts of energy production, distribution and consumption on the biosphere.

Electric utilities produce approximately two thirds of total national SOX emissions. Other air pollutants -- NOX, CO, and VOCs -- result primarily from transportation energy use. Also, power plants, petroleum refineries, coal and uranium mines and some oil wells produce waste that unless carefully managed, adversely affects water quality. About 20% of all point sources discharges to surface waters in the U.S. are energy related.

Notwithstanding current statutes, which are more comprehensive than those enacted by any other nation, the current policy case forecasts increased environmental stress, largely due to growth in population, cars and vehicle miles travelled, unless the American standard of living is to be reduced.

The 1990 Clean Air Act Amendments will limit, and in many cases reduce from current levels, the major air pollutants from power

plants, transportation use and energy using industries. The NES, coupled with existing DOE R&D programs, such as the development of alternative fuels for transportation, clean coal technologies, and energy efficiency improvements, would further reduce air and water pollutants and waste from projected levels.

NES measures are estimated to reduce sulfur dioxide emissions by 30 percent, nitrogen oxide by 25 percent and volatile organic compound emissions by 10 percent in the year 2030 from estimated projections. To offset the volumes of waste from energy

production, the NES proposes measures to reduce current regulatory inefficiency, and development of new technologies that minimize wastes.

Although there remains a great deal of scientific uncertainty, growing international concern regarding the potential for climate change is causing many nations to consider measures to reduce greenhouse gases, in particular carbon dioxide (CO₂). Since 1950, the U.S. share of total CO₂ emissions has declined from about 42% to 23%. By 2025, the U.S. share is projected to be 14% of the world total. By contrast, developing countries have increased their share of CO₂ contributions from 9% in 1950 to 30% today. By 2025, their share is projected to be about 48% of world total.

The measures set out in the NES would reduce the rate of growth of U.S. CO₂ emissions by about 60% of the projected growth from 1990 to 2030. Greater use of nuclear power, renewable energy, and improvements in energy efficiency in the electricity and transportation sector, would be the major contributors to this reduction.

Implementation of the measures proposed in the NES will substantially improve environmental quality while improving economic efficiency and maintaining reasonably priced energy. The cost to the Nation of environmental regulation is over \$100 billion per year and growing (1.5% of GNP). The NES proposes to reduce these costs through more efficient management of environmental compliance. It calls for wider use of emissions-trading and other market mechanisms that will be demonstrated in the implementation of the CAA, and should be extended to other environmental protection programs. Also, to reduce the costs of energy, the NES proposes measures to expedite the siting, permitting and licensing of new energy facilities.

Ultimately, the key to meeting National requirements for energy, for economic well being, and for environmental quality, will be new technology. For these reasons, the NES concerns itself not only with the historical Federal role in basic science and research, but also with technology transfer and with the quality of the educational system that will train future technology developers and managers.

Specific measures to better harmonize energy and environmental objectives include:

1. Implementing greenhouse gas emission reduction measures that also make sense for other environmental, energy security, and economic reasons. (Option 45)
2. Pursuing research aimed at resolving uncertainties associated with potential global climate change. (Option 47)
3. Greater use of mechanisms such as emissions trading and marketable allowances to reduce compliance costs. (Option 50)
4. Development and use of waste minimization technologies in all energy using sectors. (Option 52)
5. Clarifying the application of new source review requirements to existing power plants. (Option 51)
- 6.* Improving analysis of the impacts of environmental regulation on energy supply and use. (Option 49)
7. Using model programs to expedite siting, permitting and licensing of energy facilities. (Option 48)
8. Assuring that State programs to regulate radionuclide emissions are promulgated only if they improve health and environmental protection, and are applied equally against risks from all sources. (Option 53)

Conclusion

* Non-Consensus Option

As a National Energy Strategy, these measures advance the national interest by:

- o Securing adequate energy supplies at reasonable cost
- o Reducing our vulnerability to oil market disruptions
- o Increasing efficiency in the production and use of energy
- o Removing barriers to the development of domestic energy resources
- o Exerting U.S. leadership in energy research, science and technology.
- o Enhancing environmental quality.

A significant increase in energy productivity across all sectors is expected to come about by continued reliance on markets, and on market-driven technology. These productivity increases represent the baseline, or point of departure, for measures proposed in the NES. As a note of caution, however, this underlying increased energy productivity is not guaranteed. Its achievement is based on current policy efforts (e.g. Integrated Resources Planning now well underway in the States), available technology (e.g. fuel efficient technologies for cars, more efficient lightbulbs for residences and industry), and reasonable price expectations for oil and other fuels. If oil prices decline precipitously, as they did in 1986, or remain volatile, market incentives to greater efficiency would be reduced, and projected efficiency improvements will not be achieved.

Notwithstanding current and NES policy efforts, it should be recognized that petroleum will remain a critical component of the U.S. and world energy mix for the foreseeable future. U.S. and allies' vulnerability to oil market disruptions can be reduced, but reliable access to worldwide oil resources will remain a major concern. For these reasons, foreign, defense and trade policy objectives attuned to enhancing global energy security are critical. The National Security Council, and the Departments of State and Defense will explicitly address the energy-security policy link in the 1991 National Security Strategy which is currently under development.