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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

October 31, 1979

Mr. Jeff Levan
10 Harrise Drive
Harrisburg, PA 17112

Dear Mr. Levan:

This is in reply to your letter to President Carter asking about his plans for nuclear plants, gasoline, and coal. I am sorry for the delay in replying but we have been very busy with the aftermath of the Three Mile Island accident.

Enclosed is a message to Congress from the President on May 7, 1979, transmitting his Second National Energy Plan. The section of the plan entitled "Overview" is also enclosed. That contains discussions of conservation, oil, natural gas, coal, nuclear, and renewable energy sources on pages 21 through 27, which should be of interest to you.

Sincerely,

Harold Denton

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosure:
As stated

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96th Congress, 1st Session - - - - - - - - - House Document No. 96-121

SECOND NATIONAL ENERGY PLAN

MESSAGE

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

THE SECOND NATIONAL ENERGY PLAN, PURSUANT TO SECTION 801 OF THE DEPARTMENT OF ENERGY ORGANIZATION ACT

MAY 7, 1979.—Message and accompanying papers referred to the Committee of the Whole House on the State of the Union and ordered to be printed

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U.S. GOVERNMENT PRINTING OFFICE
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EXCERPTS

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To the Congress of the United States:

I am pleased to transmit to the Congress the second National Energy Plan, as required by Section 801 of the Department of Energy Organization Act (Public Law 95–91).

The First National Energy Plan, which I sent to the Congress two years ago, was the first comprehensive effort to deal with the broad scope of the Nation's energy problems. The resulting National Energy Act, passed last autumn, acted on a number of my proposals, and will have an important and lasting role in preparing for the Nation's energy future.

But much remains to be done. And we must now deal jointly with a number of issues which have matured since April 1977.

As I said in my April 5th energy message, our Nation's energy problems are real. They are serious. And they are getting worse. Every American will have to help solve those problems. But it is up to us—the Congress and the Executive Branch—to provide the leadership.

We must now build on the foundation of the National Energy Act. In my April 5th energy address, I laid out a program for action in five areas.

First, in accordance with the Energy Policy and Conservation Act of 1975, I have announced a program to phase out controls on domestic crude oil prices by September 30, 1981. Oil should be priced at its true replacement value if we are to stop subsidizing imports, increase U.S. oil production, reduce demand, and encourage the development and use of new energy sources.

Second, the increased revenues from decontrol must not unduly or unjustly enrich oil producers at the expense of consumers. For this reason, I have proposed a tax on the windfall profits due to decontrol. Proceeds from this tax would be used to establish an Energy Security Trust Fund, which would be available, in part, to assist those low-income Americans who can least afford higher energy prices.

Third, we must provide additional emphasis on conservation and on the development of new domestic energy sources and technologies. The Energy Security Trust Fund will also provide funds for energy saving mass transit and for tax incentives and accelerated research and demonstration of new energy technologies.

Fourth, we must find ways to expeditiously develop and use our energy resources, while protecting and enhancing the quality of the environment. The length and complexity of many Federal, State, and local permitting procedures, however, has created needless complexity and increased time and cost, without improving the protection to the public or the environment. We must remove the needless red tape which is tying up many needed energy projects. I have signed an Executive Order to expedite Federal decisionmaking for certain energy projects, which are deemed to be in the national interest.

Fifth, we must provide international leadership to deal with the crisis before us today. The members of the International Energy Agency have joined in a common commitment to reduce energy consumption in response to current shortages. The United States has provided leadership in gaining this commitment. I will assure the United States does its part to meet that commitment.

The energy program I announced on April 5th puts the country in a strong position to achieve these goals. The Plan I am forwarding today shows how these programs relate to our overall energy problem, and to the other policies and programs which we must carry forward.

This National Energy Plan explicitly recognizes the uncertainties—geologic, technological, economic, political, and environmental—which confront us. It presents a strategy for dealing forthrightly with the uncertainties, with the threats and promises of our energy future.

The analysis in the Plan shows the need to move aggressively to meet the grave energy challenges to our Nation's vitality. My April 5th proposals confront those challenges squarely. Together with the National Energy Plan, we are providing a firm foundation for dealing with these challenges today and for decades to come.

Jimmy Carter

JIMMY CARTER.

THE WHITE HOUSE, *May 7, 1979.*

OVERVIEW

The oil embargo of 1973/74 signaled a fundamental change in the ability of the industrialized nations to chart their own economic destinies and to guarantee the economic security of their citizens. Only major wars and recessions have directly affected so many people in the world's oil-consuming nations. In the U.S., the oil embargo led to nationwide shortages of petroleum, a $60 billion drop in GNP, more rapid inflation, and large balance-of-payments deficits that continue to plague the economy today.

In the winter of 1976/77, the U.S. faced another energy emergency--a natural gas shortage caused by abnormally cold weather. Factories across the country closed, leaving workers temporarily out of jobs and dramatically reducing output.

In the winter and spring of 1978, a nationwide coal strike idled thousands of workers, threatened millions of other jobs, and raised the prospect of not having enough energy to heat and light homes.

In the winter of 1978-1979, the U.S. and the world suffered yet another blow--a substantial reduction in crude oil supplies with the almost complete elimination of Iranian production. The oil consuming countries have had to borrow against current stocks, cutting into their capacity to build up supplies against next winter's cold.

In the near future, the U.S. will suffer serious shortages of unleaded gasoline unless its refineries are expanded and upgraded. Investments in new refinery capacity have been discouraged in the past by regulations that did not allow for adequate financial returns.

These past and prospective energy setbacks are only symptoms of the broader energy problem the U.S. and the world now face:

The U.S. and other major world consumers can expect more disruptions in oil supplies, at other places and at other times, as a result of events such as wars and unrest abroad, politically inspired embargoes, strikes, sabotage, and other emergencies. Over the long-term, the supply of oil will be fundamentally limited by the capacities and production decisions of those few countries in which world oil resources are concentrated. When increases in production at current prices no longer can keep pace with rising world oil demand, prices will rise sharply to bring markets into balance. As world oil supplies tighten under fundamental long-term pressures, the instability of the basic supply sources threatens even more economic and political damage to the U.S. It will make even more difficult the transition to the coming era of scarcer, more expensive energy supplies.

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THE NATURE OF THE SECURITY PROBLEM

It is all too easy to be distracted by the crisis of the moment, and to overreact or to lose sight of the fundamental problems that crisis reflects. It is also easy to re-interpret long-term trends on the basis of today's headlines. Even small swings in production and consumption can create a glut or shortfall in world oil markets almost overnight. The public sense of urgency about the energy problem may change. But the dangers posed to the nation's political and economic security have now become clear and present.

These dangers have arisen from America's rapid and massive shift to consumption of foreign oil. In 1971, the U.S. imported 3.9 MMB/D, and paid only $4 billion for that oil to foreign producers. In 1979, the U.S. will likely import 8.5 to 9.0 MMB/D and, with this year's surge in prices arising from the Iranian shortages, pay an import bill of over $50 billion.

The origin of this sudden vulnerability lies in the American economy's historic dependence on a flow of cheap energy. Energy prices in the U.S. fell in real terms through most of this century. Falling energy prices encouraged greater--even profligate--use of domestic oil and gas resources. Yet the country's resources of oil and gas were finite. These powerful forces did not collide until late in the 1960s. Domestic oil production peaked in 1970 and has declined since that time. U.S. production of natural gas peaked in 1973. Yet the Nation has clung to policies and habits that try to restore the past, keep prices low and continue wasteful patterns of use. Many have been slow to recognize that the true cost of each new barrel of oil being consumed is the cost of imported oil brought in to replace domestic supply.

In the past 5 years, the price of dependence on a few oil producer countries has been a series of unpleasant economic shocks. The first OPEC price increase of 1973/74 quadrupled the cost of oil, helped push the U.S. into a recession, and required painful adjustments from which it has only lately recovered. Oil imports have directly raised the cost of everything in the U.S. that uses oil or oil substitutes, and thus have been a direct and indirect source of U.S. inflation. They also have contributed to the large U.S. trade deficits in 1977 and 1978 which led to the recent depreciation of the dollar.

Finally, the rise in world oil prices has affected every American's standard of living. The U.S. economy has had to give up more and more goods and services to pay for the same amount of foreign oil. Americans are simply not as well off when the terms on which they buy a vital commodity such as oil change so adversely.

This dependence on foreign oil has also ushered in a new era of political instabilities. In today's world--with little warning--a revolution, war, or political embargo in the Middle East can quickly and severely disrupt American economic activity. The political and military security of a few producing countries around the world has become of major significance for all oil-consuming countries. As the events in Iran have demonstrated, internal unrest in any major OPEC producer country can cause sudden problems in world oil markets. Closure of the Persian Gulf could plummet the U.S. and the other industrialized nations into a world-wide depression.

Over the next decade, the energy security problems facing the U.S. could worsen. The underlying supply and demand pressures for major world oil price increases in the 1980s are great. Any surplus production capacity that individual OPEC countries may have developed in recent years will almost certainly vanish by the mid-1980s, perhaps sooner. Producer governments with limited ability to absorb huge revenues have strong incentives to reduce output below maximum technical limits and keep world oil markets tight.

Unless there are major changes in forecasted energy production and consumption trends or efforts by governments, world oil prices by 1990 could reach $30 per barrel. Adjusted for inflation, this is up to $55 per barrel in 1990 prices. These increases are almost certain not to occur in any smooth or predictable way. Recent experience suggests that prices will rise in spurts as markets adjust, belatedly or prematurely, deliberately or inadvertently, to new realities. This erratic behavior is likely to aggravate the recessionary shocks and painful adjustments to higher prices.

The greater the long-term rise in world oil prices, the more they will slow world economic growth, dampen new investment, reduce employment and worsen inflation. Developing countries would suffer even greater direct harm than advanced industrialized nations; with the growing interdependence of the world economy, however, vulnerability to energy problems is a collective danger.

The U.S., and the governments of the other consumer nations which are already linked in the International Energy Agency, are not powerless to influence the world energy situation, however. For their own security, they have no choice but to do so. They can limit the economic damage from higher world oil prices, and limit world oil price increases. Through policies that encourage conservation and use of alternative fuels, consuming nations can reduce the demand pressures that would lead to high world oil prices. They also can stimulate

development of new, higher-cost energy technologies and resources, which can be introduced at the proper times to help limit further price increases. It will be essential, as world oil prices rise, to ensure that such higher-cost substitutes for oil are available quickly and in the quantities needed.

PLANNING FOR UNCERTAINTY

The U.S. cannot develop a satisfactory energy policy until it recognizes the need to plan for a wide range of uncertainties. Despite a flood of energy forecasts and prognoses in recent years, no one can predict with certainty the Nation's energy future. But it is possible to understand better the forces that will shape that future.

The first set of uncertainties concern supply. The world has vast oil and gas resources. The basic doubt is whether enough new oil sources can be discovered and produced at current prices to meet even a low growth in world oil demand. More and more of the world's oil has come recently from high-cost, hostile environments. Many geologists believe that most of the world's largest fields have already been discovered, and that future discoveries may be smaller in size than in the past. As production from existing fields declines, successful discoveries would have to occur at a rate never before experienced to prevent large jumps in world oil prices.

Meanwhile, some of the countries in which world oil resources are concentrated are unlikely to produce at their maximum technical limit. They will seek to stretch out their oil supplies, and to seek the level of revenues that best meets their own needs for internal political and economic development. These supply factors could change, however. Stepped-up exploration outside OPEC could lead to unexpectedly large discoveries of new oil sources. Changing revenue needs of OPEC governments could lead to higher or lower output.

The second set of uncertainties concerns world energy demand. The world's appetite for oil in the next two decades will depend on economic growth, which is very difficult to predict. Conservation can hold down energy demand growth, but government policies, consumer behavior and the energy-efficiency of new capital goods and buildings are notoriously hard to predict, and their effects are hard to estimate. These factors will determine whether and how fast world oil demand reaches the limits of OPEC and non-OPEC production capacity.

Many other uncertainties also will affect future world oil price behavior. These include technological change, the policies of consumer-nation governments in developing substitutes for oil, and the role that communist governments will play in world oil markets as exporters, importers or both.

In short, the timing and size of price increases are clouded with uncertainty. However, under a broad variety of assumptions that span the range of responsible opinion, it is almost inevitable that demand at current prices will exceed supplies at those prices at some time during the 1980s. It would be rash to ignore these uncertainties, take comfort from the existence of optimistic forecasts, or use them to justify inaction. The U.S. must plan for pessimistic and optimistic futures, and anticipate the problems and benefits that can emerge in all such futures.

Price is not the only measure of a "good" or "bad" energy future. Low oil prices bring short-run economic benefits, but lead to higher import levels and greater long-run political insecurities and economic vulnerability to import disruptions.

High oil prices may lead to reduced import levels, although non-market constraints on increased domestic supplies could emerge that would keep imports high. The U.S. must develop policies that balance and protect against the risks of higher prices, higher imports, or both.

TOWARD A U.S. ENERGY STRATEGY

Since the first OPEC price increase of 1973/74, the U.S. energy situation has continued to deteriorate. While there has been increased emphasis on conservation and demand growth has slowed, domestic production of energy has remained stationary for almost a decade.

The Nation stands at the threshold of a major transition in its sources of energy supply. Over the next two decades, the U.S. will meet its future demand growth not only with oil and gas, but increasingly with coal, nuclear power, renewables, and high-cost unconventional sources. No longer can it easily turn to imported oil to fill the supply gap, as it has in the past. Foreign oil will no longer be cheap and readily available. Moreover, the political costs of dependence will have become even more apparent and unacceptable.

The challenges of the transition period are inherently formidable. Development of new transitional supplies and the development of new

markets for those supplies will take many years and require enormous investments over a long period of time. Yet the effort is critical and, apart from political security benefits, the potential cost savings would be enormous. Actions too long delayed could have disastrous consequences.

To date, interminable conflict over the future of energy policy has been one of the most paralyzing uncertainties in the country's energy future. Only with the President's energy message of April 5 is the Nation finally moving towards an oil pricing policy that ends the subsidy for foreign oil. Institutional barriers have blocked increased energy production and new energy projects. Frequently, businesses have hesitated to undertake new projects or raise their production because of delays and uncertainties about government policies.

The energy policy debate has been one of the most divisive in recent years. Energy policy touches every economic interest, every group in American society. It leads into a complex tangle of sometimes competing national goals--market efficiency and greater production, equity among income classes and regions, environmental protection, national security, economic growth, and inflationary restraint. It will be difficult, and sometimes impossible, to reconcile all these goals.

An energy strategy must build on the National Energy Act of 1978. It must develop a consensus on issues that were not treated in the NEA, and on new issues that have arisen since. It must define a more active role for regional, State and local governments in addressing the vast array of energy problems that cannot be solved at the national level. It must demonstrate a new creativity in reducing the welfare and equity impacts of higher energy prices. It must determine how to balance the costs of short-run inflation with the benefits of long-run inflationary restraint. There is no alternative but to confront the difficult choices that lie ahead.

THE NATIONAL ENERGY STRATEGY

An energy strategy must balance those measures that improve the Nation's long-run security and those that better prepare it to deal with sudden crises. It must recognize the different problems that can emerge in three time-frames: the near term (from now to 1985), the mid term (from 1985 to 2000) and the long-term (2000 and beyond).

The Nation cannot resolve all the energy issues facing it now or at any one time. Every decision must be made carefully with recognition that more knowledge will permit wiser choices later. The main objectives of the strategy, nevertheless, must be to offer constant policy guidance for an uncertain future.

The Near Term (1979-85)

Over the next few years, the United States and the rest of the world will be fortunate to escape a second radical increase in world oil prices. The adjustment process would again be painful. Most of the energy-producing and energy-using equipment that will be important in that period is already in-place.

Even with the benefits of last year's National Energy Act, imports are still unacceptably high, and without further action could be still higher by 1985.

> As an immediate objective, which will become even more important in the future, the Nation must reduce its dependence on foreign oil and its vulnerability to supply interruptions.

The challenge of the near term is to ensure that investments in new energy producing and consuming equipment are made in the degree and kind that reflect the new realities, and that existing stock and equipment are used in the most effective way.

Movement toward the pricing of oil and gas at their true replacement cost will prepare American consumers better for long-term price increases and stimulate greater production and conservation now. Removal of barriers to new production will eliminate excessive regulatory delays that now paralyze the construction of new refineries, pipelines, and other energy projects. Filling the Strategic Petroleum Reserve (SPR), diversification of world oil supplies, and other actions will cushion the economic impact of an interruption. All these measures can set the stage for actions that will buy even greater energy security in the mid-term.

The Mid-Term (1985-2000)

During the mid-term, the U.S. and the rest of the world will begin to shift from reliance on oil and gas to new and higher-cost forms of energy. Energy consumption growth should be far slower than once anticipated. Direct coal use, electricity and decentralized renewable sources will increase their share of the market. The uncertainties--especially those surrounding world oil supply and price--are much greater for the mid-term than for the near term. These uncertainties will give the U.S. a major opportunity to influence more directly its own energy future.

In the mid-term, the Nation must seek to (1) keep imports sufficiently low to protect U.S. security and to extend the period before world oil demand reaches the limits of production capacity and (2) develop the capability to use new higher-priced ("backstop") technologies as world oil prices rise.

Because of the uncertainties in the mid-term outlook, the U.S. cannot afford to pursue an inflexible set of programs or actions. No one can be certain how fast or how slowly world oil prices will rise. The U.S. must press forward with those actions that are appropriate today. It should begin now to develop the capability to use new technologies that rely on domestic or non-OPEC resources, to be deployed if and only if they become competitive with imported oil at higher prices. Introduction of these advanced technologies also will require innovative solutions in design and deployment to ensure compatibility with environmental goals.

The Long Term (2000 and beyond)

The U.S. faces two major transitions in energy markets between now and the middle of the 21st century. The first will occur during the mid-term when the U.S. moves from an energy system which has depended on traditional oil and gas sources (including imports) to one relying on unconventional supplies. These "transitional" energy supplies include some renewable technologies, enhanced oil recovery, oil shale, unconventional gas, and coal-derived products.

Since even those supplies are depletable, a second transition will begin after the year 2000. A set of "ultimate" technologies, including all the renewable and advanced nuclear technologies, would begin to displace traditional fuels and non-renewable conventional sources.

The Nation's long-term objective is to have renewable and essentially inexhaustible sources of energy to sustain a healthy economy.

Many promising technologies may prove excessively expensive. Environmental and safety problems may render others infeasible. There is always the danger that premature or overbearing Federal support for any one group of technologies may foreclose more attractive options. The current generation cannot and should not impose its own judgments and values on generations yet to come. The final choices about deployment of various technologies must be left to them.

A sustainable energy future cannot be achieved overnight. The U.S. cannot expect "crash" technological breakthroughs to solve its energy problems. The technical advances that do occur are best encouraged by diligent, aggressive research and development programs for the widest range of options.

AN AGENDA FOR ACTION

The Federal government, State and local governments, and the private sector all have important responsibilities to advance conservation and specific fuel technologies in all three time periods. This section describes Federal policies and programs.

Conservation

Conservation continues to offer the greatest prospect of reducing dependence on unstable imports, reducing energy costs, and meeting environmental goals. The objectives of the Administration's conservation policies are two: to reduce the rate of growth in demand for energy and to improve the productivity of energy use--by increasing the energy efficiency of existing and future capital stocks of buildings, vehicles, homes, and industrial operations while sustaining economic growth. The tools for achieving these objectives will be mainly the impact of higher energy prices, the conservation tax incentives in the Energy Tax Act, and regulatory measures.

- Conservation will be encouraged by policies for replacement-cost pricing, as embodied in the Natural Gas Policy Act, the phased decontrol of crude oil prices, and the Public Utilities Regulatory Policy Act.

- The residential and industrial conservation tax credits in the Energy Tax Act will be an important mechanism to encourage near-term energy conservation.

- Energy use in new buildings and appliances will be reduced by using the regulatory authorities in the Conservation Policy Act and other legislation. Energy use in automobiles will be regulated by fuel economy standards. The Administration will work to resolve promptly the issues surrounding future use of the diesel engine.

- Grants will continue to be provided to low income families, schools, and hospitals to improve the energy efficiency of residential and community facilities.

- The Administration will seek and exploit opportunities to demonstrate conservation and increased efficiency in energy use and productivity at the institutional and community level. Institutional barriers to greater conservation will be reduced by intervening in utility rate proceedings and by acquainting the public with opportunities to conserve.

- The Federal government will lead the way in energy conservation, starting with its own buildings, processes, and transportation.

- The Department of Energy will support research and development (R&D) to improve efficiency where the benefits of new developments will not be captured by industry without government involvement. Major RD&D targets include industrial operations, buildings, and new automotive propulsion systems.

Oil

Financial incentives and the reduction of institutional barriers are the major tools to raise oil production.

- Domestic production will be increased by rapidly phasing out controls on crude oil and, until complete decontrol in 1981, by providing price incentives targeted for production from new discoveries, marginal wells, and the use of enhanced oil recovery techniques.

- To prevent excessive revenues from flowing to producers in the wake of decontrol, the President has requested that the Congress enact a Windfall Profits Tax. Its proceeds would be used to help low-income families, to encourage mass transit, and to create an Energy Security Fund.

- Alaska and California production will be stimulated through steps to accelerate transportation systems to bring oil more cheaply from the West Coast to mid-Continent, Gulf, and East Coast markets. Exports or swaps of Alaskan oil are also under consideration as a way to strengthen markets for West Coast production.

- Oil Shale technology will be developed and tested on a commercial scale through a production tax credit financed by the Windfall Profits Tax.

- To provide security in the event of a possible disruption, the Strategic Petroleum Reserve will be filled, ultimately to a level of one billion barrels.

- Sources of production worldwide will be diversified. The Administration will support multilateral bank financing and other incentives for exploration, development, and production in less developed countries. The Administration will also encourage accelerated development of improved technologies for extraction of heavy oils and tar sands.

Natural Gas

The natural gas policy has two high priority elements--use of the temporary domestic surplus to substitute for oil imports and incentives to increase conventional domestic production.

- Domestic production will be encouraged by financial incentives, including the higher prices stemming from the recently enacted Natural Gas Policy Act; through a more stable and predictable regulatory environment; the deregulation of high-cost gas, most notably that below 15 thousand feet; and, deregulation on a predictable basis.

- Surplus gas and reasonably-priced supplemental sources of gas will be used to displace foreign oil in existing industrial and utility facilities capable of burning both oil and gas; coal will continue to be the preferred fuel for existing coal-capable units and all new boiler facilities.

- Supplemental sources of gas will be used in the order of their cost-effectiveness and security. Under present circumstances, the order of attractiveness is: Alaska production; pipeline gas from Canada and/or Mexico; short-haul liquefied natural gas (LNG); domestically produced synthetic gas, depending upon the resolution of certain technical problems and cost; and long-haul LNG.

- Financial incentives or R&D as appropriate will be used to quicken the production of unconventional sources of gas, including gas from tight sands, Devonian shale, geopressurized methane, and coal bed methane. R&D programs will be directed at determining the size of the resource base, the cost of extraction, and the possible environmental effects.

Coal

Coal, the Nation's most abundant fossil energy resource, should be used in place of oil and gas wherever economically and environmentally feasible. Programs that increase the use of coal as a substitute for oil will receive the highest priority.

- o Direct Use
  - The Powerplant and Industrial Fuel Use Act (PIFUA) will be used to require coal use in all new electric utilities and major industrial fuel burning installations, and in existing coal capable facilities;
  - Research, development, and demonstration (RD&D) programs will be used to develop environmental control technologies and environmentally acceptable means of direct coal use to enhance the overall market for coal and to increase the regulatory options available under the PIFUA.
- o Coal Liquefaction
  - RD&D for direct coal liquefaction processes will be used to develop the capability by the 1990s for commercial deployment of plants producing the most economic synthetic liquid fuel.
  - Indirect coal liquefaction processes based on existing technology will be examined to determine whether they offer additional economic or environmental benefits.
- o Coal Gasification
  - The Administration supports favorable rate treatment and loan guarantees for first-generation Lurgi technology.
  - The two second-generation gasification technologies now being considered for demonstration will be developed and analyzed further, leading to a decision in early FY 1980 whether to proceed with a demonstration plant.
  - Research and development on advanced technologies will be continued. Funding levels will be based on whether the processes appear to promise more economic and environmental benefits than available technologies, and on whether this supplemental source of gas is needed.

- Improved Efficiency Coal Conversion

  - R&D on advanced coal conversion systems such as magneto-hydrodynamics (MHD), combined cycle, pressurized fluidized bed, and fuel cells will attempt to resolve key technical, economic, and environmental questions.

Nuclear

The Presidential Commission will provide a complete accounting of the causes of the Three Mile Island accident and its handling by utility, State, and Federal officials. The Nation needs to develop safeguards that will allow light water reactors to continue to meet an increasing share of electrical energy needs.

- Light Water Reactor

  - The Administration will work toward resolving nuclear waste management issues, including both away-from-reactor storage and permanent disposal, in accordance with the recommendations of the Interagency Review Group.

  - Nuclear siting and licensing legislation will be proposed to streamline procedures without in any way sacrificing the safety of new power plants.

  - Generic R&D will be undertaken to improve light water reactor (LWR) operations, to improve the safety of LWRs, and to improve their efficiency and thus extend the uranium resources they utilize.

  - Reliable and economic uranium enrichment services for domestic and foreign users will be assured by:

    - Operating and expanding the existing gaseous diffusion plant capacity.

    - Commercializing gas centrifuge technology by establishing a machine manufacturing industry and building a commercial centrifuge enrichment plant.

    - Developing advanced isotope separation enrichment technology.

- o Breeder Reactor
  - R&D on breeder reactors will continue so that commercial development can be initiated, if justified by future market conditions and non-proliferation policies.
  - Breeder reactor demonstration will be deferred pending the results of the International Nuclear Fuel Cycle Evaluation and interagency review.
- o Fusion
  - Research on the magnetic and inertial confinement concepts will continue with the objective of demonstrating scientific feasibility in the mid-1980s.
  - The program for development of fusion energy will be governed by a structure of sequential decision points to select candidate technologies and to initiate construction of large facilities. If all goes well, the first commercial use of fusion will occur in about the year 2020.

Renewable Energy Sources

The Nation's capacity to use renewable resources should be enhanced. The maturity of these technologies varies greatly; some are economic now, others are in the early stages of R&D. Federal support must be tailored to each stage of development.

- o Solar Energy
  - Tax credits and other financial incentives will be used where necessary to accelerate market penetration of solar technologies that are economic or nearly economic now (solar hot water heating, certain industrial process heat systems, passive solar systems, direct wood burning, and low head hydro).
  - RD&D and/or product support will advance those technologies that have significant market potential and that replace oil and gas, but which are not yet competitive in the mass market (certain solar industrial process heat systems, active solar space heating, conversion of biomass to liquid and gaseous fuels, and wind systems).

- R&D and limited product support will develop those technologies with significant long-term potential, but which are far from economic application (solar cooling, photovoltaics, solar thermal, and ocean thermal energy conversion (OTEC)).

- The Administration will continue to study the possible applications of technologies with highly uncertain potential (solar power satellites, photo-chemical conversion).

o Geothermal

- Tax incentives and loan guarantees are the primary tools to encourage the use of hydrothermal resources. RD&D will be used where the technology has not been demonstrated.

- Research and development will be used to develop the technology to use hot dry rock geothermal resources.

- The Administration will encourage the development of geopressurized energy primarily as sources of methane and secondarily as sources of heat from hot water.

Cross-Cutting Policies

In addition to these programs designed to ameliorate the Nation's fundamental energy problems in future years, it is necessary to confront today's crises. The ways in which the Federal government deals with energy problems must be streamlined. And energy policy must treat all citizens fairly.

o Dealing with the Current Crisis

With conservation and other measures, the United States will meet its commitment, reached jointly with other member nations of the International Energy Agency, to cut energy consumption by 5 percent by the latter part of 1979.

o Emergency Preparedness

The Department of Energy, in cooperation with state and local governments, will continue to develop and refine planning and management capabilities to deal with emergency shortages of supply.

o Management of Energy Processes

- The Administration will seek to clarify and simplify processes and procedures for siting and licensing new energy facilities, without sacrificing the opportunity to carefully balance conflicting policy objectives.

- The Administration will work closely with States and local governments to ensure that they participate fully and effectively in developing and implementing the Nation's energy policies. The Administration has proposed the Energy Management Partnership Act to provide funds to accomplish this objective.

THE SIGNIFICANCE OF NEP-II

The actions already undertaken, and those currently proposed, will place the Nation's energy policy on a sound and long-lasting footing. Movement toward replacement cost pricing for crude oil, coupled with last year's action on natural gas pricing, will build a coherent economic framework for making more rational decisions about energy production and consumption--and thus about the Nation's energy future. These actions are coupled with a variety of measures, such as the Windfall Profits Tax, designed to assure equity for consumers.

By beginning to remove the roadblocks to timely and equitable decision-making on energy projects, the Nation can increase production of its domestic resources. By spurring the development of new technologies, the U.S. will lay the groundwork for their future use as world oil prices rise.

The decade of the 1960s, and the early 1970s, saw imports climb steadily, both in absolute terms and, more dangerously, as a percentage of total consumption. With each passing year, the Nation became more dependent on oil imports, and thus more vulnerable.

The National Energy Act, and the actions and proposals recently announced by the President, will arrest those trends. By 1985, the measures in the National Energy Act will reduce imports 2.5 to 3.0 million barrels per day below what they would have been without those actions. The additional steps proposed this year will save over one million barrels per day. As a result, oil imports are expected to drop as a percentage of total energy consumption by 1985. Although imports will still be comparable to current levels, U.S. vulnerability will be reduced substantially by the availability of the strategic petroleum reserve.

After the series of crises over the last few years, crises that resulted in shortages of oil, gas, and coal, it is now clear that it is impossible to lay out, in one document, all the policies that ultimately may prove necessary for the Nation's long-term future. Instead, NEP-II provides the Congress with the best information available at the present time with which to make future decisions, to deal with future developments, and to capitalize on future technological advances.

POOR ORIGINAL

Dear Mr. President I am writting to you hoping that you will tell me what you are planning to do about the nuclear plants that all the people want shut down. And what to do about the gasoline crisis and what to do about all the coal thats laying around, not being used. I hope you will write back to me and tell me what you are planning to do about the problems I have written about.

Thank you.

Jeff LeVan

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