BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON, D.C. 20551

February 28, 1974

To: Federal Open Market Committee

From: Arthur L. Broida

Attached is the documentation relating to the recent Washington Energy Conference which Chairman Burns indicated at the February FOMC meeting would be distributed to the members of the Committee.

Attachments

WASHINGTON ENERGY CONFERENCE

FEBRUARY 1974

Doc. 17 (Rev. 2)
February 13, 1974

COMMUNIQUE

COMMUNIQUE

Summary Statement

1. Foreign Ministers of Belgium, Canada, Denmark, France, the Federal Republic of Germany, Ireland, Italy, Japan, Luxembourg, The Netherlands, Norway, the United Kingdom, the United States met in Washington from February 11 to 13, 1974. The European Community was represented as such by the President of the Council and the President of the Commission. Finance Ministers, Ministers with responsibility for Energy Affairs, Economic Affairs and Science and Technology Affairs also took part in the meeting. The Secretary General of the OECD also participated in the meeting. The Ministers examined the international energy situation and its implications and charted a course of actions to meet this challenge which requires constructive and comprehensive solutions. To this end they agreed on specific steps to provide for effective international cooperation. The Ministers affirmed that solutions to the world's energy problem should be sought in consultation with producer countries and other consumers.

Analysis of the Situation

2. They noted that during the past three decades progress in improving productivity and standards of living was greatly facilitated by the ready availability of increasing supplies of energy at fairly stable prices. They recognized that the problem of meeting growing demand existed before the current situation and that the needs of the world economy for increased energy supplies require positive long-term solutions.

3. They concluded that the current energy situation results from an intensification of these underlying factors and from political developments.

4. They reviewed the problems created by the large rise in oil prices and agreed with the serious concern expressed by the International Monetary Fund's Committee of Twenty at its recent Rome meeting over the abrupt and significant changes in prospect for the world balance of payments structure.

5. They agreed that present petroleum prices presented the structure of world trade and finance with an unprecedented situation. They recognized that none of the consuming countries could hope to insulate itself from these developments, or expect to deal with the payments impact of oil prices by the adoption of monetary or trade measures alone. In their view, the present situation, if continued, could lead to a serious deterioration in income and employment, intensify inflationary pressures, and endanger the welfare of nations. They believed that financial measures by themselves will not be able to deal with the strains of the current situation.

6. They expressed their particular concern about the consequences of the situation for the developing countries and recognized the need for efforts by the entire international community to resolve this problem. At current oil prices the additional energy costs for developing countries will cause a serious setback to the prospect for economic development of these countries.

7. General Conclusions. They affirmed, that, in the pursuit of national policies, whether in the trade, monetary or energy fields, efforts should be made to harmonize the interests of each country on the one hand and the maintenance of the world economic system on the other. Concerted international cooperation between all the countries concerned including oil producing countries could help to accelerate an improvement in the supply and demand situation, ameliorate the adverse economic consequences of the existing situation and lay the groundwork for a more equitable and stable international energy relationship.

8. They felt that these considerations taken as a whole made it essential that there should be a substantial increase of international cooperation in all fields. Each participant in the Conference stated its firm intention to do its utmost to contribute to such an aim, in close cooperation both with the other consumer countries and with the producer countries.

9. They concurred in the need for a comprehensive action program to deal with all facets of the world energy situation by cooperative measures. In so doing they will build on the work of the OECD. They recognized that they may wish to invite, as appropriate, other countries to join with them in these efforts. Such an action program of international co-operation would include, as appropriate, the sharing of means and efforts, while concerting national policies, in such areas as:

--The conservation of energy and restraint of demand.

--A system of allocating oil supplies in times of emergency and severe shortages.

--The acceleration of development of additional energy sources so as to diversify energy supplies.

--The acceleration of energy research and development programs through international cooperative efforts.*

* France does not accept point 9.

10. With respect to monetary and economic questions, they decided to intensify their cooperation and to give impetus to the work being undertaken in the IMF, the World Bank and the OECD on the economic and monetary consequences of the current energy situation, in particular to deal with balance of payments disequilibria. They agreed that:

-- In dealing with the balance of payments impact of oil prices they stressed the importance of avoiding competitive depreciation and the escalation of restrictions on trade and payments or disruptive actions in external borrowing.*

-- While financial cooperation can only partially alleviate the problems which have recently arisen for the international economic system, they will intensify work on short-term financial measures and possible longer-term mechanisms to reinforce existing official and market credit facilities.*

-- They will pursue domestic economic policies which will reduce as much as possible the difficulties resulting from the current energy cost levels.*

*In point 10, France does not accept paragraphs cited with asterisks.

-- They will make strenuous efforts to maintain and enlarge the flow of development aid bilaterally and through multilateral institutions, on the basis of international solidarity embracing all countries with appropriate resources.

11. Further, they have agreed to accelerate wherever practicable their own national programs of new energy sources and technology which will help the overall world-wide supply and demand situation.

12. They agreed to examine in detail the role of international oil companies.

13. They stressed the continued importance of maintaining and improving the natural environment as part of developing energy sources and agreed to make this an important goal of their activity.

14. They further agreed that there was need to develop a cooperative multilateral relationship with producing countries, and other consuming countries that takes into account the long-term interests of all. They are ready to exchange technical information with these countries on the problem of stabilizing energy supplies with regard to quantity and prices.

15. They welcomed the initiatives in the UN to deal with the larger issues of energy and primary products at a world-wide level and in particular for a special session of the UN General Assembly.

Establishment of Follow-on Machinery

16. They agreed to establish a coordinating group headed by senior officials to direct and to coordinate the development of the actions referred to above. The coordinating group shall decide how best to organize its work. It should:

--Monitor and give focus to the tasks that might be addressed in existing organizations;

--Establish such ad hoc working groups as may be necessary to undertake tasks for which there are presently no suitable bodies;

--direct preparations of a conference of consumer and producer countries which will be held at the earliest possible opportunity and which, if necessary, will be preceded by a further meeting of consumer countries.*

17. They agreed that the preparations for such meetings should involve consultations with developing countries and other consumer and producer countries.*

* France does not accept points 16 and 17.

WASHINGTON ENERGY CONFERENCE

FEBRUARY 1974

Doc. 10
February 11, 1974

STATEMENT BY THE HONORABLE WILLIAM E. SIMON
ADMINISTRATOR, FEDERAL ENERGY OFFICE
BEFORE THE WASHINGTON ENERGY CONFERENCE
WASHINGTON, D. C., FEBRUARY 11, 1974

The world economy is undergoing a period of rapid change and growth. Decisions made in one country effect the patterns of life for the rest of the world. Such decisions demand not only the collective wisdom of world leadership but also a continuing spirit of cooperation among the countries of the world. By building an international framework of cooperation among nations, I am convinced that we can overcome the problems that face all of us in the energy area today, and can establish a permanent structure for world-wide economic development. The explanation of our current problems lies in ourselves - in our own failure to acknowledge our interdependence and plan for it. There are several areas in which we have failed. On an individual basis, we in the United States and other individual industrialized nations have misued our energy resources, and failed to gain control over the rate of growth of energy demand, largely because our shortsightedness has lulled us into believing that abundant and cheap energy supplies could continue

indefinitely. Further, we have failed to develop available domestic energy resources adequately. As a group, all of the major consuming countries have failed to develop and agree upon allocation programs to meet emergency shortage situations. Further, we have failed to coordinate our national energy policies or even to adequately discuss their interrelations at a high political level. In fact, we do not have an adequate supply of information and data on world demand and supply, oil supply arrangements between consumer and producer nations, and future prospective resources in order to adopt realistic energy policies. Because of these failures, we now find ourselves at a cross-roads faced with a choice which will influence the history of future generations of the modern world. We can ignore the lessons of the past and be doomed to relive them; or we can learn from them and forge together a new atmosphere for orderly world economic growth.

As such, we must commit ourselves to work against unconstrained bilateral deals which will be counter-productive to all of our goals. In fact, we must seek to redefine bilateralism so that bilateral arrangements only occur within the umbrella of international cooperation.

Today, I would like to present to you our views on how we can do this. At a time when the energy shortage has caused

a sense of paralysis that grips many people of the world, we must calmly place the issues in the proper perspective. We must ring the emotions out of our considerations of these issues, and carefully assess where we are and where we must go from here.

In order to understand the nature of the problem we now face and how we can overcome it, I think it is important to review the world energy situation, in particular with respect to production, consumption and energy prices, as well as the impact which these factors have on balance of payments, on employment and on the world economy.

Production and Consumption

First of all, let us review the world production-consumption picture. During September 1973, free world petroleum production averaged 47.8 million barrels per day.

In the subsequent months, after the outbreak of war in the Middle East, production declined as a result of intentional cutbacks by a few of the oil producing countries bordering on the Persian Gulf. The low point in production was reached in November when free world production was estimated to be only

43.2 million barrels per day. By January 1974 production had increased to an estimated 46.2 million barrels per day, a level about eight percent below pre-war estimates of the level of January production.

Consumption in January was probably about equal to January production. There had been some drawdown in stocks of crude and petroleum products, but the cumulative reduction by the end of January is estimated to have been only on the order of magnitude of 100 million barrels.

For the calendar year 1974 as a whole it is estimated that through responsible and efficient use of existing and planned facilities the free world could produce about 51.4 million barrels per day. Whether conditions in 1974 will be such that producers will choose to produce that much and consumers will consume and add to inventories that much oil is very difficult to predict.

Prices

In September 1973 the arms-length open-market FOB price for a new short-duration sale of a cargo of Arabian light crude was on the order of $2.12 per barrel. In November some crude sales apparently were at prices in excess of the equivalent of $15 per barrel for Arabian light. By the end of January the comparable spot market price had apparently fallen to the $10 to $11 per barrel range.

In light of continuing efforts to reduce consumption around the world, the potential clearly exists for spot market prices to continue to decline. There can be no certainty how greatly consumers -- and their governments -- will be inclined to reduce their consumption below the pre-war forecast of about 51.4 million barrels per day in consumption plus normal inventory build-up in 1974.

A rough estimate now would be for free world 1974 consumption of about 46.4 million barrels per day if oil prices around the world average in 1974 a level consistent with an Arabian light FOB price of $8.50 per barrel. On a comparable basis estimated consumption would be on the order of 50.3 million barrels per day with an Arabian light price of $4.50 per barrel.

To these consumption estimates must be added estimates for the build-up of inventories. Companies and governments will undoubtedly wish over coming months to add to their inventories, not only to return to levels considered normal in the past, but also to provide greater security against the demonstrated insecurity of imported supplies. Ultimate objectives for inventories will probably be considerably in excess of targets to be

reached by the end of 1974. A reasonable estimate of targets for year-end 1974 might be levels five percent above what would have been considered normal in pre-war days. On that basis it can be roughly estimated that 200 million barrels will need to be added to inventories in 1974, to build up from present levels to the year-end target. That addition to inventory would increase 1974 total demand to 48.8 million barrels per day at the $8.50 price and 50.8 million barrels per day at the $4.50 price.

Spare Capacity

At either of these illustrative combinations of price and oil use in 1974 the world's forecast "normal" oil production capacity would not be fully employed during the year. Whether some oil producing nations will choose to allow some of their "normal" production capacity to lie idle, with accompanying loss of revenue, is, of course, problematical. Assuming as at present, most producers wish to maintain production, relatively sharp cutbacks would be necessary by the remaining producers at the $8.50 price. For instance, if only Saudi Arabia restrained its production, then for the year Saudi production would average only 3.6 million barrels per day, only about 44 percent of its potential output.

If 1974 production restraint were borne on an equal percentage basis by Saudi Arabia, Kuwait, the United Arab Emirates, and Qatar, then the production for each would be about sixty-seven percent of capacity. At the $4.50 price on these assumptions, there would still be a margin of excess capacity in these countries.

Certainly at the higher of the two illustrative price levels, and quite possibly at the lower level as well, production in other oil countries would grow faster than world demand over the years after 1974, so that the relative production restraint would need to be increased over time to maintain those prices.

Balance of Payments Impacts

The impact of such higher costs of imported oil will be severe upon the economies of many oil-consuming nations. The increased costs in 1974 for the less developed nations alone would be on the order of $9 billion at the $8.50 price and approaching $5 billion at the $4.50 price. As a consequence of these changes in oil payments, the projected 1974 current account deficit for the LDCs would be estimated at about $22 billion at the $8.50 price and on the order of $18 billion at the $4.50 price.

The incidence of the higher oil prices among individual LDC's will vary widely. Some of the hardest hit countries such as India, Bangladesh, and the draught-ridden regions of Western Africa not only face a significant increase in their import bill but their low per capita incomes and slow rates of growth of output and of exports will make it difficult to finance anything approaching the same volume of imports as in 1973. Other countries -- such as Brazil, Korea, Taiwan, and Turkey -- while facing a significant increase in their import

bill will have a greater capacity to finance increased oil payments in the short run with their relatively high level of reserves.

Employment and Inflation

These large increases in payments will worsen both the employment and inflation situation in oil importing countries. Even after adjustment in monetary and fiscal policies, these increased import bills will have a deflationary impact on demand for domestic production, as purchasing power is diverted from domestically produced goods and services in order to meet increased oil import payments.

At the same time that demand for domestic production is being decreased, cost push inflationary pressures will be increased as a result of the direct impact of oil price rises on price indexes and possibly also as a result of intensified labor pressures attempting to secure a wage increase sufficient to offset the decrease in the standard of living implied by the increased price of oil.

There is also likely to be a temporary increase in unemployment and decline in output as patterns of consumption and production are readjusted to the levels of energy costs. Particularly hard hit will be such products as automobiles, plastics, fertilizers, and boating and camping equipment.

It is estimated that for a number of the large industrial countries these factors, even after appropriate adjustments

in fiscal and monetary policies, could combine to reduce rates of real economic growth by one to one and one-half percent during 1974, if an $8.50 level of prices prevailed. There could be two to three percent additional upward pressure on prices in many countries. At a $4.50 level of prices these impacts would be considerably less.

The Economic Impact of Higher Oil Prices

In general, then, projections of the economic impact for 1974 of higher price levels for oil indicate that oil-consuming nations will experience lower rates of growth, higher rates of inflation, higher levels of unemployment, lower levels of real income, and notably less favorable trade balances than previously anticipated. The economic impact of higher oil prices will vary widely among countries reflecting not only differing degrees of dependence on imported oil, but also differing degrees of financial strength and economic adaptability. All industrial nations, with the possible exception of Canada, could experience serious economic difficulties, as will many LDCs. For LDCs with inadequate reserves, low per capita incomes, and slow rates of output and export growth, the economic impact of higher oil prices could be extremely severe.

For the developed countries -- which in recent years have typically run current account surpluses in the order of

$10 billion per year -- the increased oil costs at the $8.50 per barrel price would mean a current account deficit of more than $30 billion. At the $4.50 price, the deficit for the developed countries would still be in the range of 5 to 10 billion dollars. For the OPEC producers, even after taking into account an assumed increase in their imports, an $8.50 price would yield a current account surplus in the order of $55 billion. The $4.50 price would still yield a surplus in excess of the $20 billion range. The corresponding increases during 1974 in the foreign asset holdings of the producing countries, while large, will still be equal to only a small fraction of the assets traded in the financial markets of the OECD countries.

The incidence among the developed countries is relatively evenly spread, with projections of increased oil payments as a percent of total imports falling in the range of 10 to 20 percent for most countries. Japan will be particularly hard hit with a projected increase in oil payments approaching one-third of total 1973 imports. Canada, on the other hand, with oil exports of roughly the same magnitude as imports, should feel virtually no net balance of payments impact from the changes.

At this point, I think it is important to carefully assess these projections of energy production, consumption and prices and recognize that they are flashing warning signals to which we must respond. We must realize that these projections depend upon the basic assumption that recent trends in world demand for energy, in the sources of energy, and in the form in which energy is supplied, will continue largely unchanged. Together, we can prevent this from happening.

The projections do show -- clearly and vividly -- that we face far-reaching changes in our energy balances. We must accept that the rising demand for energy will lead to a substantial increase in real costs. We cannot be blind to the concentrated location of the existing resources which can be made available for the years immediately ahead.

But, there is another side. These projections show us what needs to be done. If we approach it bilaterally, a potential crisis will become a reality. However, if we make the commitment to join together, a potential crisis may be translated into a real opportunity. In essence, the energy problem is the most infinitely solvable one we have -- but we must approach it together. Action by consuming countries, with a long view of their best interest, is required now.

We, in the United States -- in our actions and in our planning -- are participating in this process with the greatest sense of urgency.

In November 1973, the President of the United States inaugurated Project Independence, designed to ensure an expansion in domestic energy production so that our Nation would no longer be subject to economic disruption, or the threat of such disruption, from a sudden curtailment of vital energy supplies.

Project Independence is designed:

(1) To conserve energy - to establish a new energy ethic that will greatly reduce our growing demand for energy;

(2) To increase production of all forms of energy in the United States; and

(3) To meet our energy needs at the lowest cost consistent with the protection of both national security and environment.

As we begin this Conference, we must not view Project Independence as a move toward autarchy but rather we must see it as part of a world-wide effort to bring greater balance to world energy supply and demand. Our current energy problems magnify the fact that we live in an interdependent world. We in the United States view Project Independence as a means for

us to reduce our call on oil available to the international market. Moreover, it is our way to become exporters of energy by 1985. Seen in this way, this effort will be our contribution to the rest of the world. Let us now look carefully at Project Independence and relate this initiative to what we all can and must do together.

The first major thrust of U.S. energy policy is to eliminate waste and conserve energy resources. The United States is the largest energy consumer, using one-third of the world's energy. Our pattern of energy consumption has in part, resulted from the relatively low cost of energy in the past. As prices rise, normal market forces will result in a reduction in demand. The problem, however, is that we cannot wait for these forces to operate. We must force adoption of energy conservation and demand curtailment as an individual and collective ethic now. In turn, efficient energy utilization will become a national "way of life" and not simply a temporary expedient to be followed during this period of acute shortage.

Our objectives are to eliminate waste, husband our scarce resources, and extend the available supplies to insure that essential needs are fully met. In this way a "less is better" ethic can cushion the impact of energy shortfalls on the economy and yield an improved quality of life. This means less weight and horsepower in our automobiles; less speed on our highways; less heat and heat loss in our homes; less empty seats on our planes,

trains, and buses; less waste in our industrial processes and powerplants; less throwaway containers. All of these will enhance rather than detract from our economic well being and living standard. With such a program, our goal is to cut our annual growth rate in energy consumption from the present 4 to 5 percent down to 2 or 3 percent by 1980. If we can do this, our estimates show that we could save as much as 7 million barrels of oil per day. Although much of the expected 7 million barrels per day saving can result from adherence with current conservation policies. There is considerable research we plan to do which is aimed at permanently reducing consumption of energy. For example, better insulation of houses, more efficient automobile engines, and more efficient power cycles can save energy without causing economic or social dislocation. Thus, our research program will concentrate on these areas.

The second major thrust of Project Independence is to stimulate the development and production of domestic energy resources and to develop alternative new energy sources. Specifically, our program will include the following:

-- Developing our coal reserves more effectively. We have 1 trillion, 500 billion tons of identifiable coal reserves, or half of the non-Communist world's reserves, 425 billion tons of which are economically recoverable now. We must develop ways to utilize this abundant resource. We must mount major research and development efforts in gasification and liquefaction of coal. Further, we must

develop techniques for mining surface coal that do not destroy the landscape permanently. We must also develop ways to deep mine coal that protect the health and safety of miners.

-- We have talked for years about the production of oil from our oil shale. There are an estimated 1 trillion, 800 billion barrels of oil in the shale resources in the U.S., and just those reserves that we presently know are exploitable could satisfy our needs for oil for over one hundred years. We need an increased effort by both the Federal government and private industry to develop this potentially productive resource. I am especially encouraged by recent progress in the in situ processes for extracting shale oil. This process suggests that it may be possible to produce shale oil at much less than the current cost of Persian Gulf crude. In situ extraction should also have minimal impact on the environment and its development must be expedited.

-- We also have to push forward in the development and utilization of nuclear power. Currently, nuclear power provides only one percent of our energy needs after 30 years of development. It could easily provide 10 percent by 1985. We will take every step to expedite the licensing and construction of nuclear power plants which are an essential part of our program for achieving energy self-sufficiency. We will also develop a broad nuclear program which looks toward liquid metal and other breeder reactors. In addition, top priority

will continue to be given to assuring that nuclear powerplants are built and operated safely with acceptable environmental impact.

-- We have also talked for years about development of such relatively distant alternatives to fossil fuels as fusion, geothermal and solar energy. For the next decade these alternatives are still very much in the research and development stage of growth and they could not come into widespread use until after 1990. Nevertheless, although we will invest in the development of these alternatives, at the same time we must focus now on nearer term measures for expanding energy supplies.

With this overall approach in mind, let us examine in more detail now the specifics of Project Independence.

We have tried to visualize our policy in terms of what must be done in the relatively short range -- up to the mid-1980's; and what must be done in the long term beyond the 1980's. The strategies appropriate for dealing with the short range are in general not the same as those appropriate for the long range, and so I will discuss them separately.

SHORT RANGE

In the short range our efforts must be toward development of the existing state of the art and in addition to our conservation efforts, our underlying strategy will be:

(1) To increase our domestic supply of gas and oil, including development of the Outer Continental Shelf, our resources in Alaska as well as our large gas reserves.

(2) To supplement this development of oil and gas with expanded use of alternative energy, mainly coal and nuclear power and oil shale.

Research can make some contribution toward implementing these short-range strategies, but the real rewards from research will come in the next decade. Our progress between now and 1980 will depend, for the most part, on our ability to implement existing technology rather than on the results of new research.

1. Increase domestic supply of gas and oil.

To increase our domestic supply of gas and oil involves both the application of existing technology and the creation of new technology. Application of existing technology would include such techniques as secondary and tertiary recovery from existing oil fields and greatly expanded exploration for new oil and gas reservoirs, particularly on the Outer Continental Shelf.

The undiscovered oil and gas on Federal lands and beneath our Outer Continental Shelf can provide a significant portion of the energy necessary to make us self-sufficient. The total U.S. offshore lands, including the Outer Continental Shelf, are estimated to contain 42 percent (160 billion barrels of oil equivalent) of the remaining discoverable oil and gas reserves

in the United States.

We are now increasing the acreage leased on the Outer Continental Shelf to 10 million acres beginning in 1975, more than ten-fold what had been planned two years ago. In later years, the amount of acreage to be leased will be based on market needs and on industry's record of performance in exploring and developing leases.

In addition to the Outer Continental Shelf program, we will move rapidly to exploit our resources in Alaska. The Alaskan pipeline, when completed, will result in more than two million barrels of oil a day by 1980. This is equal to one-third of current U.S. oil imports. As important, approval of the Alaskan pipeline will encourage additional development of Alaskan fields. Projections indicate that the North Slope has potential reserves of as much as 80 billion barrels. Thus, eventually, we could achieve an Alaska production of between five and six million barrels a day.

Further, it has long been clear that while an Alaskan oil pipeline was needed, it alone will not be enough. In addition to the huge oil reserves in the North Slope of Alaska, there are also gas reserves there of at least 26 trillion cubic feet -- enough to heat 10 million homes for 20 years. We are now working to determine the need for future Alaska oil and gas pipeline capacity including the best routes.

2. Supplement oil and gas through development of coal and nuclear energy.

In addition to these increased efforts in the oil and gas areas, we will move to develop coal and nuclear energy as alternatives. We can identify two separate approaches - direct substitution and coal conversion.

a. Direct use of coal for oil and gas in industrial and utility applications. Substitution requires research since the main problem in burning coal is the environmental impact. We have a large program devoted to stack gas clean-up and there is every reason to expect this program will be successful, thus allowing us to substitute coal for a substantial amount of the oil and gas we now burn. Some have estimated that by 1985 we might save as much as 6 million barrels per day through through direct substitution - 2 million barrels per day through direct replacement of oil under utility boilers, 1 million barrels per day in residential and commercial space heating (primarily through heat pumps) and 3 million barrels per day in industrial processes.

b. Conversion of coal into liquids and gasses. Techniques for liquifying and gasifying coal are fairly well known. However, in general these methods are expensive and will require further development before they become commercially feasible. We are undertaking a crash program now and we estimate that we might be able to replace as much as 3 million barrels per day of oil with synthetic fuels made from coal.

We thus visualize coal emerging as a very central element in our energy picture by 1985. There are some estimates that suggest that by then we shall have to mine as much as 1500 or even 1800 million tons of coal per year. This represents a tripling of our coal production.

c. Expanding the use of nuclear energy requires research on nuclear safety, waste disposal, siting of nuclear reactors, and thorium systems, as well as providing additional separative work capacity. Siting is also an important element of our nuclear strategy since, in the absence of a rational siting policy for nuclear reactors, the nuclear option may be jeopardized.

LONG RANGE

All of these developments can take place in a relatively short-range time frame. Long-range our goal is to gradually transform the base of our energy system from the non-renewable fossil fuels to non-fossil fuels, mainly nuclear, geothermal, and solar.

To accomplish this, we have provided substantial funds for energy research and development. Last June the President announced a $10 billion Federal program over the next five years, but he stressed that we would spend whatever additional sums that could reasonably be spent to accomplish our task. Last month, the President announced that in fiscal year 1975--the first year of the five year energy R&D program--total Federal commitment for

direct energy research and development will be increased to $1.8 billion, almost double the level of a year ago.

Our research will retain as much flexibility as possible: In the coal area, the challenge is to learn how to transform our different types of coal through a variety of processes into acceptable gaseous and liquid fuels suitable as substitutes and replacements for dwindling supplies of petroleum and gas. Thus, low-BTU gas, which is probably marginal in the short-range looms with high priority in the long-range. And perfection of processes for coal hydrogenation leading to production of syncrude and syngas will be supported to the limit of scientific creativity.

Finally, nuclear energy holds the most importance for the long-range, primarily because it gives mankind an essentially inexhaustible energy source, one that is relatively independent of mineral resource costs. At the present time the breeder reactor is the only nuclear technology that can be counted upon today to achieve the nuclear promise. Thus, research and development on other breeder reactor concepts (light water breeder, gas cooled fast breeder, and molten salt breeder) will be supported and expanded to retain them as viable alternatives.

THE NEED FOR A WORLD RESPONSE

All of this is however, really only a part of Project Independence - it is our part. What we need now is to transform a United States commitment into a world response. What can we do together? As major consuming countries, we share the common problem of being dependent upon oil imports and of being concerned about the impact of rising costs of such imports. If we join together, however, we can reduce our dependence upon one set of suppliers and stabilize the price that we pay for our oil.

Here is what we can do:

Development of New Energy Sources

1. The first thing that we should consider are ways in which, cooperatively, we can develop alternative energy supplies. I have already described to you what we, in the United States, are doing. We must commence discussing immediately on a program for cooperation in such fields as nuclear technology, coal extraction, liquification and gasification, production of oil from shale and tar sands, development of solar and geothermal energy, and other fields. This program should explore the potential for sharing information, patents, and technical information. We should use this Conference as the first step toward developing a program for doing this. Together, we can achieve more rapid development of alternative energy sources for each one of our countries. For instance:

a. Nuclear Energy. We are rapidly reaching the stage where we could be mass producing floating nuclear power plants. Such power plants can be produced in quantity and floated to locations throughout the world to produce power rapidly. This is not a long-range concept, but something which could be initiated immediately. The technology, ideas, and production facilities of many nations can be combined in developing these plants. The technology of breeder reactors, for instance, appears to be more advanced in France and Britain since they are constructing prototype breeder reactor powered generating stations. Germany, Italy and Japan have undertaken ambitious reactor development programs. All would benefit from an exchange of information. Certainly all countries should have a vital interest in pooling technical information which concerns the safety and environmental impact of reactor operation.

b. In addition, we should work together to encourage development of these relatively untapped but enormous sources of hydrocarbons: U.S. oil shale and the tar sands of Canada and Venezuela. All together, these three sources alone provide an enormous potential for recoverable oil. It is possible that by pooling our technical resources we can produce new energy from these three relatively untapped sources beginning in 1980.

c. Coal. Development of newer and better processes for coal conversion are in progress in a number of countries, especially in West Germany, England, and France. We all could benefit from this technology and we should explore how we can pool our thinking and technology in this area as well as participate in joint cooperative programs.

Conservation

In addition to these joint efforts to develop energy supplies, we must work together to curb the explosive growth of energy demand. Conservation efforts and sacrifices must be shared equitably by all of us. We must pledge ourselves to a new world conservation ethic -- to the adoption of parallel vigorous programs to conserve energy and promote its more efficient use. What I urge is that energy consumption in one country not simply be governed by the ability to obtain additional supplies, at the cost to other consumer countries. Rather, there must be a basic commitment to share internationally available supplies at a reasonable level of consumption for all.

World Energy Data Bank

Finally, energy policy can only be adequately formulated if sufficient accurate data is available to each country. We must develop a world energy data bank and information sharing arrangement to enable individual nations to set sound policy as well as full coordination of world energy policy. This would serve as a repository for public data now available, but scattered and serve as a focal point for

efforts to coordinate our respective national energy policies and adhere to a new code of market conduct.

CONCLUSION

In closing, let us use this Conference as the touchstone for a future of increased cooperation. Let us work toward open system in which all those capable of finding, developing and marketing energy resources can have an opportunity to do so. Nationalization without prompt adequate and effective compensation by producing nations or unconstrained bilateral deals between producing and consuming governments will be counterproductive to all. Such bilateral arrangements will result in divisive competition which will inevitably work to the detriment of each individual buyer as well as the entire world.

We are facing a dramatically changing situation in the world energy scene.

The present unstable situation is not in the long-term interest of current oil exporters, although the short-term flow of wealth and political power may make it hard for them to see the long-term disadvantages. The world is reacting to high prices by reducing demand and will develop alternate sources of energy which in turn will lead to lower prices in the world market. Moreover, the short-run actions of the oil exporters have made oil in the ground a relatively poor investment because its value will fall over the next decade. For example, using an 8 percent rate of return and a price of $10.00 per barrel in 1974, the price of a barrel of oil would have to rise to $21.59 by 1984 to produce the same rate of return. The present price levels present grave potential problems for all consuming nations. The oil producing nations cannot benefit from price levels which result in unemployment and inflation in Europe and Japan, and damage to the world economy as a whole. It is clearly in the best interests of the oil oil producers that the world economy maintain sound growth.

In the near term prices lower than those being charged at present would be in the economic interest of both producers and consumers, particularly if consumers had confidence in the stability of supply. High cost alternative sources would not then be encouraged to so great an extent, and producers could expect continued gradual increases in their national incomes as their economies developed the capacity to absorb

increasing imports of capital and technology. Consumers now suffer from the effects of the sharp and sudden upswing in prices. Producers are likely to suffer at some later time from the downswing in prices caused by the market's strong reactions to present high prices.

Ideally, what is needed is a diversity of consumers and producers operating in a cooperative international framework. Recently, we have seen some hopeful signs that oil producers are also interested in adjusting oil prices to assure a stable world economy. We should work cooperatively to see that this is done.

Together, we can prevent unemployment. Together, we can prevent a worldwide monetary crisis. Together, we can maintain economic progress.

I believe there is reason for optimism. We have the capacity and resources to meet our energy needs, and the United States stands ready and willing to help build a structure of international cooperation with producers and consumers alike.

Thank you.

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OUTLINE OF STATEMENT
BY
THE HONORABLE GEORGE P. SHULTZ
SECRETARY OF THE TREASURY
TO
THE INTERNATIONAL ENERGY CONFERENCE
WASHINGTON, D. C.
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THE NEED FOR CLOSER INTERNATIONAL-FINANCIAL COOPERATION

Finance officials have a duty to work closely together in the realization that even our best cooperative efforts will offset only a fraction of the serious damage which has been done to many countries by the abrupt and spectacular increases in oil costs.

At the same time, we must carefully avoid creating the misleading impression that such cooperation provides any panacea for the serious economic problems before us. There is no international financial arrangement which can offset the real effects of the oil price changes. It is important that we not kid ourselves here - that we not, as Ministers of Finance, give the impression that somehow or other we can print up some money and use it to "paper over" very real problems.

The problems are there. There is no way to concoct a financial solution that will avoid facing up to severe dislocations; and I think particularly for the developing countries, as has been brought out by many speakers here, great deprivation - in a sense we have that horrible chain in which the lack of fuel goes to a lack of fertilizer, goes to a lack of food, and which goes to starvation. So a point that I want to make is that, I think for many, the situation

is not one in which we say to ourselves: "Yes we see the problem. Let us understand it, and then figure out how somehow through financial means to handle it." It is for many not a manageable problem in its present state. And we have to see how it can be changed so that it is manageable.

We need to be concerned not only with the direct impact of higher prices and supply disturbances on our economies, but also with the serious threat of secondary repercussions from instability in financial markets, from inconsistency in internal economic management and in balance of payments policies, and from impaired economic development. These are areas in which we can make a contribution; and why now, more than ever, we have an obligation to seek the optimum contribution from close international economic cooperation.

We have heard reports in this Conference already that this year, and over the next few years, the standards of living of the more developed nations will be reduced significantly below previous expectations. In the short run, we are facing the problem of adjusting to reduced supply, and this has affected our immediate prospects for growth. But as this problem is met, our real income will continue to be affected both by the higher costs of energy imports and by the higher expenditures which nations will find it prudent to make in reaching reduced future dependence on imported energy. Nonetheless, the standards of living of the nations here represented will remain a large multiple of those of some of the less favored nations.

In contrast, the effects of the oil price changes are likely to be near catastrophic for some of the poor areas of the world. In some countries, it is even probable that the new energy costs will result in a reduction of standards of living over the next few years from the present abysmally low level -- to the point, in some cases, of starvation.

We have heard estimates that even after projected reductions in market prices of oil below present levels that:

-- the developed countries could have their combined current account deficits worsened by as much as $40 billion;

-- the developing countries could have their current account deficits increased by as much as $10 billion; and

-- the oil-producing nations could add as much as $50 billion to their foreign asset holdings;

all in the one year, 1974.

In the face of such possibilities, I suggest that it would be in our mutual interest to agree on some basic principles on how we should respond in our economic policies, national and international. I put forward three principles for your consideration:

I. First, at a time of vast new uncertainty, let us each recognize the need to develop internal policies that maintain our production and demand, and deal with inflation, without aggravating the problems of others. This will require not only particularly careful analysis, but also particularly close international consultation

and cooperation. In this connection, we know that the "cost-push" effects of oil prices reinforce the strong upward pressures on our price levels. Yet, at the same time, we need to recognize that the greatly increased cost of our oil imports could affect our economies as would a massive increase in taxes from which the revenues were not currently being spent. In this case, of course, this "tax" will be reflected in higher dollar imports, rather than government revenues. But that import bill should not carry the same connotation, or draw the same policy response that we usually associate with a deteriorating trade position. We must realistically take account of potential increases in exports to oil-producing countries, and more important quantitatively the potential large availability -- directly and indirectly -- of flows of investment funds from the producing countries.

II. Second, in our international policies we must agree to keep open our markets for goods and capital, and to avoid the temptation of competitive

devaluations. No nation can impose trade restrictions, and other beggar-my-neighbor policies without engendering retaliation, so that the whole process would be self-defeating and destructive. Now, more than ever during a period when international adjustments will necessarily have to be large and rapid, governments must maintain momentum for the removal of existing distortions from the international economy. They must proceed resolutely with planned trade negotiations and with feasible further dismantling of capital controls. And they must agree to undertake special efforts to resist those pressures for the introduction of special-interest-serving government controls and interventions which are likely to be put forward during any time of rapid economic change.

III. Third, in our development policies, we should endeavor at least to maintain recent levels of assistance to the most seriously disadvantaged nations; and encourage oil-producing nations with rapidly increasing holdings of foreign assets to take immediate steps greatly to expand their programs

of assistance for the developed nations in full cooperation with industrial nations and international institutions.

In the light of the new burden of energy costs upon their economies and their balance of payments, it will not be easy to maintain a climate of opinion in the developed nations to maintain or increase past levels of assistance to the least developed nations. But, in view of the extreme distress faced by some areas of the world, and the economic and political consequences, it would be shortsighted and inhumane for the developed nations to curtail assistance plans and programs at this time of greatest need.

But even with continued assistance from the traditional providers of aid, the least developed nations are faced with a tremendous gap in needed resources. Some of the most important oil-producing nations -- themselves moving rapidly from poverty to affluence and with natural understanding for the problem -- can reasonably be called upon for a major contribution toward reducing that gap.

No channel of aid should be neglected. Increased assistance may be made available through direct country-by-country relationships, through new or already established regional institutions, and through increased contributions

to the existing broad multilateral financial institutions. But -- in view of the extreme need and the weakened financial position of many of the least developed nations -- it is essential that a substantial proportion of the increases in assistance be in the form either of outright grants or of their equivalent.

As we seek to incorporate these general principles into practical actions, I believe our work can be divided naturally into four broad areas of cooperation:

1. Measures to help ensure that we maintain open markets.
2. Measures we can take to deal with or reduce the uncertainties inherent in the present situation -- uncertainties related both to the extent of oil price increases and to the directions in which the flows of producing-country money -- much of which will be short term -- will be channeled.
3. Measures we can take to facilitate a larger portion of these funds to move into longer term investment in ways beneficial to both the investing and recipient nations.
4. Measures we can take to encourage and facilitate the flow of resources from oil-producing countries to LDC's, particularly the poorest of them.

I. Measures to Maintain Open Markets

The principle of avoiding restrictions on trade and payments that have the effect of transferring problems to others has wide support -- the question is how we can reinforce that principle in practical institutional and operational terms.

The countries here represented include the largest trading nations. Should we not pledge among ourselves, here and now, to take no trade restricting measures -- surcharges, quotas or their equivalent -- for balance of payments purposes?

For the future, we would be willing to consider new institutional means and procedures whereby we would pledge no trade restricting action for balance of payments without prior discussion and approval by the IMF.

I. Measures for Dealing with Uncertainty

A. We know, in the aggregate, the money spent for oil, and not used for our exports, will flow back, largely short term. But each country is left uncertain as to the size of its increased import bill and the directions which the reflow of investment money will take. Some countries may naturally attract more or less of this money than their increased balance of payments drain.

1. Much of this sorting out can take place in private markets, and by official borrowing, where necessary, in private markets. Obviously, the flows may take place through home markets or third markets, such as New York or the Euro-currency markets.
2. In sheer bulk, this is mainly a problem for developed countries. Because some LDC's may have special difficulties obtaining credit, different techniques will be necessary there.

B. One thing we can do is be sure private markets are sufficiently free to do the recycling job.

1. Removal of U. S. controls has opened the largest and most efficient capital market once more to the world. Other nations have made moves in the same direction. I believe the results will be beneficial.
2. In the present situation, part of our financial "ethic" should be to permit our nationals to borrow abroad, particularly for countries facing deficit. Conversely, potential surplus countries should permit funds to flow out.

C. Private borrowings, in some cases, will need to be supplemented by official borrowing. Our markets, the Euro-markets, and some others are open. But, possibly, a scramble for money, and sharp pressures on one market or another, could develop in no one's interest. Therefore, it may be worth considering at least informal and confidential exchanges of information about prospective borrowing operations among major nations. Then nations could act in the knowledge of each other's intentions, and help avoid alternate periods of congestion and vacuums in money and capital markets that could in turn affect exchange markets.

D. At times, intergovernmental borrowing may be necessary and desirable, and a greater sense of certainty

that such facilities would be available in time of need could be very useful -- even if it turns out in the end that such facilities are not used heavily, or at all.

1. This is classic purpose of IMF credits, and those lines fortunately are little used at present. Consequently, there is some spare capacity.
2. A further line of defense, which can readily be expanded, are central bank swap lines. We have indicated a willingness to do this, at least on a selective basis, and we would welcome discussion of the appropriate role and limits of such facilities.
3. Beyond these facilities, the question arises as to whether existing international institutional facilities need to be expanded and rearranged to deal with uncertainty about the direction in which funds will move and, if needed, rechannel funds to take care of balance of payments needs in short or medium term. As we understand it, the proposal made by Mr. Witteveen falls into this category, and has attracted most attention.

a. We feel it essential, in evaluating this proposal, to distinguish sharply the problem of uncertainty and the need for rechanneling potentially sizable amounts of money for limited terms among countries able to repay relatively promptly from the more severe (but quantitatively smaller) problem of the poor LDC's which need grants and heavily concessional long-term aid.

b. Even among developed countries and more prosperous LDC's, a Witteveen-type proposal presents difficult technical and negotiating problems in deciding upon suitable terms. We await further eleboration of Witteveen's thoughts, and in particular how the risk of building up nominally short-term, but in fact unrepayable credits can be handled. We intend to react constructively.

III. Measures to Facilitate Orderly Longer Term Investment Patterns

A. Removal of restraints on longer term investment is equally relevant.

B. Given the vast flow of potential investment, serious and difficult questions arise in the minds of both investors and recipients that may hamper flows:

1. The investor wants and needs the widest possible diversity of outlets (i.e., open capital markets), professional investment management; and confidence that his investments are secure from political action by recipients.

2. The recipient wants to have some assurance that investments will not be managed for political purposes, and the prospect of reasonable stability in flows.

C. I have no specific proposal in this area. However, I raise for discussion one question: Should we consider a new international investment institution

-- a kind of multinational joint venture, with participation in management by both investor and recipient nations -- as a means of helping to satisfy the concerns I have cited. An essential aim of the institution would be to achieve a diversity of profitable investment outlets, with

expert investment management, for the producers. At the same time, the multilateral umbrella might help put to rest mutual fears of political reprisals, thus encouraging recipient countries to permit larger amounts of investment and encouraging investor countries to commit sizable funds for extended periods.

Obviously, in managing such an institution, the investing countries would legitimately maintain control over some basic decisions concerning the volume and distribution of the funds. Many complex organizational problems would arise. Are they worth discussion?

D. We might exercise our collective imagination to devise other means of better assuring the safety and stability of investments.

An international investment guarantee agency has been discussed at length in the past -- fruitlessly. But now the problems appears in another guise and fresh thinking with the producers may be desirable.

The U.S. earlier advanced the concept of an "investment fund" for countries with large official pools of investment money. This concept rested on an essentially simple "code of conduct" or "rule of the road." A recipient country would be

entitled to know how much investment of what type was being made by other governments in its currency, and to limit the aggregate amount of that investment. But having agreed to that investment, it would also agree to treat that investment in a nondiscriminatory manner.

These questions might well serve as the basis for further international study.

IV. Measures to Encourage the Flow of Resources from Oil-Producing Nations to the Less Developed Countries

-- The LDC's pose a special problem. The prospects of the poor nations, even before the quadrupling of oil prices, were marginal at best. To all, it must be clear that for some of the poorest nations oil prices at current levels spell misery and even starvation.

A transfer of resources cannot be done by one group of countries alone. The industrial nations must continue to provide their historical levels of assistance or better. This will not be easy in face of growing concern about domestic impact of energy crisis. Our Congress has illustrated its sensitivity to this problem in its first vote on the IDA Replishment. We do not

mean to let that vote stand as the final word.

I say to you, quite frankly, that the vote in our House of Representatives, a couple of weeks ago, on the IDA (International Development Association) IV replenishment was a great disappointment to us and we do not intend to let it stand! We intend to work to turn that around and to maintain the flow of development aid from the United States to the developing countries. We must meet the argument that all we are doing is paying out aid for the developing countries to flow back to the Arab countries and only support the price of oil. That is the argument used against development aid, and we think there are good arguments against it, and we intend to use them and use them aggressively.

-- At the same time, industrial nations cannot be expected to pay for the cost of increased oil bills to LDC's. That responsibility must fall primarily on the oil producers.

-- But the industrialized nations can and must cooperate with producers to facilitate the required flows from producers.

The U.S. would be pleased to join in studying concrete proposals to bring about this goal and believes the following items might usefully be included on a study agenda:

1. Assuring the oil producers play a full role as members or associate members of development organizations, including the Development Advisory Committee and regional economic institutions as well as the World

Bank and the IMF. In view of their increased economic standing and the greater financial responsibility they are being asked to assume, a prompt provision of larger voting shares in the latter two institutions may be appropriate.

2. Encouraging greater participation in management and staff roles in these organizations by producer nations would also seem appropriate.

3. Expansion of the World Bank and the IMF services as agents to the producer countries for loans to the LDC's.

These services can include participation in conventional loans and in concessional financing. A direct contribution to, or alongside, IDA IV would be extremely helpful. Our existing institutions, as well as national governments, can also provide direct technical assistance to bilateral and regional assistance programs of producers to achieve a high level of assistance as rapidly as possible.

4. A larger producer share in planned world and regional bank borrowings.

These institutions, instead of floating issues on the world capital markets, would offer bonds at reasonable rates to oil-producer nations.

5. A rechanneling of loans from existing oil-producer loan recipients -- who now have more funds than they can absorb domestically -- to the poor nations. Newly affluent countries can afford prepayment of past loans, and should be less dependent on new loans. The potential for a rechanneling of loans in these ways is substantial.

6. Beyond the redirection of planned borrowing, the World Bank already has guarantee capital sufficient to permit larger lending and larger borrowing in producers' markets. Lending from ordinary capital raised in this manner could be appropriate for some LDC's, who can afford to pay loans at near market rates provided the repayment terms are long.

I must stress that almost all of the above measures involve loans -- not grants, near-grants, or heavily concessional terms. The poorest nations require a major direct effort to offset the devastating impact of higher oil prices. The offset must come first in the form of lower prices and then from grant aid. Industrial nations can and must be expected to contribute in historical levels of money, institutional expertise and technology to mix with Arab funds in providing the tools to help these poorest nations do the job.

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This then brings me back to where I started. In a way, the problem is a large one as everyone tells each other. Cooperation is essential, as everyone tells each other, but at the same time I think we still need to keep reminding each other that cooperation,

handling things with a sense of balance, financially, is not a substitute for changing the problem so that the problem is more manageable. There is no way to print up money and use it to "paper over" a real problem. We must face the real problem in its own terms and do everything we can to solve it. Thank you Mr. Chairman.

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