

**The original documents are located in Box 10, folder: “Speech - April 2, 1976 - Graduate School of Industrial Administration, Carnegie-Mellon University” of the Frank Zarb Papers at the Gerald R. Ford Presidential Library.**

### **Copyright Notice**

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted material. Frank Zarb donated to the United States of America his copyrights in all of his unpublished writings in National Archives collections. Works prepared by U.S. Government employees as part of their official duties are in the public domain. The copyrights to materials written by other individuals or organizations are presumed to remain with them. If you think any of the information displayed in the PDF is subject to a valid copyright claim, please contact the Gerald R. Ford Presidential Library.

REMARKS PREPARED FOR DELIVERY BY  
THE HONORABLE FRANK G. ZARB, ADMINISTRATOR  
FEDERAL ENERGY ADMINISTRATION, BEFORE THE

TWENTY-EIGHTH ANNUAL SPRING MANAGEMENT CONFERENCE,  
GRADUATE SCHOOL OF INDUSTRIAL ADMINISTRATION,  
CARNEGIE-MELLON UNIVERSITY  
GEORGIAN ROOM, WEBSTER HALL HOTEL, PITTSBURGH, PENNSYLVANIA  
FRIDAY, APRIL 2, 1976, 12:45 PM, EST

EMBARGOED FOR RELEASE UNTIL:  
FRIDAY, APRIL 2, 1976, 12:45 PM, EST

Good afternoon, and thank you, Arnold, for that kind introduction. It is always a pleasure to get back to the "Golden Triangle," although I must admit that I'll be glad when the highway construction between here and the airport is completed.

Pennsylvania is lucky to have reserves of coal, oil, and natural gas right within its borders, and this State provides an outstanding example to the Nation of the importance of domestic energy resources.

The impact of the energy crisis on our economy has been and continues to be felt in many ways. During the 1973-74 embargo, an estimated half million Americans were thrown out of work either temporarily or permanently. Last year, the money we exported in payment for foreign oil could have been invested in America. The 27 billion dollars we spent to buy oil imports in 1975 could have generated one million new jobs and significant industrial expansion here at home.

Contrary to what some would have the public believe, the energy crisis has not gone away. It has, in fact, gotten much worse since 1973.

During the week ending March 12, for the first time in this Nation's history, we imported more crude oil and petroleum products than we produced. In 1973, at the beginning of the oil embargo, our dependency on foreign oil was only 36 percent. The comparison is not good. Production of crude oil in this country has declined steadily over the past six years. Production of natural gas peaked in 1973, and has declined by more than 11 percent since then.

Moreover, seismic crew activity, which is recognized as a leading indicator of the search for new petroleum sources, dropped



in February to its lowest level since 1971. And the 249 crews at work surveying oil and gas drillings prospects -- both onshore and offshore -- represent a 65 percent drop from the all-time high of 710 crews reached in 1952.

Coal production remains at the levels of the 1940's, even though it increased by some five percent last year. And the growth of our nuclear power capacity continues to be significantly constrained by financial and environmental concerns.

Clearly, the energy problem is still very much with us, and the consequences of doing nothing can be devastating to our energy independence, our economic independence, and our political independence.

But, just as the dangers of increasing dependency are clear, the opportunities for reducing that dependency are equally clear.

We have the domestic resources to reverse the upward trend in energy imports.

We can return to the point where we are no longer unnecessarily vulnerable to the economic disruptions which can result from abrupt cutoffs in oil imports.

And we can do it in the next decade.

The United States, in fact, has a number of options open to reduce energy imports and achieve independence.

We can and must encourage conservation and the efficient use of energy wherever possible.

We can and must dramatically increase exploration and development to tap new reserves of natural gas and oil. We can and must increase the utilization of coal and nuclear power to meet electricity needs. We can and must continue to develop new technologies -- in synthetic fuels, fusion, geothermal, and ocean power, and accelerate research and development activities to bring the promise of unlimited solar energy from the theoretical and experimental stage to the practical and feasible stage.

Two vitally important factors tie all of these options together. First, we cannot pick and choose which of them we wish to pursue -- we must proceed with all of them if we are to have enough energy to meet our needs now and in the future. Second, all of these energy supply options can and must be developed in ways which protect and enhance the environment we all share.

Now that I've said all that, the question arises: How do we get from here to there by 1985?



First, it is important to remember that energy invulnerability does not mean no imports at all. It does mean reducing energy imports and increasing domestic production and storage capability to the point where we can withstand any possible cutoff of imports while maintaining the health of our domestic economy.

Second, legislation already enacted provides for actions designed to accomplish perhaps half of the job of reaching energy independence once again.

And, third, President Ford proposed, in his energy message to Congress in February, further actions which can complete the task of reducing our energy imports and our vulnerability to foreign actions to manageable levels.

Conservation of energy is an important part of the overall program to reduce energy dependence, especially in the short-term.

Higher energy prices have already reduced the growth of our energy demand. And between now and 1985, higher prices are expected to lower the traditional rate of growth from 3.6 percent per year to an average of 2.8 percent per year.

But there is more that can be done. Active conservation programs can cut that rate of energy demand growth even further, to 2.2 percent per year and further reduce our total oil needs by the equivalent of 3 million barrels a day by 1985.

Of that 3 million barrels each day, some 2.2 million would be imported. At \$13 a barrel, that's nearly \$30 million a day we could save on our bill for imported oil.

Improved automotive efficiency and increased conservation efforts in residential, commercial, and industrial applications can further result in significant energy savings in all sectors of the economy, without sacrificing productivity or employment.

Still, while conservation can be highly effective in the short term, it cannot obviate the need for development of additional energy supplies to meet the increase in long-term energy needs.

By 1985, domestic crude oil production could increase by nearly 50 percent -- from today's level of just over 8 million barrels a day to 12.3 million barrels a day -- if free-market prices are allowed to stimulate domestic exploration and production, and an aggressive program of leasing the Outer Continental Shelf is followed.

We estimate that OCS production could about double to about 2.3 million barrels per day, and, with completion of the Trans Alaska pipeline, oil from Alaska could add 2.4 million barrels a day to our national supply by 1985.



In addition, if wellhead price controls on the production of new natural gas are removed, gas production could increase to 22.3 trillion cubic feet in 1985, up by more than ten percent from 1975's total of 20.1 trillion cubic feet.

Gas from Alaska could provide one trillion cubic feet per year by 1985, if needed transportation systems are approved and built. Imports of liquefied natural gas could add an additional two trillion cubic feet per year to available supplies. And, if financial incentives are available, still another trillion cubic feet of gas per year could be available from synthetic gas processes.

Production of coal can increase from the 1974 level of 603 million tons to more than one billion tons by 1985, if constraints are eliminated to allow the increased use of coal for electric power generation.

Production of low sulfur western coal could quadruple from 92 million tons in 1974 to 380 million tons in 1985, primarily through surface mining operations. Diligent mining controls and reclamation requirements can ensure that strip-mined areas are protected from environmental damage from these operations. In the East, coal produced largely through deep mining could increase by about 30 percent over this same period of time.

Simultaneously, the continued, careful expansion of our nuclear power capacity could be supplying about 26 percent of electric generation requirements in 1985, up from 9 percent last year. This increase in nuclear power will depend on a number of regulatory actions that are necessary to avoid the delays associated with financing and constructing nuclear powerplants.

These four areas of domestic energy production -- oil, natural gas, coal and nuclear power -- can all be significantly increased by continued and concerted actions, using proven, established methods and operations.

Development of new technologies -- solar energy and other alternative energy sources -- will not begin to make major contributions to our overall energy supply picture until after 1990.

While some technologies such as coal gasification and liquefaction already exist, they aren't economically competitive on a commercial scale yet.

Advanced technologies such as these have traditionally had difficulty attracting capital investment in normal money markets. That is why Federal loan guarantees are essential to encourage development -- guarantees which could cost the government little nothing, while encouraging needed new energy sources.



The President has proposed creation of an Energy Independence Authority to provide the financial guarantees necessary to support commercial development of long-range new energy technologies.

Another Administration proposal would establish a billion-dollar program of financial assistance to local areas affected by energy development over the next 15 years. The program would provide loans, loan guarantees and planning grants to help communities expand public services like health care, sewers, roads and schools for orderly development.

Our economy needs energy to grow on, and it needs energy from reliable sources at reasonable prices if we are to be secure in the years ahead.

Relying increasingly on domestic energy for our supplies, rather than on foreign energy, has two beneficial results:

- Investment in energy exploration, development and production ventures will remain within this country where it can benefit American business and American workers.
- And anything which keeps dollars working within our economy instead of sending them abroad works to the benefit of all American consumers.

Every challenge faced by nations or individuals provides an opportunity -- to succeed or to fail. The energy challenge is as big a one as this country has faced, but when we have faced seemingly insurmountable obstacles in the past, we have always risen to the occasion.

I have confidence that America again will rise to the challenge we face -- the challenge of solving our energy and economic problems and of assuring a secure and prosperous future for our children.

Thank you.

