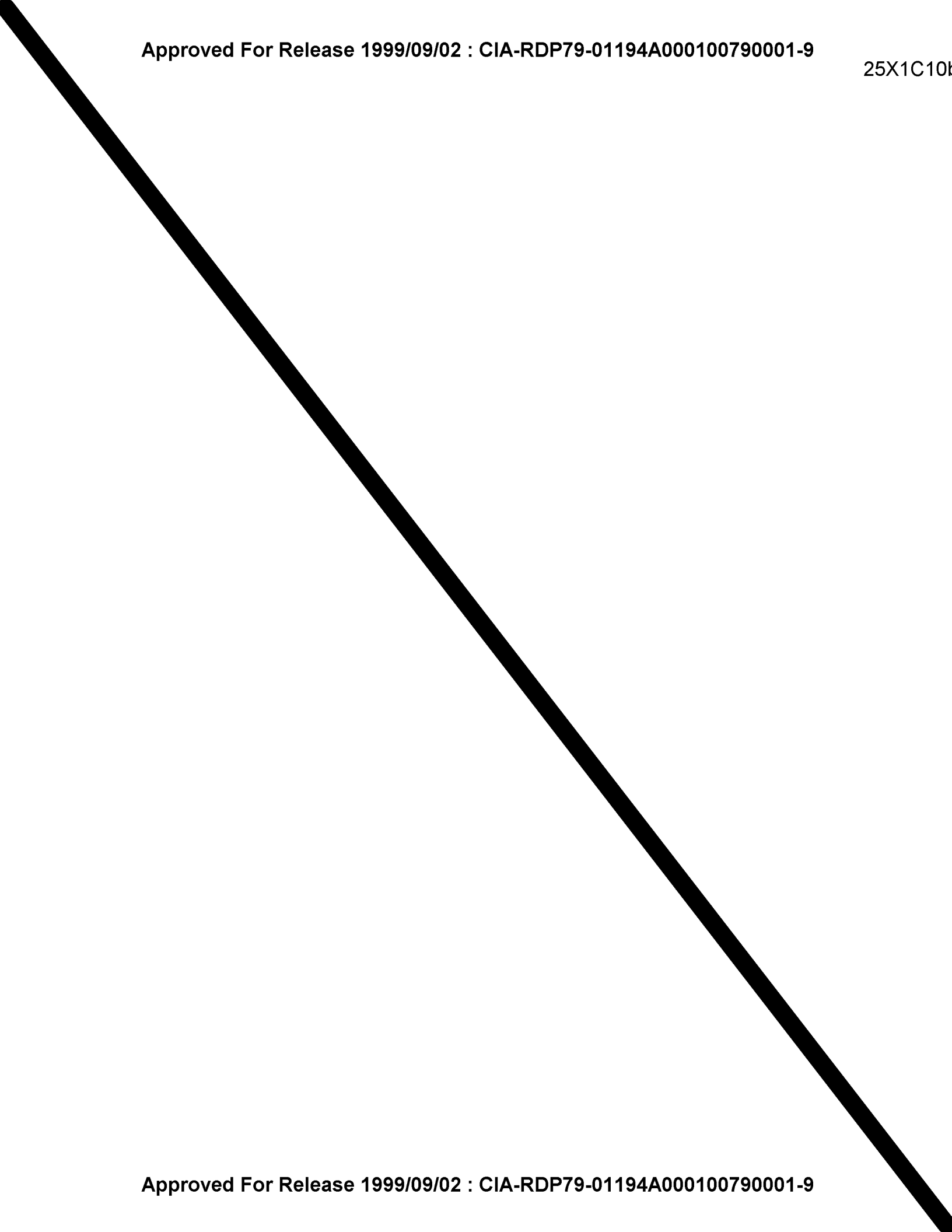

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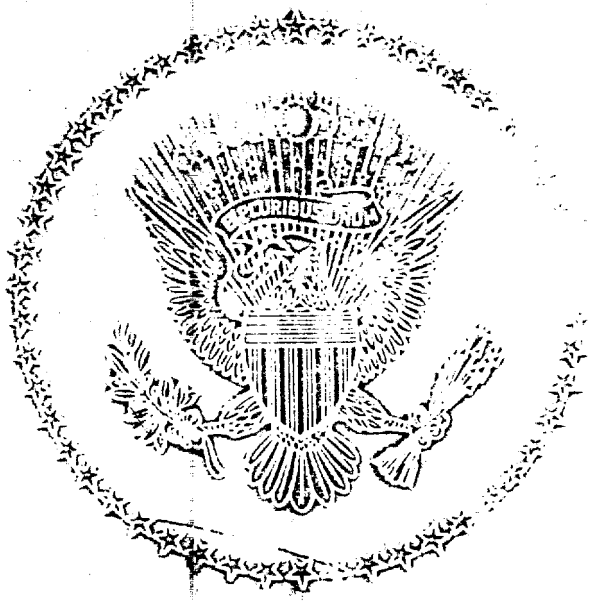
ECONOMIC REPORT OF THE PRESIDENT

TRANSMITTED
TO THE CONGRESS
FEBRUARY 1974



To the Congress of the United States:

The United States enters 1974 in a position of leadership in the world economy. The dollar is strong, we have constructive economic relations throughout the world, and we have the greatest freedom of action resulting from our great capacity to produce. We must take the responsibilities and the opportunities this position of leadership gives us.

Nineteen hundred and seventy-three was a year of problems and progress in the American economy. In some respects the problems were greater than we expected and the progress was less than we had hoped. But the areas of our solid achievements were more important than the areas of our disappointments. We and the world around us have difficult tasks ahead—primarily to deal with an old problem, inflation, and to deal with one that has just become acute, energy. But the United States confronts these difficulties with a strong and adaptable economy, which means an economy of capable and enterprising people.

In the middle of 1971, when the New Economic Policy was launched, the country had three economic objectives: to promote the expansion of output and reduce unemployment, to correct the persistent deficit in the U.S. balance of payments, and to check the inflation which had been going on for 5½ years. To achieve these objectives a comprehensive program of action was initiated. Taxes were reduced. Price and wage controls were instituted. The exchange rate of the dollar was set free to adjust to market conditions, and steps were initiated to improve the international monetary system.

There has been great progress toward two of these three objectives. Production and employment have risen rapidly. Total civilian employment was 6.8 million higher in December 1973 than in June 1971. The unemployment rate had fallen from 6 percent to a little under 5 percent. In 1973 a larger percentage of the civilian population over the age of 16 was employed than ever before.

With vigorously rising employment, and rising productivity as well, there was a big increase in output of goods and services, the essential ingredients of higher living standards. In the 2½ years of the New

Economic Policy, total output increased by 14 percent, which is about 35 percent above our average for a period of this length. The real income of American consumers per capita, after taxes, rose by 8½ percent, also well above our long-term rate. Both real output and real income, of course, reached record highs.

The second goal of the New Economic Policy, to strengthen the international financial position of the United States and of the world, was also largely achieved. The significance of this goal is commonly neglected in America. But a country whose currency is weak, whose currency others don't want to hold, is greatly limited in what its government and citizens can do—in buying goods abroad, in traveling freely, in investing freely, in maintaining forces abroad if necessary. And if a country goes on spending more abroad than it earns abroad, its freedom of action is going to be curtailed. There has been a dramatic change in our balance of trade, from a deficit of $917 million in the first half of 1971 to a surplus of $714 million in the second half of 1973. We have not only improved our own position but we have also taken the lead in strengthening the international system. The more flexible system we have promoted withstood numerous shocks during 1973, and at the same time the world economy and international trade and investment continued to expand.

It is the third of the three objectives of the New Economic Policy—the control of inflation—that has been our great difficulty. Until the end of 1972 the New Economic Policy, drawing on the results of earlier fiscal and monetary restraints, worked well in getting the rate of inflation down, even though worrisome rises in food prices appeared. But in 1973 inflation speeded up sharply. During the year, consumer prices increased by almost 9 percent.

Of course, the progress on the first two objectives was connected with the disappointment on the third. The rapid rise toward full employment, the expansion of our net exports, and the reduction in the value of the dollar to make the United States more competitive, all contributed to the resurgence of inflation. But there were other factors at work, less directly under our control. Food production lagged in major producing countries, including the United States. An extraordinary combination of booms in other countries boosted prices of industrial materials. Countries jointly controlling a large part of the world's exportable oil supplies decided to raise their prices substantially. During 1973 food prices accounted for 51 percent of the total rise of consumer prices, and energy prices accounted for another 11 percent.

The American people generally prospered despite the inflation in 1973. Their incomes, on the average, rose more than prices. But there were many families for which that was not true. We cannot accept continuation

of the inflation rate of 1973, and still less can we risk its acceleration. We must dedicate ourselves to carrying on the fight against inflation in 1974 and thereafter.

There are at least four lessons we can learn from our past experience in combating inflation:

1. *The importance of patience.* To correct a powerful trend of the economy which has been going on for some time requires time. Sharply squeezing down the economy in an effort to halt inflation would produce a severe drop in employment and economic activity and create demands for a major reversal of policy. Pumping up the economy to get quickly to full employment would risk setting off even swifter inflation. We need a greater steadiness of policy.

2. *The importance of the rest of the world.* The events of 1973 brought our external economic relations sharply to our attention. Most simply put, it will be exceedingly hard for us to have a stable economy in an unstable world. We must contribute a stabilizing influence to the world economy of which we are a large part. We must promote concerted efforts to maintain the health of the world economy.

3. *The importance of production.* Despite other vicissitudes, what determines the economic well-being of the American people more than anything else is the rate of production. The rapid increase of production has provided the rising real incomes of the American people. More specifically, increasing food production is the best way to deal with the food price problem, and increasing our energy supplies is the best way to deal with the energy shortage. We think of ourselves as a Nation with high and strongly rising output. We are. But we can do better and it is important that we do better.

4. *The importance of free markets.* In the past several years, under the pressure of emergency conditions, we have made great, but temporary, departures from reliance on free prices and free markets. In special circumstances and for short periods these departures have been helpful. But taken together, these experiences have confirmed the view that the free market is, in general, our most efficient system of economic organization, and that sustained and comprehensive suppression of it will not solve the inflation problem.

At the beginning of 1974 the three problems which have dominated economic policy for many years—inflation, unemployment, and the balance of payments—have been joined by a fourth—the energy problem. Or rather, the other three problems have been pervaded by the energy problem. The present oil situation means that we are paying much higher prices for imported oil than formerly and that the volume of imports at the present time is less than we would freely buy even at those prices. But the

prices and volumes are both highly uncertain and add uncertainties to the economic picture for the year.

The current and prospective oil situation will at the same time raise prices, limit production in some industries, and reduce demand in others. It will be the objective of the Administration's policy to do three things in this circumstance:

1. To keep the moderate slowdown of the economic boom from becoming excessive because of the energy shortage;
2. To keep the rise of fuel prices from spilling over unnecessarily into more inflation in other parts of the economy; and
3. To set the stage for stronger economic expansion with greater price stability after the initial price and output disruptions caused by the energy shortage have been absorbed.

Achieving these goals in this unpredictable economic environment will require alertness and adaptability. We cannot set a policy at the beginning of the year and let it run without further consideration. But we can describe the main elements of our present strategy.

1. We will maintain a budget of moderate economic restraint. Even though the combination of urgent requirements and inescapable commitments generates pressures for huge expenditure increases, the budget I will propose will keep the expenditures within the revenues that the tax system would yield at full employment.
2. We will be prepared to support economic activity and employment by additional budgetary measures, if necessary.
3. We urge the Congress to enact the legislation I proposed last year for improving the unemployment compensation system, with further strengthening amendments I will submit. This would provide better protection for workers who may lose their jobs, whether because of the energy shortage or for other reasons, and also help to protect the economy better against the secondary effects of their unemployment.
4. Working together with other consuming countries, including the developing countries, and with the oil-exporting countries, we will try to arrive at an understanding on mutually beneficial conditions of exchange.
5. We will try to manage the energy shortage in such a way as to keep the loss of jobs and production to a minimum, although some loss is inevitable in the short run. The allocation system is designed to assure an adequate flow of oil to those industries where lack of it would limit employment the most. We shall also have to provide

or permit incentives—including higher prices—for maximum imports, for maximum domestic exploration and production, and for efficient use of our scarce supplies. To prevent higher prices from causing excess profits, I have proposed an Emergency Windfall Profits Tax, which I urge the Congress to enact promptly.

6. We will work with other oil-importing countries to prevent the higher prices of oil and its limited supply from generating a downward spiral of recession. The higher prices will cause dislocations and impose burdens on all consuming countries; they do not have to cause a spreading recession if we manage our affairs cooperatively and wisely.
7. We will continue our policy of maximum agricultural production to help hold down food prices.
8. We will continue our policy of progressive removal of price and wage controls in order to restore the flexibility needed for efficiency and expansion in a time of economic strain.

The effort to maintain the stability of our economy in the face of the present unusual conditions will absorb a great deal of attention this year. But we must not neglect the fundamental factors which determine the prosperity of the American people in the longer run. One of these has come to general public attention with a rush—the need for adequate supplies of energy at reasonable cost. We are seeing the possible consequences of being deprived of these, and we must not allow it.

The energy problem has had two main parts for some time:

First, with rapidly rising world demand for energy, most of which comes from depletable resources, we could run into sharply increasing costs of energy unless vast investments are made in research, development, experimentation, and production.

Second, we are exposed to the danger of being thrown back upon inadequate or very expensive sources of energy earlier than necessary by joint action of a few countries that control a large part of the existing low-cost reserves of oil.

To deal with this problem I began proposing, almost 3 years ago, a number of governmental measures to permit or assist development of energy within the control of the United States. In 1973 the second part of the problem, which had formerly been a threat, became a reality at least temporarily, and this has demonstrated unmistakably the urgency of the steps I have recommended.

I propose that the United States should commit itself to "Project Independence" to develop the capacity for self-sufficiency in energy supplies at reasonable cost. One key element of Project Independence is a

5-year, $10 billion program of federally financed research and development in the field of energy. My budget for fiscal year 1975 will include almost $2 billion for this purpose. By far the largest part of the research, development, and production required by Project Independence will be private, and steps to stimulate the private contribution are essential. Among the numerous measures to this end which I called attention to in my latest energy message on January 23, were several tax proposals. Last April I proposed that the investment credit be extended to cover exploratory drilling for new oil and gas fields, while the tax shelters for wealthy taxpayers associated with such drilling would be eliminated. In my recent message I asked Congress to eliminate the depletion allowance given to U.S. companies for foreign oil production but to retain it for domestic production, in order to shift the incentive to exploration and production at home. I have also asked the Treasury Department to prepare proposals for revising the treatment of taxes paid by oil companies to foreign governments, both to improve tax equity and to increase the incentive for domestic production.

Energy is only the most dramatic example of the need for policies to promote a rising American standard of living by increasing production and assuring the stability of supplies. There are many others.

I. We have discovered that we no longer have a surplus of food, in the sense of producing more than we need either to consume at home or to sell abroad in order to pay for the things we buy abroad. We no longer have great reserves of food in storage and acreage withheld from use. We have freed the American farmer to produce as much as he can and we should keep him free. American agriculture is, and should be, heavily involved in exports. This means that the American food price level and the American consumer are directly influenced by the forces of world demand and supply. International cooperation is needed to promote food production and the maintenance of stocks adequate to shield consumers from the more extreme variations of output. At the call of the Secretary of State, preparations are now being made for a conference on this subject to be held under United Nations auspices.

II. Our ability to buy abroad what is produced more efficiently abroad, and to sell abroad what we produce more efficiently, contributes to the productivity of the American economy. At my recommendation the countries of the world are now preparing to negotiate new steps in foreign trade policy which will further invigorate this beneficial process. I urge the Congress to enact promptly the trade legislation I have proposed to permit the United States to participate in these negotiations.

unfortunately shot through with inefficiencies. Many of these inefficiencies are the result of obsolete, shortsighted, and excessive regulation. Hundreds of millions and probably billions of dollars a year could be saved by unleashing carriers and shippers to carry the freight on the most efficient mode of transportation, in the most efficient way. I have sent to the Congress new proposals to this end.

IV. In 1973, as in 1972, relatively few days of work were lost as a result of industrial disputes. Continuation of this record would be a valuable contribution to the level and stability of production. I have appointed a Commission on Industrial Peace, composed of leaders of management and labor with an impartial chairman, to make recommendations for bringing that about.

V. In addition to the major research and development effort to provide secure supplies of energy, without abusing our natural environment in doing so, this Administration is continuing its support of research and development projects that will help maintain a healthy rate of innovation and productivity growth in the rest of our economy. These activities will be supported at record levels in the coming year, and we are also trying to get a higher return for every dollar we spend.

VI. An indispensable source of economic growth is saving and investment in productive facilities. It should be the policy of government to interfere with this process as little as possible. The government should not absorb private savings into financing its deficits in times when private investment would otherwise utilize all the private saving. Our basic budget policy of balancing the budget or running a surplus under conditions of high employment carries out this principle. Moreover, taxation should not depress productive investment by unduly burdening its return. We should not indulge in demagogic and shortsighted attacks upon profits.

VII. We must push forward, as we have been doing, to remove barriers against the entry of women and minorities into any occupation and against their maximum training and advancement. The men and women of the country are its greatest economic resource. To fail to use any of this resource to its full potential is a serious loss to us all.

* * * * * * *

Compared with our parents and grandparents we are enormously rich. We have protections against the ebbs and flows of economic life that they never expected and barely imagined. But I cannot assure the American

people of an easy time. Like our parents and grandparents, we have our own tests. If we meet them with fortitude and realism the period ahead can be one not only of material advance but also of spiritual satisfaction.

Richard Nixon

February 1, 1974.

THE ANNUAL REPORT
OF THE
COUNCIL OF ECONOMIC ADVISERS

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CHAPTER 1

Economic Problems and Policies

FOR EIGHT YEARS economic policy and the news about the economy have been dominated by inflation. The story has been a frustrating one. Over the period from the end of 1965 to the end of 1973 consumer prices rose by 45 percent, or at an average rate of 4.8 percent a year. There were fluctuations. Twice during the period the rate of inflation declined significantly. But in the last of the 8 years the rate of inflation was higher than in any of the others. During the 8 years the inflation came in various forms—sometimes led by wages, sometimes by prices, by foods, by oil; sometimes it was domestic and sometimes imported. Many programs have been launched to stop it—without durable success. Inflation seemed a Hydra-headed monster, growing two new heads each time one was cut off. The problem was not confined to the United States; indeed inflation was worse in most other countries.

Several important points seem clear to us from the experience of the past 8 years. One is that while continued rapid inflation is not inevitable, the course of unwinding it will be long and difficult. There is by now a great deal of inflation built into our system. For one thing, both workers and employers are now used to high increases in money wages which reflect the expectation of rapid inflation, and only gradually can these be moderated. Inflation is similarly built into the level of interest rates. The public is highly sensitive to inflation and reacts in an inflationary way to any news which confirms its expectation of inflation. Against this background, to hope that we can "wring the inflation out of the system" by the end of some short period is to assure disappointment. Whoever undertakes now to fight inflation must be prepared to stay the long course. We think it is necessary to do this, and also to recognize why we must do it. Experience extending over almost a decade teaches us that if we do not fight inflation effectively it will accelerate.

The American people have prospered over the past 8 years. Our real incomes have risen. Our real consumption expenditures have risen, and our real assets have risen, in total and per capita. These are facts of great importance. But they do not relieve us of the need to bring inflation under control, and to accept the cost of doing so for the sake of avoiding the greater costs of an accelerating inflation.

We have specific problems, too, aside from the general inflation problem. There are many things the American people want to do, collectively or individually. They want to maintain an adequate defense, to clean up the environment, to provide more generously for the disadvantaged, to improve standards of health, and also to continue to raise the quality of their lives in all the ways that involve more private consumption. At the same time, we see unusual obstacles to more rapid increases of production—the increased costs of energy being the most obvious one at present. Beneath the tide of inflation the basic economic problem of increasing production goes on and requires attention, even in a country as rich as ours.

The problems of specific price increases must be distinguished from the general inflation problem. Increases in some individual product or service prices beyond the average are essential, if we are to maintain supplies and allocate shortages. The attempt to suppress the increase of particular prices, while it may be necessary in emergencies, is in general not an effective way to combat inflation and is harmful to production.

WHERE WE STAND AT THE OUTSET OF 1974

We enter 1974 in a condition of high inflation and in the early stage of a slowdown, one result of which will be to reduce the rate of inflation, although not immediately. All the features of this situation—the high rate of inflation, the slowdown of output, and the slowdown of demand—are intensified by the higher prices and reduced imports of oil. Moreover, the oil situation makes the period ahead even more than usually difficult to predict. Decisions of the oil-exporting countries, resulting from a mixture of economics and politics, cannot be foreseen. American businesses and consumers are faced with unprecedented increases in relative prices and curtailments in supply, and no one can tell just how they will react in their consumption and investment. Other oil-importing countries will be seriously affected by price and supply developments in oil, and their responses will have repercussions here.

The rapid price and wage increases that were being experienced at the end of 1973 will undoubtedly be carried on and passed through in the early part of 1974. In the fourth quarter of last year, wholesale industrial prices other than for energy products rose at an annual rate in excess of 11 percent. Much of this rise will appear in retail prices in early 1974. Similarly, large increases that have already occurred in crude oil prices have not yet been fully reflected in retail prices. Wholesale food prices were also rising as the year ended, and the outlook was that tight supplies would boost retail prices in the first months of 1974. The rate of wage increases had been drifting up during 1973, and since the cost of living was also continuing to rise rapidly, this trend of wages was unlikely to be reversed soon.

Thus, a high rate of price and wage increases, although possibly not as high a rate as in 1973, seems inevitable in the first part of 1974. But

beyond the early months, the course of inflation is as yet undetermined. Prices of oil and related products will not go on rising at the rate of late 1973 and early 1974, but will presumably reach some new high level from which they will be no more likely to rise than to fall. There is also a prospect of larger world food supplies. In general, as we go through the year the course of prices will be less and less a reverberation of what happened in 1973 and increasingly the outcome of events and policies in 1974.

The year 1974 also began with demand rising less rapidly than during most of 1973 and production possibly not rising at all. In the fourth quarter of 1973, total expenditures for the purchase of output rose at an annual rate of about 9½ percent, compared to about 12 percent in the year ending in the third quarter. Real output rose at the rate of about 1 percent after an increase of about 5½ percent in the preceding year. There seems little doubt that this sluggishness will continue in the early part of 1974 and that total output may decline. Automobile production is being cut back sharply, partly because of the effect of high prices and shortages of gasoline on the demand for large cars. The recent weakness of housing starts and permits indicates declining residential construction during the first part of the year. The high prices for oil being paid to foreign suppliers will hold down expenditures for U.S. output. There will be some cases, although one cannot be sure how many, in which production is held back by shortages of energy or energy-related materials.

Just as a high inflation rate seems predetermined for the early part of the year, so does a fairly low rate of increase of production, which might in fact for a while be negative. But the situation at the beginning of the year does not appear to presage a very long or severe slowdown. There are a number of factors tending to support the expansion of the economy, including substantial planned increases of business fixed investment. How soon a revival will come, and how strong it will be, also depend on events and policies of 1974.

GENERAL ECONOMIC IMPLICATIONS OF THE ENERGY PROBLEM

The nature of the problems with which policy has to contend in 1974 depends substantially on the energy situation—on the volume of oil imports, on their prices, and on the policies adopted in the United States. Total imports of oil expected in 1974, before measures were taken by some exporting countries beginning in October 1973 to curtail shipments and raise prices, were about 40 percent of expected petroleum consumption in 1974. This was about 20 percent of expected energy consumption in 1974, since petroleum would have supplied about 50 percent of total energy use. The countries participating in the embargo of the United States had been expected to supply, directly and indirectly, about 16 percent of our petroleum use and 8 percent of our energy use. This would have been the extent of the initial supply reduction if the embargo had been fully effective.

This curtailment of supply does, of course, lead to adaptations. Prices of oil imported into the United States are free from price control, as are prices of oil produced by certain small (stripper) wells and of "new" oil produced by other wells in excess of their base period production. These prices can be passed on in prices of refined products. Thus, a shortage of oil in the United States raises the prices of oil in these categories and increases the supply, both of imported oil and of domestic oil, offsetting some of the initial effects of the curtailment. Also the higher prices reduce the quantity consumers and businesses want to buy. Therefore, the whole initial curtailment does not appear as a gap between desired quantities and available quantities.

In time, and despite the existence of the price controls, prices might rise enough to clear the market, and there would be no "shortage" in the sense of inability to buy petroleum products at the prevailing prices. The uncontrolled prices, whether of imports, of "new" oil, or of oil from stripper wells, would rise to a level which, when averaged in with the controlled prices, would equate the quantities demanded and supplied. Although prices of petroleum products in the United States rose very rapidly after October 1973, and this apparently served to cut down the desired consumption, they had not risen enough by the end of January to eliminate shortages. The impact of the remaining shortages is being distributed through the economy by allocations and other controls, by voluntary conservation measures, and to some extent by a first-come-first-served process.

The Secretary of State has recently expressed the hope that the embargo on the export of oil to the United States from some Arab countries would soon be lifted. The effect of such action on the U.S. economy would depend upon the price and production policies of the oil-exporting countries. The higher their production levels, and the lower the world price, the smaller will be the current economic problems for the United States and for other importing countries. In any case it seems necessary to reckon with a significantly higher price for imported oil in 1974 than in 1973, although how much higher is uncertain. This conclusion would imply smaller U.S. imports than would otherwise have occurred, but a larger dollar cost of imports. It is probably also reasonable to assume that the curtailment would increasingly be reflected in higher domestic prices rather than in shortages at the existing prices.

This combination of limited oil imports and higher prices will have four kinds of economic effects in the United States and in other oil-importing countries.

1. *Limitation on capacity to produce.* Beyond some point, inadequacy in the supply of energy can make it impossible to produce certain products, or high energy prices can make it impossible to produce certain products at costs at which they can be sold. However, it does not appear that this point will be exceeded or that our capacity to produce will be significantly curtailed by the energy situation. Part of the U.S. energy supply is utilized

directly for consumption, particularly for home heating and for personal transportation. Some is used in industry for lighting or heating that may be convenient but is not necessary for production. In general, it appeared when the embargo began that the initial curtailment of imports could be absorbed out of these "nonproductive" uses without impairing our capacity to produce. This would not have been entirely true, because there would have been shortages of particular products and in particular places. But it did not appear that the output and employment loss resulting from inability to produce would be substantial, although there would be other negative effects. This view has been fortified since it appears that the net curtailment of imports may be less than initially feared. Maintenance of capacity to produce in the presence of import curtailment will depend on limiting consumption use of petroleum products, especially the use of heating oil for homes and gasoline for personal transportation. This will cause inconvenience, although curtailment on the scale foreseen would not cause hardship. Concentration of the available supply in the uses most essential for production and employment will be brought about in part by higher prices. This can be, and is, supplemented by voluntary conservation measures and by mandatory allocations.

2. *Restraint on the demand for output.* The reduced availability and higher price of gasoline will curtail the demand for large automobiles, for the services of motels, and for other tourist services. The shortage of heating oil and gasoline will cut the demand for new houses. How serious these effects are will depend in part on the amount of the cut in oil supplies or on the rise in the price. One should note that the effect of a price rise can be as great as the effect of a shortage in diverting expenditures from oil-related products. All of these effects will also depend on how consumers react, not only in restricting purchases of petroleum-related products but also in switching purchases to other things. The problem is compounded by uncertainties, both about imports and about public policy, which may cause a more negative reaction than the most probable facts would justify.

3. *The real income loss due to costlier energy.* The foregoing are the transitional problems created by the present energy situation. The initial loss of capacity to produce caused by the curtailment of energy supplies will in time be offset by shifts of production in directions that use less energy. The initial loss of demand for output associated with energy will in time be compensated for by a shift of consumers' demands to other products, and possibly by an increase in demand for American products by the oil-exporting countries. In addition to these transitional problems there will be a continuing effect on the real standard of living of the American people as a result of being cut off from low-cost sources of oil. That means we shall have to pay more of our own products or assets to foreigners in exchange for their oil, that we shall have to devote more of our own resources to producing energy domestically, and that we shall have to accept methods of production or forms of

consumption we would not have chosen if more oil had been available at a lower price.

How much these costs will amount to is exceedingly difficult to estimate. A clue to their magnitude is given by the fact that the increased cost of U.S. oil imports due to the oil price rises of October and December 1973 would be less than 1 percent of the gross national product (GNP) in 1974, with a volume of imports that would have occurred at the pre-October prices. This is probably an outside estimate of the costs in 1974 (aside from the transitional costs already noted) because there would be adaptations of various kinds. The amount is large and justifies a strenuous effort to reduce it, by getting the foreign price down and by developing cheaper sources at home. Whether the cost will continue to rise, relative to GNP, will depend on the costs of producing additional amounts of energy from new sources.

4. *Balance of payments and other international consequences.* All of the other oil-importing countries of the world will suffer the effects of the cut in supplies and the increase in prices of oil. In fact, most of these countries will be more seriously affected than the United States, because their imports of oil are larger relative to their total supply of energy and to their total GNP. The position in the Western European countries is expected to be qualitatively similar to that in the United States. The short-run depressing effect on their domestic demand as a result of the high import prices will be greater than the cut in their ability to produce caused by the oil shortage. For Japan the situation may be different, and the effect on her ability to produce may be more severe. In any case there will be a marked slowdown, and possibly an absolute decline, in demand and output in most of the countries of the world with which we do business, except for the oil-exporting countries.

This outcome will influence the United States in a number of ways. It should help to retard the increases in prices of industrial raw materials, just as the worldwide boom contributed to their rise. The increase in the value of the dollar in the last quarter of 1973 should also help to slow down the rise of dollar prices of internationally traded commodities. The net effects on trade are not clear. Oil prices will be lower here than elsewhere, at least for a time, because of the price control on a large part of our oil supply; and this situation will tend to stimulate exports of products with a large oil component, such as petrochemicals. On the other hand, the reduction of income and activity abroad and the depreciation of foreign currencies will tend to cut our exports. This factor will probably be the dominant one, although its net effect is likely to be small except for one reservation to be noted.

At present prices of oil, the oil import bills of the industrialized countries will be so large that many if not all of them will have current account deficits—that is, their foreign expenditures for goods and services will exceed their foreign earnings. This will be true even after allowing for the added purchases that the oil-exporting countries may make from the industrialized countries. The oil-exporting countries will have large current account sur-

pluses, which in one form or another will be invested in financial or real assets in the industrialized countries.

This combination of transactions does not require any decline in the level of economic activity in the industrialized world—aside from the transitional difficulties already noted—or slowdown in the rate of growth. In fact, there may be a stimulus to the rate of growth, as the higher oil prices extract funds from consumption and return them to investment via the investment of the oil-exporting countries. However, there could be severe repercussions if the financial aspects of these transactions are not well managed.

Several possibilities can be envisaged which could lead to cumulative recession. One possibility is that some of the industrialized countries might lose large amounts of monetary reserves, or incur large liquid liabilities to the oil-exporting countries which would impel the industrialized countries to try to build up their reserves. Or industrialized countries having current account deficits might feel it important to correct those deficits, even though their overall balances of payments are not in deficit. Some countries will have overall deficits and might try to correct that situation. In any event, the single-country response is likely to be to try to export more and import less, either by squeezing down the economy at home or by checking imports and spurring exports. That is, the single-country response could well either create recession at home or export recession. If many countries are following this policy at once, the compound result could be a large and unnecessary decline in the world economy.

GOALS FOR 1974

The goals for 1974 must be realistically connected with the conditions existing at the beginning of the year. As we have already explained, we believe that the conditions existing at the beginning of the year make it extremely likely that inflation will continue at a high rate through the early part of 1974. A slow rate of economic expansion is also likely during this period, and possibly a decline, with rising unemployment. After some period, probably after the first half of the year, the course of the economy will be influenced more by policies still to be adopted. The idea of a "goal" is more relevant to this later period than to the months immediately at hand. For this later period, three possible paths for the economy can be distinguished.

1. Total spending can accelerate strongly, bringing production quickly back to a full-employment level. This path would create new price pressures which would replace the diminishing pressures expected in energy and food and contribute to an acceleration of wage increases.
2. The contraction can continue, with unemployment rising throughout the year. Anti-inflationary pressure would be strengthened along this path.
3. The economy can begin a moderate expansion, one which will bring a halt to the rise in unemployment and yet resist an upsurge of inflation

outside the food and fuel sectors and get the benefit of a much lower rate of further price increase in these two sectors. There would be an expectation that a significant reduction of price increases in food and fuel would be followed in time by a reduction elsewhere if the economic environment is not overheated. This would be accompanied by a gradual decline of the unemployment rate.

The third possible path is most consistent with attaining as well as maintaining the goals of the Employment Act. The first is a prescription for undiminished and probably accelerating inflation. The second exacts too high a price in unemployment.

Of course, no one knows with certainty or precision the relations among output, unemployment, and prices along any of these paths. They only reflect general emphases which can be utilized as guides to policy. Moreover, even if the desired path could be precisely described, no one could precisely describe the policy that would achieve it. All of these usual uncertainties are heightened this year by the difficulty of foreseeing the effects of the radical change in the energy situation. This unusual degree of uncertainty makes it more important than ever that we be prepared with means for adapting policy if events seem to be moving outside a reasonable range of the roughly defined target path.

What is implied by the path that at present seems to us the best of the feasible ones for the economy, given the inescapable effects of the energy shortage, is an increase of about 8 percent in the nominal value of GNP from calendar 1973 to 1974, to about $1,390 billion. Of this rise, about 1 percent would be an increase in real output and about 7 percent an increase of prices (as measured by the GNP deflator). Changes from calendar 1973 to 1974 are, of course, significantly influenced by what has already happened in 1973; and hence changes so expressed do not describe an expected path for 1974, though they are implied in any expected path. As for the expected path during 1974, this would leave real output approximately flat, and perhaps declining for an interval, in the first half of the year but would bring a rise by somewhat more than the normal trend rate in the second half. Inflation would be rapid in the early part of the year, mainly as a consequence of energy and food prices, and then subside to rates significantly below those experienced in 1973. Unemployment for the year would average a little above 5½ percent.

We would emphasize two aspects of this path. First, it is at the same time our view of a feasible target and a prediction of what will be achieved if the planned policy is carried through. Second, that the path is feasible and that it will be achieved by the planned policy are both uncertain to a significant degree. This means that the target or the policy may have to be changed as new information emerges, although changes involve costs and should not be made unless the case for them is clear.

A description of the implications of this path for the main sectors of the economy appears at the end of this chapter.

The general contour of the economy described for 1974 is consistent with the private forces now apparently at work. In the early months of the year, consumers will make the move to spending a larger part of their income on an imported product—namely oil—because of the higher price. This will tend to reduce their spending for the purchase of other goods and services and will offset the rise of other categories of demand, such as business investment and government spending. But the adjustment to spending more money on imported oil will be completed early in the year; this drag on the expansion of the economy will then be removed and the expansive forces will become more effective. (Expenditures for foreign oil will not decline, but they will not be rising significantly.) As the year progresses, housing construction will rise in response to greater availability of credit and greater certainty about the distribution of fuel oil and gasoline; and production of new automobiles will increase as the manufacturers improve their ability to turn out small cars. Meanwhile, the period of maximum increase of energy prices and food prices should have passed.

The main functions of policy will be to keep the dip in the early part of the year from going too far and to assist the revival later in the year, but to avoid stimulating too rapid a surge.

1. *Fiscal policy.* The budget proposed by the President will tend to restrain the decline of the economy during 1974 but would inject no fiscal stimulus to push the economy above its average rate of expansion. If the economy were operating at about the same rate of utilization of the labor force in 1974 as in 1973, the size of the budget surplus would change very little between the 2 years. Thus one can say approximately that if the economy were moving along its normal growth path the budget would not be tending to divert the economy from that path in either direction.

However, if the economy operates, as expected, at a lower rate of activity relative to its potential in calendar 1974 than in calendar 1973, the budget will swing significantly toward deficit. This change will result chiefly from the lower level of receipts accruing to the Federal Government at lower levels of economic activity, and partly from higher unemployment compensation payments. As a consequence, private incomes after taxes rise relative to output, thus sustaining demand and moderating the slowdown of the economy.

In calendar year 1972, unlike 1973, Federal receipts were swollen by exceptionally large net overwithholding of personal income tax estimated to amount to about $9 billion. An estimate of the economic effect of the budget in 1972 and 1973 depends heavily on the impact attributed to this overwithholding. If the amount overwithheld was less like a personal tax than like personal saving accruing in the form of a government obligation, fiscal policy moved in a restrictive direction from 1972 to 1973. Thus, if the amount overwithheld is subtracted from recorded receipts, there was a swing of

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about $14 billion from deficit to surplus between the 2 years on the assumption of a constant rate of economic activity at full employment. Over $3 billion of that swing would have been due to the higher rate of inflation in 1973, but the remaining $10 billion would represent an independent fiscal policy force restraining even the normal rate of growth. Such restraint was appropriate, given the inflationary condition of the time. Since we had in 1973 both a reduction of unemployment and an increase in the rate of inflation, the actual swing from deficit to surplus was larger—about $17 billion, or about $26 billion if overwithholding is excluded from actual 1972 receipts.

If the overwithheld amount is treated like any other tax receipt, little shift in the full-employment budget position appears between 1972 and 1973. However, exclusion of the overwithholding from receipts seems to us to come closer to representing the economic effect of the budget, and the full-employment estimates in Table 1 are calculated in that way. On this basis it appears that whereas the direction of fiscal policy was significantly restrictive from 1972 to 1973 it is fairly neutral from 1973 to 1974, offering support if the economy declines but otherwise not exerting any upward or downward push.

The foregoing observations relate to the balance of Federal receipts and expenditures in the national income and product accounts. These accounts are more useful for analysis of overall economic impact than the unified budget accounts stressed in the Budget Message, primarily because they exclude certain expenditures which do not enter directly into the stream of U.S. income or expenditure. The references to the behavior of the surplus or deficit at a constant rate of economic activity are to calculations of the surplus as it would be at the actual or forecast rate of inflation if the economy were operating at 4 percent unemployment and at an annual growth rate of 4 percent (rather than the 4.3 percent used in Council Reports of the past 4 years). The level of these surpluses depends on the unemployment rate chosen, but the year-to-year changes in the surplus are not sensitive to the unemployment rate chosen if the chosen rate is approximately stable from year to year. Reference to a higher unemployment rate would reduce the levels of the surpluses but not have much effect on the year-to-year changes.

It is also useful to try to take the effect of changing inflation rates out of the change in the surplus because such a procedure gives a clearer picture of the budget changes that are autonomous, that is, not responses to economic fluctuations. An increase in the inflation rate will affect both receipts and expenditures, but it will affect receipts much more promptly and hence increase the surplus. This increase in the surplus tends to restrain the expansion and thus the increase of the inflation rate. But it is also a symptom of not having prevented a rise of the inflation rate and so is evidence of anti-inflationary policy only in a rather negative sense. Unfortunately, the effect of the change in the inflation rate can be measured only very approximately.

Table 1 shows the annual surpluses and changes according to four different methods of measurement.

TABLE 1.—*Federal budget surplus or deficit under alternative assumptions, national income accounts basis, calendar years 1969–74*

[Billions of dollars]

Calendar year	Actual budget surplus or deficit (−)	Full-employment budget surplus or deficit (−) under alternative assumptions [1]		
		4 percent unemployment	4 percent unemployment, standardized inflation rate [2]	Variable unemployment rate [3]
Level:				
1969	8.1	8.8	.....	4.9
1970	−11.9	4.0	.....	.3
1971	−22.1	−2.1	.....	−5.0
1972	−15.9	−7.7	.....	−10.4
1973	.6	5.8	.....	3.1
1974 [4]	−4.6	6.0	.....	2.1
Change from previous year:				
1970	−20.0	−4.8	−4.8	−4.6
1971	−10.2	−6.1	−5.3	−5.3
1972	6.2	−5.6	−5.6	−5.4
1973	16.5	13.5	10.2	13.5
1974 [4]	−5.2	.2	.3	−1.0

[1] $9 billion in overwithholding excluded from 1972 receipts.
[2] Change in surplus or deficit between 2 succeeding years assumes that inflation rate is constant at rate of first year.
[3] Assumes that unemployment rates of the civilian labor force are constant at their 1956 levels in each of four sex-age categories: Males and females 16–24 years and males and females 25 years and over. Instead of staying at 4 percent, the overall unemployment rate used to represent a constant rate of utilization of the labor force in this estimate rises to about 4.6 percent by 1973 because the labor force was increasingly composed of groups (females, youths) characteristically having higher unemployment rates than older males.
[4] Excludes transfer of $2.1 billion worth of rupees to the Indian Government expected in the first half of 1974.

Sources: Department of Commerce (Bureau of Economic Analysis), Office of Management and Budget, and Council of Economic Advisers.

In view of the uncertainties facing us, it is extremely important to be prepared with fiscal measures to support or restrain the economy if it is clearly running outside the general track described here for 1974. The Administration is now in the process of preparing for support action. A decision to take such measures would have to be made with great caution, however, in view of the additional supply bottlenecks that might be caused by the energy shortage.

Greater protection for those unemployed because of the prospective conditions, and greater assurance against an even more serious slowdown, would have been provided if Congress had enacted the proposal submitted by the Administration last year to improve the unemployment compensation system. The President has again strongly urged the Congress to act promptly on these proposals; he will also submit additional unemployment insurance amendments to extend the duration of benefits and expand coverage in labor market areas that have large increases in unemployment.

2. *Monetary policy.* Because of the lag which we believe exists between changes in money and changes in economic activity, the influence of monetary policy on the economy during 1974 will largely result from the monetary expansion during the second half of 1973 and the first half of 1974. The monetary expansion in the second half of 1973 can be described by an increase in the narrowly defined money stock (M_1) of somewhat under 5 percent and an increase in the broadly defined money stock (M_2) of about

8 percent, at annual rates. Continued growth in M_2 at approximately this rate would be consistent with our expectations concerning the increase in money GNP during 1974. At present we expect money GNP to increase by about 8 percent during the year. For more than a decade the proportionate increase of money GNP tended to be the same as that of M_2, though in some years the deviations from this proportionality were substantial, and half-yearly deviations were often quite large. Hence, the foregoing conclusion seems reasonable, barring the emergence of further evidence as yet unforeseen.

The prospect for trends in interest rates is particularly difficult to appraise at present. Inflationary expectations tend to raise money rates, while the temporary slowdown of business activity is apt to have the contrary influence for a while, even though business fixed investment is likely to rise at a rate well above that of GNP. Among the interest-reducing influences, the prospective capital inflows resulting directly or indirectly from current account surpluses of the oil-exporting countries also need to be taken into account. All this relates to interest rates in general. Terms on which mortgage credit is available will be influenced by the success that depository institutions have in attracting new savings funds in competition with market alternatives, and by the subsidization policies of the Administration with respect to this category of borrowers.

As will be explained in Chapter 2, by steepening inflationary expectations an overgenerous increase in the money supply would steepen rather than moderate trends in money rates of interest.

3. *Housing policy.* The economic path described for 1974 implies a bottoming out of housing starts in the first quarter of 1974 at a level only slightly below the fourth quarter of 1973 followed by a rise beginning in the spring. The Administration took a number of steps in September 1973 to cushion the decline then under way. In January a two-pronged action was taken to revive the mortgage market. The Department of Housing and Urban Development was authorized to purchase mortgages on up to 200,000 housing units at 7¾ percent, substantially below the prevailing market interest rate. In addition, the maximum interest rates on FHA–VA mortgages were lowered to 8¼ percent from 8½ percent, thereby setting the pattern for reduced mortgage rates.

4. *Managing the energy shortage in the United States.* If the economy is to follow the general path we have outlined it will be essential that output not be seriously hampered by the shortage of energy. This stipulation means, first, that the total supply of fuels made available for industrial production, including transportation related to it, must be adequate to sustain the aggregate level of economic activity projected for the year. Second, the supply must be distributed among users in a way that avoids bottlenecks.

How easily these two conditions can be met will depend upon the volume of oil imports. We believe that the volume of imports will be sufficient to permit their fulfillment, but it would be imprudent to assume that they can be met without care in the distribution of energy among various uses.

The rise in prices of petroleum products which has been occurring helps to bring about the desired distribution. As the prices rise, the less valuable uses—which tend to be those which generate the least output and employment—are foregone. At a higher price, a factory which uses oil for space heating will cut down the temperature before it cuts down the use of oil in the production process. A higher price will cause a consumer to cut down the use of his car for pleasure driving, rather than for getting to work. It is commonly said that the use of energy will be reduced relatively little by a price increase. That may or may not be correct. But even if the cut in energy use is "relatively little" compared to a price increase, the price increases that have occurred or are in prospect are sufficiently large to have a substantial effect on the total use of energy and its distribution.

The oil price increases that have taken place under the controls program have been justified as a necessary means of increasing supply and maintaining orderly markets. Imported oil, "new" oil, and oil from small wells are exempt from control. Other oil is controlled and sells at prices considerably below those of uncontrolled oil, but the control price has been raised on two occasions to keep the price spread from becoming too large. Although necessitated by supply considerations, these price increases have played a useful role in the allocation of supply. To make sure that the price increases do not yield excessive profits that are not justified by their contribution to increasing supply, the Administration has proposed an Emergency Windfall Profits Tax. This tax would take a large proportion, up to 85 percent, of the additional revenue earned by producers of crude oil as a result of higher prices.

Other methods are being used to distribute supplies of oil in ways that will meet production requirements. The Federal Energy Office (FEO) has encouraged refineries to limit the production of gasoline in order to increase the production of other products more essential to industrial output. This enforces a cut in automobile driving, although it does not solve the question of who gets the available gasoline. The FEO has taken steps to prepare for coupon rationing of gasoline, although it is believed that a combination of increased supplies, higher prices, and conservation measures, largely voluntary, will make such rationing unnecessary.

The Emergency Petroleum Allocation Act of 1973 requires the establishment of a system of mandatory allocation of oil products, and the FEO has now set up such a system. It specifies limits to the amounts of petroleum products that refineries or distributors can deliver to described classes of customers (but stops short of individual consumers). The limits are generally described in percentages of current requirements or base-period use. The limits differ by class of user, in accord with FEO's estimate of the essentiality of the use to the productive process and to society. Such a system necessarily involves elaborate paperwork and a large degree of arbitrariness. Confidence that the economy will not be seriously hampered rests upon the expectation that increased supply and higher prices will narrowly limit the shortages to be distributed by the allocation system.

A third method, which seems to have been highly effective, has been voluntary conservation. This has been especially useful in stretching out the supplies of gasoline and home heating oil, but it has also helped to bring about a reduction in the nonproductive use of energy in industry.

The measures taken in recent months to deal with the energy shortage are too numerous to recount here. What further steps may be needed cannot now be foreseen. It must be emphasized, however, that satisfactory progress through 1974 will depend upon a flexible use of prices, allocations, and voluntary measures to channel energy efficiently into industry.

5. *Wage and price controls.* When Phase IV controls were instituted in August, the President announced that it would be our policy to work our way and feel our way out of controls. There would be no pre-set terminal date and we should avoid a disorderly transition, but the determination would be to end the system of comprehensive controls. This policy has been followed in the last 5 months. A number of industries have been decontrolled since Phase IV began and the pace of decontrol has been accelerating.

Experience under Phase IV has shown the wisdom of pressing on with the removal of controls. The controls have not recently been very effective in restraining inflation, and the general uncertainty cast over the economic process by the actual or potential operations of a detailed control system endangers the healthy economic expansion we seek. The last point is very important. Too many business decisions for too long a period ahead are being influenced by puzzlement over the kinds of controls businesses will be subjected to. We badly need business investment and economic growth in the years ahead, and continuation of general controls tends to interfere with that aim.

Just how fast the process of decontrol should properly go, and what residue of controls will endure, if any, cannot now be precisely told. But achievement of the desired reduction of inflation during the year does not, in our opinion, depend upon any significant influence from the controls.

6. *International cooperation.* The ability of the United States to get through the economic uncertainties of 1974 successfully would be enhanced by reasonable stability in the rest of the world, especially in the industrialized countries that are the chief suppliers and customers of the United States. There are two main things the United States can do to further that stability.

First, the United States can take the lead in an international effort to bring about a reliable international flow of oil at reasonable prices. Powerful moves by the United States and other industrialized countries to develop energy sources as potential alternatives to the oil now controlled by a few nations will be helpful in normalizing the flow of oil. The President has called the first of a series of international meetings on this subject to take place February 11.

Second, the United States can participate in a common effort to assure that the effects of high oil prices on the balance of payments do not lead the industrialized countries into a round of competitive deflation, depreciation, or trade restriction. This effort should include consideration of possible ways to supplement the now existing means of providing temporary support to countries finding themselves in a critical financial condition as a result of greatly enlarged oil import costs.

GOALS BEYOND 1974

Concern with the stabilization problems of 1974 should not divert attention from those other problems whose consequences will come chiefly after 1974 but which need to be dealt with now and continuously. Most of these problems arise from the need to increase our ability to produce—in total as well as in particular directions. This emphasis on ability to produce is essentially an emphasis on efficiency, on managing our resources so that we get as much out of them as we can. It is neutral about what should be produced and even about how much should be produced, only stressing the ability to produce more of what is wanted, if it is wanted.

We think emphasis on ability to produce is important at this time, because in the years ahead the desire of the American people for more output is likely to be especially strong, and unusual obstacles may hinder fulfillment of this demand. The need to devote more resources to obtaining energy will be a drag on output. The country is almost certainly ending the period of large transfers of the labor force out of agriculture into other pursuits. By 1980, we will probably come to the end of a period in which the labor force grew much more rapidly than the population and thus helped to raise output per capita. Environmental considerations may tend to slow down the growth of output, at least as output is usually measured.

For these reasons, emphasis on the capacity to produce—on efficiency and productivity—is especially important now. Of course, even in the field vaguely labeled "economic" the Nation always deals with a multiplicity of goals. For example, the distribution of the national income among persons will always be a subject of concern. We hope that the information presented in Chapter 5 will be illuminating in this connection. The Nation has other goals about the uses of the national output. One sees evidence, for example, of a great interest in devoting more of the national output to improvement of health, and in achieving that aim more efficiently. The President will be submitting suggestions to this end. It seems most useful for us to concentrate here on the problem of production.

Many aspects of Government policy affecting capacity to produce are discussed in more detail in later chapters of this report. We present here only a brief survey of the field.

DEVELOPMENT OF LOW-COST ENERGY FOR THE FUTURE

Throughout the 1960's the United States employed quantitative restrictions on petroleum imports to limit dependence on foreign sources of supply. However, the availability of imported petroleum at a price below the domestic price led to a weakening of the import restrictions and in 1973 to abandonment of the quota system altogether. As a result, imports have provided a rapidly expanding share of the domestic market.

The energy crisis that occurred in late 1973 as a result of the embargo by some of the oil-exporting countries alerted the Nation to the risk of depending on imports for a commodity that is vital to our economic well-being, and the supply of which is largely controlled by a few countries. Reductions in oil shipments to the United States and a sharp rise in the price of imported oil have caused substantial economic disruption. Had these events occurred later, when the United States was projected to be even more dependent on imported petroleum, the loss of jobs and the effect on incomes might have been far greater.

Oil imports may become more readily available, and the price may decline. However, the possibility of a subsequent sharp price rise or supply curtailment makes it risky for the United States to remain heavily dependent on imports to supply domestic needs.

The Nation has the capability to become self-sufficient in energy production. This capability will, however, require substantial capital investment and large expenditure on research and development. The private sector will be willing to make the needed investment only if there is a reasonable assurance that returns will be adequate to justify the commitment of resources to long-term investments.

In response to this situation, the President has announced Project Independence, a program to develop the capability for self-sufficiency in energy production by 1980. The choice of policies to implement Project Independence should be made largely on economic grounds. Because energy can be expected to cost more in the 1980's than it did in 1972, important changes in production methods, in the composition of output, and in consumption will occur. These changes will develop most rapidly, and with the least cost to society, if relative prices are allowed to allocate resources and to influence production decisions. There are many uncertainties regarding which of the new energy technologies will prove to be economic. By relying on the market mechanism to guide production decisions, we can avoid becoming locked into production methods and energy sources that prove to be uneconomic.

A major component of Project Independence is a program of Government-funded research and development to accelerate the development of technologies that will ensure an adequate supply of low-cost energy for the future. Although the private sector will continue to undertake most of the energy research and development, there is a need for a more active Government role. In part this is because the returns from expenditure on research and development will be heavily influenced by Federal policies regarding en-

environmental considerations of other energy technologies. In addition, the development of new energy technologies to some extent involves expanding our knowledge of fundamental processes. In such cases, although the research and development provides a large gain to the economy as a whole, there may be little opportunity for any one firm to derive a large enough part of this gain to warrant undertaking the research. Moreover, private research and development is usually oriented toward projects with a relatively quick payoff, whereas much of the needed expenditure must be devoted to the development of energy sources that may not be competitive for some time.

SAVING AND PRIVATE INVESTMENT

To keep output per worker rising rapidly, when the labor force is also rising rapidly, requires a high rate of investment in productive facilities. Our total investment requirements in the years ahead will be greatly increased by the need to invest in energy development and environmental improvements.

These energy and environmental investments do not raise productivity as conventionally measured, though the former may prevent a decline in productivity if energy shortages would otherwise continue, and the latter may also prevent an ultimate decline in productivity. Both types of investment thus represent part of the increased resource costs imposed on energy-using or environment-using industries, in one case by adverse supply developments and in the other by social choice. Environmental benefits enhance economic well-being, and increased reliance on domestic sources of energy adds to security of production. Still, one can probably say, the American people expect rapidly rising output of the ordinary, marketable kind; and this expectation will require rapidly rising total investment to accommodate rising energy and environmental investment along with increasing investments of other kinds.

Part of total investment is provided through the Federal budget, in the form of direct expenditures for capital purposes, loans to private businesses and individuals, or grants and loans to States and localities. The budget for fiscal 1975 includes $19 billion for such outlays, excluding defense and excluding expenditures for education, training, health, and research and development. The largest single item is expenditures for transportation, primarily highways, followed by expenditures for public works.

These direct investments in the Federal budget make a useful contribution to economic growth, if they are wisely selected and well managed. Such direct investments have numerous advocates in the Federal budget-making process. But attention needs to be called to another way in which the Federal budget could contribute to investment and growth, although it has few advocates: running a budget surplus, or at least avoiding a budget deficit except under appropriate conditions.

If the Federal Government runs a deficit and borrows under conditions of strong private investment demand, its borrowing absorbs funds which

would otherwise have been invested in private projects. Unless all of that deficit is used to finance direct Government investment, which is unlikely, the deficit depresses total investment. On the other hand, if the Government runs a surplus in these circumstances, it will repay some of its debt and make more funds available for private investment, unless the surplus is generated by taxes all of which come out of private saving, an unlikely condition. When there is a great deal of slack in the economy, a budget deficit will help to support the level of economic activity needed to supply both the incentive to invest and the savings for investment. However, when productive resources are fully utilized, the smaller the Federal deficit is, or the larger the Federal surplus, the higher private investment is likely to be. This fact partly explains the principle adopted by the Administration that expenditures should not exceed, and at times may properly be less than, the receipts that would be collected at full employment.

Government policy affects incentives for private investment, in total and in particular sectors, in a number of ways, including policies relating to taxes, international trade, and international financial policy, as well as credit guarantees, subsidies, and so on. All of these involve well-known conflicts of objectives and difficulties of measuring costs and benefits. We may now be running into a problem which is new, at least in magnitude, and potentially very serious: the uncertainty created for private investment, and all private long-term commitments, by Government economic controls that are unprecedented in scope and unpredictable in operation. Taken together, the price and wage controls, the controls connected with the energy shortage, and the environmental regulations add up to a massive entry of Government into the affairs of almost every business in the country. The management of these controls involves a great many close or arbitrary decisions, to be made in many instances by a very few people. They could go either way, and the private businessman who must invest in the light of these controls cannot tell which way they will go.

These uncertainties could become a major obstacle to new private investment, even though we do not now see good evidence of its having already happened. Concern on this score is not a conclusive argument against any particular control, although it is a strong argument for avoiding controls. And it does argue for as much stability as can be achieved in the management of the controls that are inescapable.

THE FINANCIAL SYSTEM

In his 1970 Economic Report the President said:

> Because our expanding and dynamic economy must have strong and innovative financial institutions if our national savings are to be utilized effectively, I shall appoint a commission to study our financial structure and make recommendations to me for needed changes.

After studying the findings of this commission (the Hunt Commission), the President, on August 3, 1973, sent to Congress a series of recommendations. In them a more efficient financial system is envisioned, in which finan-

cial institutions can operate with greater freedom and less imposed specialization. By fostering more competition among financial institutions, the proposed measures would improve the efficiency of our financial system in channeling funds from savers to borrowers. Savings would earn the highest rate of return the competitive market structure could allow, and the savings would be put to the most productive use. Under such a system, interest rates would play a greater role in determining the volume and the distribution of funds. Social projects deserving priorities, such as low- and moderate-income housing, would be taken care of with subsidies instead of regulations.

Among the recommendations, interest rate ceilings on deposits would be phased out over a period of 5½ years. Federally chartered thrift institutions would be authorized to offer third party payment plans, including negotiable orders of withdrawal (NOW's) and credit cards to individuals and corporations; but they would also be given expanded lending powers in making consumer and real estate loans and in acquiring high-grade private debt securities. National banks would likewise be able to offer NOW accounts and make real estate loans with fewer restrictions. Interest ceilings on Government-backed mortgages would be removed, and a mortgage interest tax credit of up to 3½ percent to financial institutions and up to 1½ percent to individuals supplying mortgage funds would be made available.

The President's recommendations, if enacted by Congress, would strengthen the financial markets in general and mortgage markets in particular. The expanded lending and borrowing powers would increase the flow of funds into financial institutions. Further, the mortgage tax credit would reduce the dependence of the mortgage market on thrift institutions by encouraging other types of financial institutions, as well as individuals, to invest in mortgages. The resulting mortgage market would be less vulnerable to a credit squeeze than it has been, and the burden of monetary restraint would be more evenly distributed throughout the economy.

On another financial matter, the time may be at hand when a move in the direction of greater uniformity of reserve requirements among depository institutions is warranted. Varying reserve arrangements among State and federally supervised banks have resulted in removing an increasing proportion of the money supply from the direct influence of Federal Reserve requirements and have made short-term shifts of deposits among member and nonmember institutions a source of uncertainty in the implementation of monetary policy. Care must be taken that any change in the reserve structure of the Nation's banks should not work to the disadvantage of smaller institutions or change the balance among supervisory authorities; but within these constraints it now appears desirable that deposits which form the money supply should be subject to direct influence by the Federal Reserve, regardless of the source of supervision of the institutions that hold them. The Federal Reserve has recently submitted its own proposals in this field.

TRANSPORTATION REFORM

Last year the Congress passed and on January 2, 1974, the President signed the Regional Rail Reorganization Act, which is a pragmatic attempt to deal with the pervasive insolvency of railroads in the heavily industrialized Midwest and Northeast. Several of the eight principal bankrupt railroads had threatened liquidation, and such a bill was needed because the risk of even a very short period of suspended service was too great to be tolerated. If the services of the Northeast's railroads are so vital to the rest of the economy, one must ask why so many of them were in such a weakened financial condition. Factors more general and basic than those that normally cause bankruptcy are responsible.

Poor management and unrealistically rigid labor contracts are popular explanations of the railroads' inability to adapt to changing technology and a changing economy. These proximate causes largely reflect, however, a more fundamental cause—inefficient and intransigent governmental regulation.

Governmental regulation of the railroads can be traced to two sources. The public wanted the Government to protect them from the industry in a time of near monopoly and the members of the industry wanted the Government to protect them from each other. This "protection" has been expensive for both the railroads and the public. The elaboration of regulations intended to provide this protection has created a complex set of specifications for the behavior of firms that has tended to ossify with time. As a result railroad companies have increasingly given up control of fundamental management decisions to the Interstate Commerce Commission (ICC) in return for the policing of industry competition by the agency. Moreover, railroad management's attention began to focus more on the rules that delimited its discretion than upon the underlying economic realities in the markets in which they operated. As these realities changed, railroad management found itself increasingly inept at adjusting—the result being an increasing incidence of bankruptcy.

The Transportation Improvement Act

The Transportation Improvement Act of 1974, proposed by the Administration, is an important first step toward solving some of the more general problems of the railroad industry. It is also an imperative step toward a long-term solution of the problem of the bankrupt railroad; because the viability of the rail system that will emerge from the wreck of the Penn Central will depend in an important way upon successful regulatory reform. Among the more important reforms facilitated by the bill would be liberalization and rationalization of procedures for the "abandonment" of unprofitable lines. In 1971 the railroads were required by the ICC to maintain service on 21,000 miles, about 10 percent of the total, of lightly traveled track for which revenues were less than operating costs.

To cover these losses, railroads must charge higher rates on profitable routes. This subsidization distorts resource use and interferes with the effi-

ciency of the entire transportation system, and hence the entire economy, as well as increasing the financial problems of the rail industry. Requiring railroads to continue to operate short and uneconomic branch lines diverts traffic that could be carried more efficiently by truck; and conversely the higher rates on longer hauls result in a diversion to trucks of freight that could be moved more efficiently by rail. Since trucks use considerably more fuel (and emit more pollutants) than trains per ton-mile of freight carried, the magnitude of this inefficiency grows directly with the increasing relative scarcity of energy supplies.

The proposed act will also facilitate the substitution of truck transportation for rail services on abandoned lines, by more or less automatically authorizing truck service between any point on the abandoned line and connecting rail service points.

Need for Further Reform

Although enactment of this bill will add to the efficiency of the rail industry, several basic problems remain on the agenda for transportation reform in the coming year. The longer-term viability of the Nation's railroads will require substantial investments in improved technology, and in improvement and diversification of types of freight service, as well as investments to rehabilitate deteriorating physical facilities.

It is vital, however, that a comprehensive evaluation of the regulatory and institutional structure of both the railroads and the entire surface transportation industry be completed *before* such investments are made. Many aspects of modern railroad operation are not determined by either technological or profitability considerations. They are adaptations to obsolete regulatory policies and labor practices. Investment in conventional railroad technology as it exists today may inhibit productivity and actually reinforce the resistance to the institutional reforms that will be required for the development of a more rational and efficient surface transportation system in the future.

Changes in corporate structure may also be desirable. Costs of transferring freight from one railroad to another significantly reduce the savings that rails enjoy relative to trucks on long-haul shipments. This would imply that end-to-end mergers of railroads might be important mechanisms for reducing the real cost of rail transportation. Yet formidable administrative barriers must be surmounted by companies attempting end-to-end mergers under current regulatory practices.

The Administration's concern with the efficiency of the surface transportation system is not limited to stopping the spreading insolvency that infects the railroad industry. It will be difficult to exploit fully the opportunities for increasing productivity in the railroad industry unless major changes take place concurrently in the trucking industry.

The regulation of trucks in interstate common carriage that began in the midst of the Great Depression has also evolved into a web of regulatory

constraints. Restrictions on entry into market areas, limitations on the type of goods carried, and mandated "gateways"—creating required routes which may be so circular as to be bizarre—have resulted in an industry burdened with regulatory inefficiency. Partially loaded trucks, often required to return empty even when alternative cargoes are available, are common. Such inefficiency is a result of regulatory policy. There are no technological reasons why the motor freight industry could not operate as an essentially competitive sector of the economy.

A comprehensive analysis of the trucking industry is now under way and will provide a basis for the design of a comprehensive set of regulatory reform proposals to be completed by the fall of 1974.

EFFICIENT INTERNATIONAL EXCHANGE

Economic growth is significantly enhanced by an openness to foreign economies which permits a relatively free international exchange of goods and capital based on economic incentive. International trade makes goods available that might otherwise be lacking, or only available at much higher costs. It can also make available to domestic producers ideas about new products, new product designs, or new methods of production. For producers it can be an added incentive to adopt more efficient methods of production.

We have been reminded in recent months that in some circumstances there can be a danger, both political and economic, in excessive dependence on foreign supplies. The United States must guard itself against this danger, by unilateral or multilateral action. However, if this objective is realistically defined it will be found not to limit greatly the scope for beneficial expansion of international trade.

Despite a fairly extensive removal of trade barriers in the past 25 years, substantial barriers to international trade and investment remain in effect. The inefficient location of productive facilities because of these barriers constitutes a loss of economic welfare to the country as a whole. Efforts to negotiate a reduction of the remaining trade barriers are therefore important toward improving the efficiency of the U.S. economy. The trade legislation now before Congress would give the President authority to negotiate a substantial reduction of such barriers.

Negotiations in the trade area also have to deal with the economic interdependence that results from trade. Abrupt economic shifts emanating from abroad can from time to time create a temporary economic dislocation at home which needs to be moderated or offset by government measures. Since such measures will have further repercussions abroad, governments need to agree on some basic rules and procedures that they can follow when their interests conflict. Multilateral negotiations are designed to improve some of the current rules and procedures, as well as to reduce existing trade barriers.

An international monetary system is a prerequisite for the efficient exchange of goods and capital. Without such a system, international exchange is confined to barter. To function efficiently, the international monetary sys-

tem has to provide sufficient quantities of commonly accepted means of payment and a procedure for adjusting the relationship between one currency and another. It also has to provide a set of rules on such questions as the conversion of one currency into another, restrictions on the conversion of currencies, transfers of liquid funds from one country to another, as well as a set of procedures for resolving differences in national approaches to such problems. The current negotiations to reform the international monetary system are designed to improve the existing rules and procedures.

SUPPLEMENT

Prospects for 1974

Earlier in this chapter we noted that 1974 would be a year of little output growth and considerable inflation but that in both respects the second half of the year should be better than the first. The energy crisis has clouded near-term prospects much more than usual. There is great uncertainty, not only about the overall GNP change and its distribution between price and real volume but also about the components of demand. It seems fairly likely that this year's 8 percent increase in nominal GNP should reflect slower rates of increase, compared to last year, in consumption, gross private domestic investment, and net exports, and a faster rate in combined government purchases. The specific changes are much less certain, but the Council presents the following projections of individual demand components underlying this year's overall total.

Business Fixed Investment

The Council expects nonresidential fixed investment to show a rise of about 12 percent from 1973 to 1974. It is likely to be the major source of strength in demand this year. Despite the small rise in production in the final quarter of 1973, the condition of shortages that prevailed in many industries earlier in 1973 continued through the end of the year. Capacity utilization was still very high, especially in the basic materials industries. Delivery times were still long. Aside from the automobile industry, inventories were rather low relative to output and sales. All of these were indicative of tight supply conditions that constituted a strong stimulus for business to invest in new plant and equipment in the coming year.

This is not to say that the character of investment demand will be the same as in 1972 or 1973. The slowdown of the rise in aggregate demand during 1973 and the leveling in profits are likely to bring a smaller rise in new investment initiatives than in the preceding 2 years. Even so, the large volume of new investment under way assures a sizable increase in real expenditures in 1974. Unfilled order backlogs in capital goods industries at the end of December were some 35 percent greater than they had been a year earlier.

In early 1974 the Commerce Department released a survey which showed that businessmen were planning a rise of 12 percent in capital expenditures in the coming year. The rise was particularly large for manufacturing—17 percent—and planned increases within manufacturing were above average (21 percent) for materials-producing industries. The Commerce Department survey is broadly consistent with a McGraw-Hill survey, which was run about 2 months earlier, projecting an overall rise of 14 percent from 1973 to 1974.

Neither of these surveys sheds any light on the effect of the energy crisis on investment plans; and because of variations in sample coverage and for other reasons, the difference in results between the two surveys is not considered significant. The Council believes that on balance the energy crisis may result in some reduction in business purchases of cars and trucks, but aside from this the negative and positive effects of the energy crisis on investment will be roughly offsetting. Some industries directly affected by the crisis have already cut back investment (airlines, for example), while some firms in other industries may be holding back on commitments until they understand the implications that the current crisis holds for future fuel supplies. On the other hand, the crisis is stimulating capital outlays to support the search for new energy sources in this country, and conversions to other types of fuel will entail new capital expenditures.

Inventory Investment

Inventory investment is likely to be a little higher this year than in 1973—perhaps by $2 billion. In the final quarter of 1973 there was a very large increase in inventory accumulation, a good part of which represented a rise of retail stocks of new cars. Even so, total nonfarm stocks relative to total output measured in real terms at the end of 1973 were low, gauged by post-World War II experience. The first half of this year should see a working off of unwanted automobile stocks at the same time that other industries continue to accumulate inventories in an effort to restore more normal relationships between stocks and output.

Residential Construction

Housing starts in the final quarter of 1973 appeared to be reflecting the effects of the stringency in mortgage markets last summer, and possibly temporary effects arising out of the energy crisis. Very late in the year there were reports that builders were uncertain about the impact of reduced fuel supplies on new construction, while potential buyers of homes in outlying areas were hesitant because of uncertainty about the availability of gasoline for extended commuting. But this, and the extent to which homeowners were making new expenditures for better insulation of their homes, cannot be considered hard information. While there is no assurance about improved energy supplies, the coming months should at least dispel the present uncertainty and permit those builders and those consumers who can buy and rent new homes to make decisions.

A more fundamental factor concerns financial conditions. Net inflows into savings and loan associations have risen since late summer, and thrift institutions now have more funds available for mortgage lending. On the basis of past experience this improvement in the availability of mortgage funds should be reflected in a turnaround in starts this spring. Recent actions taken by the Federal Government should also help spur the recovery. The reduction in FHA and VA mortgage rates in January should help make these programs more attractive to home purchasers, and increased purchases of mortgages by GNMA should increase the supply of mortgage funds for these programs.

The underlying demand for housing—as measured by the need to provide shelter for new households and for the replacement of houses removed from the housing stock—remains strong. However, the inventory of unsold homes at the start of the year is likely to act temporarily as a brake on new starts and dampen the increase after this spring. For all of 1974 the Council foresees starts of approximately 1⅔ million private units, which would represent a decline of almost 20 percent from the 1973 total. Outlays are expected to decline by 15 percent.

Government Purchases

Federal purchases of goods and services, after rising very little from 1972 to 1973, are expected to increase about 10 percent in the coming year, with increases in both defense and nondefense outlays. State and local purchases, further supported by the revenue sharing program, are expected to rise by 12 percent, which is close to the increase of the preceding year.

Net Exports

Prior to the energy crisis it was expected that net exports would show a further improvement from 1973 to 1974. The effect of the devaluation of the dollar and the continued strength of foreign demand were expected to stimulate exports. The slower growth of output in the United States was expected to slow the growth in imports. Thus, a further moderate improvement over the high rate of net exports that prevailed in the second half of 1973 appeared to be a reasonable prospect.

The oil crisis has drastically modified this outlook. For the time being at least, foreign countries are expecting much slower real growth than they anticipated previously. While exports will be greater than in 1973, they will not rise as much as they would have without the crisis. The main factor affecting imports is the huge increase in prices of imported oil. Cutbacks in the physical volume of crude oil and refined products will be much more than offset by the rise in price. The full effect of the price rise should be felt by the second quarter. In nominal terms the net exports are expected to fall close to zero for 1974 as a whole.

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Consumer Spending

Consumer expenditures are likely to increase about as much as GNP in 1974. Spending should be rather sluggish in the first half but should show a marked improvement in the second.

Consumers had already shown a pronounced reaction to the energy crisis in late 1973, when they reduced their purchases of domestically produced cars from an annual rate of 10 million units in the third quarter to about 8 million units in the fourth. The decrease was much more than had been anticipated by forecasters prior to the energy crisis, and the fact that large car purchases were weak, while long delivery times were required for small car purchases, pointed up the special influence of the crisis on auto demand. It is not clear whether the cutback by consumers had run its course by early January, when dealer sales of domestic cars were running at a seasonally adjusted annual rate of about 7⅓ million units. As small car supplies improve through the year consumers should come into the market in increasing numbers, although the pickup in car purchases is not likely to be appreciable until this summer. Another reason for the improvement in consumer spending from the first to the second half of 1974 is that the major downward adjustment of demand resulting from reduced gasoline supplies and higher prices is likely to be completed in the first half of this year.

Prior to the energy crisis some slowdown in the growth of consumer spending had been expected in the first half of 1974 because of the earlier shift in fiscal and monetary policy and the independent effect of the housing decline. Offsetting these influences is the stimulation from sharp increases in Federal transfer payments. These include the 7 percent social security increase scheduled for this April and the further 4 percent increase in July; the rise in payments due to the federalization of adult welfare programs; increased payments for food stamps and increased retirement benefits for Federal workers and veterans. All told, Federal transfer payments to persons as measured in the national accounts are scheduled to rise by $14 billion (annual rate) from the second half of 1973 to the first half of 1974. As an offset, the increase in the taxable wage base this January from $10,800 to $13,200 will reduce personal income by $2 billion, as calculated in the national income accounts. In fact, this rise will be felt by those consumers whose wages exceed $10,800 only in the second half of the calendar year, as employers make deductions from employees' earnings for a longer period than under the old taxable base. Although the net fiscal stimulus will have run its course by midyear, the pickup elsewhere in the economy in the second half should serve to increase consumer incomes and spending.

CHAPTER 4

Energy and Agriculture

FOR THE BASIC RESOURCE INDUSTRIES, 1973 was an unusually eventful year. Prices in all major categories of these industries—agriculture, energy, timber, and minerals and metals—rose sharply, even in relation to the rising average level of prices. In some cases additional supplies could not be obtained even at the higher prices. These conditions reflected a worldwide state of affairs.

The growing scarcity of resources in 1973 was a significant departure from the long-term trend. Since World War II prices of basic resources have increased much less than prices generally. Wholesale prices of crude materials, for instance, increased only 13.6 percent from 1947 to 1971, compared to a 53.4 percent increase in wholesale prices of finished goods. During the same period the consumer price index rose 81.3 percent, and the GNP deflator for the private economy 78.2 percent. Prices of basic resources thus declined by a considerable amount relative to prices in the entire economy throughout most of the postwar period.

This downward trend of relative prices began to be reversed in 1972, and in 1973 it changed significantly. Some have interpreted this reversal as an early indication that along with the rest of the world we are entering a new era of increased scarcity of basic resources, during which prices for these materials will rise faster than prices for other products. Others have attributed the reversal to the coincidence of essentially temporary factors. Neither generalization can be conclusively supported at this time.

With the exception of energy, basic resource demands and prices tend to exhibit strong fluctuations. The demand for timber rises when housing construction accelerates, and housing construction is highly cyclical. The demand for minerals and metals is tied closely to the cycle of economic activity, and the agricultural sector is influenced heavily by weather conditions and its own production cycles. Thus the unusual price pressures on basic resources in 1973 are to a significant extent explained by an exceptional combination of economic fluctuations that impinged upon all basic resource industries in the context of high total demand and output.

The reduction in oil exports by several Arab nations focused attention upon a severe shortage of energy resources. But in recent years the market demand for energy has been growing faster than our capacity to produce

it at the existing price. While the oil cutbacks created obvious new short-term problems for the economy, they also precipitated what was emerging as a serious long-run problem.

It would be naive to assume that so fundamental a question as whether or not we are entering a new era of scarcity for basic resources can be answered adequately on the basis of the limited information now available. The question is nevertheless important for the following reasons.

1. Basic resource industries utilize many minerals and metals that ultimately will be exhausted. Because the opportunities to correct faulty public policy and private decisions affecting exhaustible resources are also limited, a high value to society accrues from accurate information on future demands and supplies.
2. Public policy has played a particularly important role in the evolution of basic resource industries. Specific policies in varying degrees inhibited the capacity for adaptability that is inherent in the operation of the market system. During periods of sudden and substantial change in world patterns of production and demand, these industries may therefore experience particularly difficult problems of adjustment.
3. Most basic resource industries involve commodities that are traded very extensively in international markets. The volatility of these markets, the commonly strong cyclical nature of the domestic industry, and the rapidly expanding consumption in foreign countries can combine in such a way as to create significant political and economic tensions between nations. As international markets expand and nations become more economically interdependent, such tensions could become more serious.
4. The production processes in many basic resource industries interact with the environment in an important and complex way that has in the past resulted in abuse of the environment. Public policy to protect the environment in turn interacts with—and in an ultimate sense may well determine—the appropriate public policy toward basic resource industries.

The following sections of this chapter seek to separate the enduring from the transitory factors that shape the Nation's energy and agricultural industries. This is a risky business. In the past the initial stages of new trends have often been dismissed by wise men as unusual, even unique, events; and many an authoritative forecast of an imminent new trend has proved to be based upon random episodes.

ENERGY

Energy prices have been generally lower in the United States than in other developed countries. Abundant supplies of coal, petroleum, and natu-

coupled with relatively plentiful capital, and advanced technology, permitted rapid growth in conversion of fossil fuels to electric power. In addition, a generous depletion allowance and low excise tax rates have helped keep down consumer prices of energy.

Low prices and a high rate of economic growth have encouraged domestic consumption of energy to expand. From 1950 to 1972 U.S. gross consumption of energy increased at an annual rate of 3.5 percent (Table 27). In 1972 the United States consumed about one-third of the world's production of energy. Tables 28 and 29 show the distribution of U.S. energy use by sector and by source. Americans have often been accused of wasting energy, but the low prices prevailing until 1973 provided little reason to economize in its use. Because the price of labor was rising relative to the prices of capital and energy, it paid, both in industry and in the home, to substitute capital and energy for labor.

TABLE 27.—*Gross consumption of energy in natural units, selected years, 1950–72*

Year	Total (quadrillions of Btu's)	Natural gas (trillions of cubic feet)	Petroleum [1] (millions of barrels per day)	Coal [2] (millions of tons)	Hydropower (billions of kilowatt-hours)	Nuclear power (billions of kilowatt-hours)
1950	34.0	5.94	6.52	494	103	0.0
1960	44.6	12.27	9.89	398	154	.5
1970	67.4	21.37	14.70	525	253	21.8
1972 [3]	72.3	22.43	16.41	526	282	54.0

[1] Includes petroleum products refined and processed from crude oil, including still gas, liquefied refining gas, and natural gas liquids.
[2] Includes anthracite, bituminous, and lignite coals.
[3] Preliminary.
Note.—Data relate to annual totals unless indicated otherwise.
Source: Department of the Interior, Bureau of Mines.

TABLE 28.—*Consumption of energy, by user sector and source, 1972*

[Quadrillions of Btu's]

Source	Consumption of energy [1]			
	Total	Industrial	Transportation	Household and commercial
Total consumption	59.6	23.2	18.1	18.3
Petroleum [2]	29.8	5.8	17.3	6.7
Natural gas	19.0	10.6	.8	7.6
Coal [3]	4.8	4.4	(4)	.4
Electric power	6.0	2.5	(4)	3.5

[1] Preliminary.
[2] Includes petroleum products refined and processed from crude oil, including still gas, liquefied refining gas, and natural gas liquids.
[3] Includes anthracite, bituminous, and lignite coals.
[4] Less than 0.05 quadrillions.
Note.—While in 1972, 18.6 quadrillion Btu's were used for generating electricity, the electricity so generated represented only 6.0 quadrillion Btu's. This accounts for the difference between 72.3 quadrillion Btu's of gross energy consumption in Table 27 and 59.6 quadrillion Btu's of consumption by user sector.
Detail may not add to totals because of rounding.
Source: Department of the Interior, Bureau of Mines.

TABLE 29.—*Use of energy inputs for electric power, 1972*

[Quadrillions of Btu's]

Energy input	Total uses [1]
Total uses	18.6
Petroleum	3.1
Natural gas	4.1
Coal	7.8
Hydropower	3.0
Nuclear power	.6

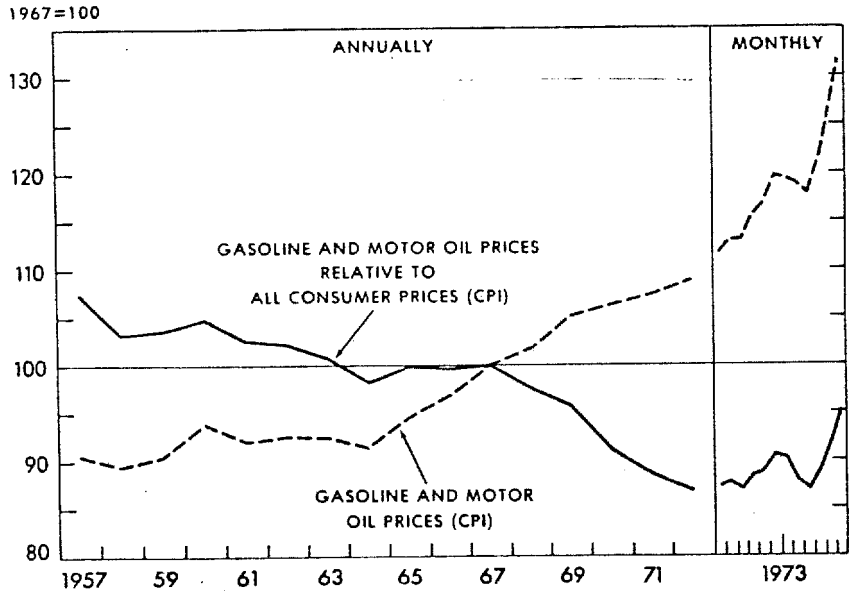
[1] Preliminary.

Source: Department of the Interior, Bureau of Mines.

Wholesale energy prices in the United States were quite stable, relative to other wholesale prices, during the 1960's. But toward the close of the decade the price of coal began to move upward, and in 1973 petroleum prices increased sharply (Table 30). Consumer prices of energy actually were declining from 1960 to 1972, relative to other consumer prices. For instance, the relative price of gasoline and motor oil fell 17.2 percent between 1960 and 1972 but began to increase steeply near the end of 1973 (Chart 7).

Chart 7

Consumer Prices of Gasoline and Motor Oil



SOURCE: DEPARTMENT OF LABOR.

TABLE 30.—*Wholesale prices, all industrial commodities and selected fuels, selected periods, 1950–73*

[1967=100]

Periods	All industrial commodities	Coal	Crude petroleum	Gas fuels	Electric power
1950	78.0	83.3	83.2	(1)	(1)
1960	95.3	95.6	98.6	87.2	101.2
1970	110.0	150.3	106.1	103.6	105.9
1972	117.9	193.8	113.8	114.1	121.5
1973	127.0	218.1	126.0	126.7	129.3
December:					
1972	119.4	205.5	114.7	119.2	122.9
1973	137.1	240.7	146.2	137.6	135.9

[1] Not available.

Source: Department of Labor, Bureau of Labor Statistics.

During 1973 the United States also experienced threats of shortages of petroleum and natural gas, and in some areas of the country electric power brownouts and blackouts. Shortages of petroleum intensified late in the year, following an October decision by several Arab nations to cut back crude oil production and to curtail shipments to the United States. By the end of 1973 our once abundant and secure energy supplies seemed to be seriously threatened; and what appeared earlier in the year as a problem turned into a crisis. To conserve scarce petroleum, a variety of restrictions previously unknown to peacetime America had to be adopted. They focused attention on the dependence of the economy on energy, the importance that oil imports have assumed, and the vulnerability of the economy to arbitrary acts by foreign states.

The energy crisis has its roots in events dating back a decade or more. To understand the present situation, it is necessary to examine the factors that have influenced energy supply and use in the United States.

Natural Gas

Since 1954 the Federal Power Commission (FPC) has regulated the wellhead price of all natural gas sold to interstate pipeline companies. The FPC maintained prices at approximately the same level throughout the 1960's. In response to increased exploration costs and constant prices, producers cut back on exploration, so that the ratio of reserves to annual production declined rapidly from over 20 in 1960 to 10.5 in 1972. At the same time, the use of natural gas was expanding rapidly. With a growing gap between production and desired consumption, producers called for deregulation to permit higher prices and to stimulate exploration.

Beginning in 1969, the regulated price was permitted to rise. The natural gas shortage continued to intensify, however, as demand received an additional stimulus from environmental limitations imposed on the use of high-sulfur coal and high-sulfur oil. The FPC estimated that in 1973 the shortage reached 7 to 10 percent of demand at the prevailing price. To restrict con-

sumption to available supplies, the industry has been forced to curtail deliveries under both firm and interruptible contracts. In addition, many gas distributors have been unable to add new customers. Recently, arrangements were made to import liquefied natural gas (LNG) at a price several times the domestic price for natural gas. Because the gas price has been maintained below the market-clearing level, a heavier burden has been placed on other fuels, mainly oil.

Petroleum

In 1959 the Mandatory Oil Import Program was adopted to limit dependence upon foreign sources of supply. This program was partly a response to the curtailment of Middle East oil exports during the Suez Crisis of 1956. Under the program, quotas were imposed on imports of oil, especially crude oil. These quotas increased the profitability of domestic production and led to additional drilling. The major oil-producing States had earlier established a maximum efficient rate of recovery (MER) for oil fields, and had limited production to some percentage of MER. This prorationing, together with import quotas, served to support the domestic price above the price of imports. In addition, prorationing resulted in excess capacity in crude oil production, in the form of production below MER.

After 1960 the only major new discoveries of petroleum in the United States were on the North Slope of Alaska and on the Outer Continental Shelf. In the "lower 48" States, the ratio of proved reserves of crude oil to annual production declined throughout the 1960's. Excess crude oil production capacity also declined as allowable rates of recovery were raised by the State regulatory agencies. This permitted output to increase rapidly during the 1960's. But after 1969 the increases in production failed to keep pace with the growing domestic demand. As an alternative to raising the supported price which would have stimulated domestic production and restrained demand, exceptions were made to the existing quotas, to permit a greater level of petroleum imports. Finally, in April 1973, the system of import quotas was abandoned altogether in favor of a flexible import fee. This fee is currently set at a low level to encourage importation.

Beginning in the late 1960's, the expansion of domestic refinery capacity failed to keep up with the growing demand for oil products. Frequent exceptions to oil import quotas and the continuing review of the Mandatory Oil Import Program gave rise to uncertainties about whether future policy would encourage importation of crude oil or of refined products. In the face of this uncertainty few new domestic refineries were built. In some cases domestic refinery construction may also have been discouraged by the difficulty of finding a site that would not arouse community objections for environmental and other reasons. In addition, the income tax credit to companies for income taxes paid to foreign governments may have increased the incentive to build refineries outside the United States.

The use of petroleum products in the United States increased by 66 percent from 1960 to 1972. Much of this increase occurred in the transporta-

tion sector, which in 1972 accounted for 53 percent of the Nation's total petroleum use. A low excise tax has made the retail price of gasoline lower in the United States than in most other developed countries. The low gasoline price and a rapid growth in incomes have contributed to large increases in the number of motor vehicles on the road and in the total mileage driven, and thus to the rapidly growing demand for gasoline. Gasoline consumption has also been increased by the trend toward heavier automobiles with air conditioners and automatic transmissions, and by the use of emissions control devices. This expansion in demand for petroleum products was underestimated, as was the need for additional refinery capacity to meet that demand, with the result that the United States became heavily dependent on imports of refined products.

Imports of crude oil and refined products rose from 22 percent of domestic consumption in 1969 to 36 percent in 1973, prior to the embargo. For the first 9 months of 1973 the U.S. share of total world oil imports amounted to 19 percent. This increased U.S. dependence on imports coincided with, and probably contributed to, a general tightening of the world petroleum market.

In the mid-1960's the governments of the oil-exporting countries gradually began to assume a greater measure of control over crude oil production and pricing decisions. The Organization of Petroleum Exporting Countries (OPEC), which was formed in 1960, began to function effectively as a cartel in the 1970's. Excess capacity in crude oil production had begun to disappear in the United States, Canada, and Venezuela, thereby strengthening the market power of the Middle Eastern nations. This market power was further increased by the rapid growth in demand for petroleum. For example, from 1960 to 1972, oil consumption grew at an annual rate of 11.0 percent in Western Europe and 17.4 percent in Japan. When it became apparent that the United States would also have to expand its oil imports, the exporting countries, working through OPEC, were in a strong position to raise prices and thus to realize monopoly profits.

Coal

Although coal is our most plentiful energy resource, its use in the United States has not expanded since 1966. Enactment of the Coal Mine Health and Safety Act in 1969, together with a host of labor problems, caused a large rise in the cost of underground mining, and a decline in output. The reduction in output, together with increased transportation rates, led to the rise in the price of coal referred to earlier. The higher price, coupled with the development of improved equipment, spurred an expansion in surface mining. But the price rise encouraged many industries and utilities to switch to other fuels. Environmental regulations imposed at both the Federal and State levels prevented the use of high-sulfur coal in some areas and accelerated the substitution of other fuels. Because of the unavailability of natural gas, most of the burden has fallen on oil.

Electric Power

Until recently it was widely expected that nuclear power would be a major factor in meeting the increased demand for electricity in the early 1970's, but construction of nuclear reactors has fallen far behind schedule. Technical problems in their design and construction have been partly to blame, but there have also been unexpected delays associated with the siting of new power plants. To some extent both the construction delays and the siting delays are attributable to time-consuming litigation resulting from increased public concern about nuclear hazards and thermal pollution of water by these reactors.

Meanwhile the demand for electricity has continued to grow rapidly. So far the increased demand has been met largely by the use of fossil-fuel power plants, but in some regions the new construction of these plants has been insufficient to meet demand at existing prices. To some extent this situation may have come about because the delays in the construction and use of nuclear reactors were largely unforeseen. There is also evidence that some electric utilities underestimated the rate at which demand would rise; the rapid growth in the number of electrical appliances was not fully anticipated. At present, however, an even more serious problem for the electric utilities than the shortage of power plants is the shortage of natural gas and residual fuel oil, together with environmental restrictions on the use of coal.

THE ENERGY CRISIS

The energy crisis originated in a large number of circumstances none of which was sufficient in itself to disrupt the economy seriously. Their convergence in 1972–73, however, touched off a dramatic change in the domestic energy supply-demand balance.

During most of the 1960's the United States retained the capability to become rapidly self-sufficient in energy production, but this capability quickly disappeared in the last part of the decade. The natural gas price was kept below the market-clearing price, thereby creating a shortage and leading to an increased demand for oil. The demand for oil was further increased by environmental restrictions on the use of high-sulfur coal as well as by delays in the construction of nuclear reactors. Domestic refinery capacity was unable to meet the rapid expansion in demand for petroleum products. Although the domestic price of crude oil was supported above the price of imports, the price was not sufficiently high to discourage a rapid growth in demand or to encourage an adequate expansion in domestic production.

Preventing a rapidly growing dependence on oil imports would have required maintaining a higher domestic price. Because the enormous oil reserves in the Persian Gulf area were expected to be available to us at a very low price, a decision was made to permit exceptions to the limitations on imports of petroleum products rather than allowing further increases in the domestic crude oil price. Partly because of this increased reliance by the

United States on oil imports, OPEC could more confidently reduce crude oil output and raise the price.

Near the close of 1973 the Federal Energy Office projected that the reduction of oil imports into the United States during the first quarter of 1974 would result in a deficit of 2.7 million barrels per day, or 14 percent of total U.S. petroleum consumption. The deficit was projected to increase to 17 percent by the fourth quarter if the import curtailment continued. This projection does not adjust for the effects of higher prices on domestic demand and production. In addition, the projection assumes that there will be no leakage in the embargo and no increases in oil imports from countries not participating in the embargo. For these reasons, the projected deficit overstates the amount by which petroleum use must be reduced through nonprice conservation measures.

RECOVERY FROM THE CRISIS

The disruption generated by the unexpected reduction of oil imports has both a supply and a demand aspect. On the supply side the country has abundant energy resources for the long run, although at costs that are substantially above past levels. But in the short run there are constraints on the rate at which exploitation of these resources can be accelerated. Some increased oil and natural gas production can be obtained from existing fields, but large increases require development of new fields. There is a long gestation period for new investment in most energy-producing industries. New oil and gas fields do not begin to produce for at least a year and are not fully developed for several years. Pipelines, refineries, and nuclear reactors all take time to build. As a result the economy has less flexibility to expand energy production in the short run than over a longer period.

There is a comparable short-run inflexibility on the demand side. Most energy is used as a production input in conjunction with some item of capital equipment: for example, in a furnace to produce heat and in an automobile to produce passenger miles. To a large extent equipment design determines the energy requirements per unit of output. In some cases there is scope for reducing energy use per unit of output, but usually only to a limited extent. By increasing load factors in airline flights, for instance, the same number of passenger miles can be obtained with less jet fuel, although the inconvenience may be greater. In other cases, as in the use of clothes dryers or air conditioners, the energy-output ratio cannot be changed.

The Nation's capital stock was built during a period when energy prices were low and were expected to remain so. In view of the prices that are likely during the next few years, much of the capital stock is inappropriately designed. To obtain a major reduction in energy use without a decrease in output, we must replace the stock of capital with machines and equipment that use energy more efficiently.

A distinction should be made, however, between industrial output and household output. The latter refers to the services provided by the use

of consumer durables. There is considerable scope for conserving energy by reducing household output: for example, lowering thermostat settings and driving fewer miles. Unlike reductions in industrial output, these measures generate little unemployment, and for this reason they play an important role in the Administration's energy conservation program. During 1974, cutting back on energy used in the household will be the best available means of conserving energy without paying a high price in increased unemployment or reduced incomes.

Pricing Policy

Because of these inflexibilities with respect to energy production and use, market equilibration of demand and domestic supply in the short run would require very large price increases, at least for a year or two. Even though price increases would gradually stimulate additional production at higher cost, profits would also increase—especially before the additional production is forthcoming—and this raises problems of equity.

If price increases are not allowed, however, there will be insufficient incentives for consumers to reduce demand and for producers to expand reserves and output. Substantial excess demand would then result, requiring an extensive system of controls, allocations, and rationing. Because of serious data limitations, it is impossible to design these measures so as to ensure that resources are efficiently used. Heavy reliance on such measures is likely to lead to an inefficient use not simply of energy resources but of all resources, and thus might delay our recovery from the crisis. One has reason therefore to question the efficacy of such controls for more than a very brief period.

In addition, holding prices down is likely to create expectations that prices will rise in the future, thus further discouraging increases in production and sales. Because fossil fuels are exhaustible resources, sales made today are at the expense of earnings in the future. If the rate of appreciation of the value of a resource is expected to exceed the rate of return on alternative investments, there is little incentive to sell. A greater return could be earned by holding back production and building up inventories than by immediate sale. It has been argued that the domestic output of natural gas has been held down during the past few years, partly because of expectations that large price increases would be permitted.

These considerations argue for letting energy prices rise so that markets will clear, and for initiating a tax to limit windfall profits. In this way, the price system is permitted to play an important role in guiding production decisions and encouraging consumers to conserve energy.

With respect to the price of domestically produced crude oil, a distinction has been made between "old oil" and "new oil," the latter referring to all oil produced on a property in excess of output in the same month of 1972. To stimulate increases in production, the ceiling price has been removed from new oil production. The ceiling price on old oil was raised to $5.25 per barrel late in 1973 to reduce the widening gap between prices

of old oil and prices of imported and new crude. As required by the Trans-Alaska Pipeline Authorization Act, there is no price ceiling on oil produced from stripper wells, that is, those producing less than 10 barrels per day.

To limit windfall profits, the President recommended that Congress enact an Emergency Windfall Profits Tax. The proposed measure taxes increases in crude oil prices at rates graduated up to 85 percent on all sales of domestic crude oil at prices higher than base prices determined by reference to the December 1, 1973 ceiling set by the Cost of Living Council; the same price would apply in the case of uncontrolled oil. The tax, which would be phased out over 5 years, is designed to eliminate significant windfall profits resulting from short-term increases in crude oil prices, but to give producers enough incentive to invest in the expansion of crude oil output in the future.

Sound natural gas policy calls for more competitive pricing. The Administration has asked Congress to pass legislation deregulating prices on new interstate natural gas contracts. The Administration's proposal would permit the price to rise, in stages, toward the long-run, market-clearing level. Prompt steps in this direction are desirable as a means of avoiding the natural gas shortages that have recently occurred. Deregulating the interstate price will increase reserves and production and will permit users who depend on interstate pipelines for supplies to compete with intrastate users. Many electric utilities and industries now buy intrastate gas at a price above the regulated interstate rate. When the interstate price rises, more gas will flow in interstate commerce, where in many cases it will substitute for oil. Natural gas would thus be available where the need is most critical. Deregulation will also result in a greater output of natural gas liquids, a prime feedstock used by the petrochemical industry.

Prospects for Increasing Domestic Production

Production of petroleum, and of associated natural gas, can be increased within a year by expanding output from existing oil fields. Part of this increase will result from the use of secondary and tertiary recovery methods. An additional increase can come from maintaining the production of stripper wells that would otherwise be abandoned. Some stripper wells can be reworked to yield a greater rate of flow.

In 1973 most wells in the United States were producing at 100 percent of the MER. In most States the law does not permit production in excess of the MER, which is in principle the maximum rate at which oil can be extracted without seriously reducing the total amount of the resource that can ultimately be recovered from the field. But the MER is an imprecise figure. In many instances total output would be reduced by only a small amount if production went beyond the MER for 2 or 3 years. Moreover the MER should reflect economic as well as technological factors. The economically efficient rate of production is a function of market prices, both present and future. An increase in the value of oil today, relative to the expected future value, should lead to a more rapid rate of

recovery today. In some cases, therefore, it would be in the national interest to adjust the MER's upward.

Progressively larger increases in the production of petroleum and associated natural gas can be expected after 1974. Increases in the price paid for the so-called new oil will stimulate exploration, mainly offshore, and an expansion in production. It is likely that offshore production of crude oil will begin to rise by 1976. The Prudhoe Bay fields in Alaska are expected to begin producing by 1977 or 1978 and to yield up to 2 million barrels of oil per day by 1980, to be delivered via the new trans-Alaska pipeline, which received final congressional authorization in December 1973. It is expected that another pipeline will be completed by 1980 to ship associated natural gas from the Prudhoe Bay fields to the "lower 48" States. In addition, major new refinery construction and expansion plans have been announced.

In 1973, natural gas exploration increased sharply in response to increases in the wellhead price and a stepped-up rate of offshore leasing. The annual total of gas well completions in that year surpassed by 15 to 25 percent the all-time high reached in 1961. This high level of drilling is expected to be maintained in 1974 and will lead to a build-up of reserves. Production is likely to begin to rise in 1974 and to increase more rapidly in the following years, particularly if higher prices are permitted.

Energy Conservation

Higher producer prices for oil and natural gas will not only stimulate additional production but also dampen energy use and lead to a shift to coal in the industrial, commercial, and electric power sectors. An acceleration of the rate of construction of nuclear reactors and coal-fired power plants might lead to some substitution of electric power for oil and gas in the residential and commercial sectors.

Because the real prices of all fuels and electric power will be higher than in the past, there will be a substitution of other productive inputs for energy inputs, both in industry and in the household. Americans can be expected to drive cars that are smaller and have more efficient engines; to improve the insulation in their homes; and to pay greater attention to the energy requirements of appliances when making a purchase. In some parts of the country it will become economic to install solar space-conditioning systems that substitute energy from the sun for more conventional kinds. There will also be shifts in the composition of output away from energy-intensive goods and services toward those that use less energy.

These effects will restore the balance between domestic demand and production. The system of controls and allocations that was instituted at the close of 1973 to deal with the crisis will become increasingly less important, and it will be possible and desirable for energy resources to be allocated principally by the market system.

LONG-TERM PROSPECTS

The price of imported oil is now probably far above the long-run cost of supplying the entire U.S. market from domestic production. Because of OPEC's monopoly power, it is possible that the world price will remain above the long-run domestic cost for some time. The probability of this occurrence would be significantly increased if the United States were to continue to depend heavily on imports. Even if the world price were to decline, moreover, there would be a risk of a subsequent sudden sharp price rise or a cutoff of supply.

These prospects argue for an accelerated development of domestic energy resources. The United States has sufficient energy resources to last for centuries, even if demand continues to grow as rapidly as in the past. The Nation has untapped oil and natural gas resources on the Outer Continental Shelf. Synthetic hydrocarbon liquids and gas can be obtained from our vast shale and coal resources. Nuclear power may still play the role once expected of it, and the development of the breeder reactor will greatly expand the power that can be ultimately obtained from domestic uranium resources. New technologies that are being developed may eventually permit an economic use of geothermal, solar, and fusion power.

However, large capital investments are required to expand domestic energy production. The private sector will be willing to undertake this investment only if there is a reasonable assurance that the price will remain sufficiently high to provide an adequate rate of return. As long as domestic producers face the possibility of a significant decline in their price, the domestic investment required to expand production will be held back.

The risk to the domestic energy industry comes from the very low cost of producing oil in many OPEC countries. Although OPEC is now able to charge a price that is many times the cost of production, there is always the chance that OPEC countries will lower their prices substantially. Such a price reduction might result from a deliberate decision by producing countries to undercut U.S. energy producers, or from a breakdown of the cartel.

A decision regarding energy self-sufficiency in petroleum production is complicated by the important effect that U.S. policy may have on the price of oil imports. A U.S. policy oriented toward one price level is likely to help bring about a different price level and thus make the policy appear costly. A growing dependence on imports, however, involves a potentially higher cost than would result from expanded domestic production and also poses a threat to our national security.

Project Independence

In response to these considerations, in November 1973 the President inaugurated Project Independence, designed to ensure an expansion in domestic energy production so that the Nation would no longer be subject to economic disruption, or the threat of such disruption, from a sudden curtail-

ment of vital energy supplies. This program includes large proposed expenditures for research and development, which are described below.

The choice of policies to bring about the capability for self-sufficiency in energy production should depend primarily on economic criteria. Because domestic energy investment is now inhibited by the risk that the oil-exporting countries will disrupt the market for political or economic reasons, the policy should be oriented toward reducing that risk. It is important, however, to ensure that the incentives for efficient domestic production will continue, and that any reductions in costs are passed on to consumers. In addition, policy should be designed to permit prices of different sources of energy to reflect differences in quality (or desirability), so that resources will be used efficiently. This means that, while the Nation needs to be protected from dependence on unreliable supplies, domestic producers should not be isolated from the normal business risks arising from domestic competition. Policy should not protect against the risk of a decline in the price because of technical advances by other domestic producers; to reduce this risk would encourage inefficient production. There should be adequate incentives for development of new products, for innovation in production methods, and in general for measures that reduce the social cost of producing energy.

One way to achieve the capability for energy self-sufficiency is to provide selective incentives for the introduction of designated new sources of energy, such as shale oil or synthetic gas from coal. For example, the Government could agree to purchase a specified amount of shale oil, over a number of years, at a guaranteed price. If the market price is above the support level, there is no need for the Government to act; but if the price falls below the support level, the Government would make deficiency payments to producers. Such action would encourage the development and construction of the necessary shale oil production facilities, while market forces would determine prices to producers of other types of energy and to energy users. This proposal results in lower profits to producers of conventional energy resources, for which no price guarantee is made.

A drawback of the proposal is that different energy sources would have different prices, thereby leading to an inefficient resource use. Moreover, the Government would be required to determine which new sources of energy to support. There is also a likelihood that production from nonsupported energy sources would be discouraged and that the Government could be forced to support an ever-increasing part of the market. For these reasons many believe it would be preferable to rely on general market incentives rather than selective subsidization.

It is also important to recognize that the exercise of monopoly power by the oil-exporting countries has increased the real cost of energy to the United States. Although Project Independence will reduce energy prices below the prices currently charged for imports of petroleum and liquefied natural gas, the cost of energy is unlikely to return to the pre-1973 levels. It is therefore

important that the higher costs be reflected in the prices paid by consumers, to ensure that they economize on energy use.

Another way to achieve the capability for self-sufficiency is to give domestic energy producers assurance that import prices would not fall below certain levels. Variable tariffs could be used to ensure that prices of imported oil and natural gas do not fall below such levels. This would ensure competition among domestic producers and would encourage development of the lowest-cost domestic sources of energy. The price of all energy sources would reflect their value to consumers and would therefore encourage efficient use.

An important factor in selecting an appropriate policy is the responsiveness of domestic supply to changes in price. Restricting energy imports may appear to be an attractive option if it is believed that the long-run domestic price will be, say, $5 per barrel of crude oil. But if the cost is expected to be triple that amount, import restrictions appear decidedly less attractive.

Role of Imports

At least until 1980 the United States will continue to depend on oil imports to supplement domestic production. As domestic energy output expands, it will be possible gradually to reduce this dependence. If imports can be obtained at a sufficiently low price, however, without posing a threat to our national security, they can continue to play a role in our long-term energy policy.

The risks associated with petroleum imports could be substantially reduced by means of a storage program. Petroleum could be stored both in salt domes and in the form of oil fields with shut-in production capacity. In the event of an unexpected curtailment of oil imports, the salt dome storage would be immediately available to offset the loss of foreign supplies; and the shut-in capacity would be available within a few months to supply petroleum until it is possible to produce from new wells. On the basis of the level of imports and an assessment of the risk of an actual or threatened reduction in foreign supplies, the Government could determine the appropriate amounts of storage and shut-in capacity.

Energy Research and Development

The principal object of a Federal energy research and development program is to develop new technologies that permit the production and use of energy at a lower cost to society, either by reducing the cost (including the environmental cost) of providing a given amount of energy or by reducing the quantity of energy needed to produce a given output of goods and services.

Until recently, most energy research and development has been conducted by the private sector. There is now a need for the Government to play a more active role, partly because of the long-term nature of many energy research and development projects and partly because of the fundamental nature of much of the research that is needed. There are other reasons. The

payoff from such projects depends critically on future Government policies with respect to environmental control, leasing of mineral rights, and import restrictions. It may therefore be unusually risky for private investors to undertake this research. Many kinds of research and development concerning energy involve benefits to society as a whole that cannot be fully captured by the investor, so that it is unprofitable for any one firm to conduct the research. Finally, the interdependence among projects provides a compelling case for the Government to provide an overview and to coordinate research and development in the energy field, though not necessarily to conduct the research itself.

There is an additional potential benefit that might result from an energy research and development program. By making a coordinated effort to develop those technologies required to ensure self-sufficiency, the United States will improve its bargaining power vis-a-vis the oil-exporting countries. In this way a federally coordinated energy research and development program may play an important role in forcing the world price of oil down to the competitive level.

A major component of Project Independence is a stepped-up program of energy research and development. The Administration has recommended an expenditure of $10 billion over a 5-year period beginning with fiscal 1975. This program is principally addressed to the accomplishment of six tasks:

1. Improving the efficiency of energy use and of the conversion of fossil fuels to electric power.
2. Increasing the domestic production of petroleum and natural gas.
3. Expanding the use of coal.
4. Increasing the use of nuclear power.
5. Developing renewable energy sources.
6. Reducing the environmental effects associated with all stages of energy production and use.

The Administration's research and development program represents an important step in moving the economy toward an established capability of being self-sufficient in energy production. However, the program deals only with the technological aspect of energy production and use.

Energy production is limited not only by the state of current technology, but also by economic incentives. The prospect of higher energy prices will accelerate the development and application of technological advances by the private sector. If the private sector is given a larger role in Project Independence, expenditures on research and development will be more closely geared to those techniques likely to become commercially applicable, thus further assuring the success of the program.

ENERGY AND ENVIRONMENTAL POLICY

The Nation's urgent need for adequate and dependable supplies of energy has raised concerns about how efforts to fill the need will affect the goal of

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improving the environment. The fundamental premise of economic policy is that the Nation's total resources must be allocated as efficiently as possible. This concept includes careful allocation of our scarce environmental resources, but it does not follow that environmental policy should be insulated from other problems and policies.

In enacting laws to protect environmental quality, Congress was responding to the strong public demand that environmental resources—clean air, water, and land—should be enjoyed as amenities rather than used as receptacles to absorb residual wastes of production and consumption. The new legislation set environmental standards that would be costly to achieve, but it did so with the presumption that the goals were worth the costs. However, the standards also assumed certain basic cost relationships among the additional resources devoted to meeting the standards; the energy crisis has disrupted these relationships by sharply raising the cost of fuels.

As the price of energy increases, environmental policy provisions that call for significant consumption of energy become more expensive, and energy-conserving provisions become cheaper. If policy adjustments are not made, unnecessary amounts of society's scarce energy resources will be used to attain any given level of environmental quality. Adjustments to avoid such waste do not represent a change in the relative importance that either the Government or the public places upon environmental quality. Instead, they are similar to the reduction in consumption that occurs if the price of any commodity increases significantly while other nonprice influences on the consumption of that commodity remain unchanged. The appropriate short-term adjustments indicated in environmental policy because of energy price increases have two requirements: First, they must accurately reflect the increased scarcity of energy expected in the near future; second, they must not interfere unnecessarily with appropriate adjustments to the somewhat less intense scarcity of energy likely to prevail in the more distant future.

Thus, provisions of environmental policy that save energy become cheaper, and as a result comprehensive efficiency criteria indicate a greater use of them. For example, to achieve the air quality standards specified in the Clean Air Act, the Environmental Protection Agency (EPA) has stated that a very substantial reduction in the number of vehicle miles traveled (VMT) by automobiles and lightweight trucks will be necessary in several large urban areas. This reduced fuel consumption would be desirable both in countering the energy crisis and in improving the environment. Since higher energy prices reduce the costs of such VMT reductions, efficiency criteria suggest faster implementation of this particular environmental policy. In accordance with this view, the Administration has acted to provide on a priority basis for substantial funding of mass transit in areas in which air quality will require large VMT reductions.

The theory of implementation in the Clean Air Act calls for the States to formulate plans to achieve the act's air quality standards. The act requires only that the more important primary or human health standards be

met in 1975, but stipulates a "reasonable period of time" for attainment of the secondary standards which are intended to protect esthetics and vegetation. However, some States required in their plans that the secondary and primary standards be reached at the same time, and this became legally binding under the Clean Air Act. Such advanced timing of the environmental goals would require much more low-sulfur coal than is now available domestically. It would also seriously constrain the ability of other States to reach the more urgent primary or health standards. Although estimates vary, the so-called clean fuels deficit is roughly equivalent to one-quarter to one-half of all coal burned in 1970. In States with advanced secondary standards and in States where the primary standards will not be met, the only legal course open to coal-burning utilities would be to switch to low-sulfur oil or natural gas. In a period of high prices and short supplies for these fuels, such substitution is inefficient.

The Administration has therefore proposed in the Emergency Energy Act to give the EPA the authority to postpone attainment of the secondary air quality standards in States where such action would reduce the clean fuels deficit. One longer-term danger of this action, however, is that it removes some of the incentive that users of high-sulfur coal would have to develop improved emission control technology. A relatively easy way to restore this incentive, and give it a more efficient form, would be congressional enactment of the Administration's sulfur emissions tax proposal.

This example of the adjustments in enviromental policy that are indicated by higher energy prices is only a postponement of an implementation schedule, not a lowering of standards or other change in the policy itself. As a short-run response to the energy crisis, postponement has two advantages over a structural policy change. It entails less risk of obstructing the realization of long-term goals of environmental policy; and it avoids adding to the uncertainty about these goals which might inhibit the investment required by both energy and environmental needs.

Efficient Environmental Policy: The Post-Crisis Challenge

Although postponing the implementation of environmental standards is preferable to revising such standards, one should not conclude that current standards are optimal and need no revision. Indeed, the standards—particularly those in the Clean Air Act—should be regarded as interim and provisional targets that reflect the urgency of the Nation's commitment to environmental protection at the time they were adopted. These standards may become more stringent or less stringent. In any event, they do not yet embody the careful distillation of scientific knowledge that will be required for the most efficient use of our scarce environmental resources in the longer run.

For example, air quality standards permit only specified concentrations of a limited number of particular pollutants in the ambient air. But, although concentrations of some pollutants might damage health or create other costs for some individuals, regulations to limit processes that release particular

pollutants into the atmosphere will also impose costs upon others. Standards ought to be based on a careful balancing of these risks, costs, and benefits, as they would be perceived and evaluated by fully informed individuals.

Not enough is known, however, about the ways in which activities that result in the release of pollutants are linked with ambient air quality to permit such a balancing, nor is enough known about the effects of various concentrations of pollutants upon human health. Another consideration is the efficiency of the means employed to reach optimal environmental standards once they are identified. Thus far, legal and administrative regulations and directives have been the principal instruments. Administrative capacity and legal enforceability require that these regulations be uniform and relatively simple. At the same time, the activity and organizations they seek to regulate are complex and varied. If individuals and enterprises had more discretion and flexibility, specified standards could be attained at a lower cost and with fewer scarce resources. Taxes, emission charges, and user charges are mechanisms that introduce this flexibility and efficiency into environmental protection.

AGRICULTURE

The problems and policies of American agriculture since the 1930's have been predominantly related to excess productive capacity and the adjustment of resources to that condition. A related condition was an underlying instability in agricultural prices and incomes brought about by variability in food production and foreign demand, and intensified by a slow response by consumers and producers to changes in prices. Government restrictions on farm output, which were adopted to deal with the problem of excess capacity, as a by-product also tended to reduce price instability.

In 1972 circumstances began to change in agriculture. One reason was a sharp rise in the demand from abroad for U.S. farm products. By 1973 the higher level of exports had eliminated almost all excess capacity, and long-standing restrictive agricultural policies were modified to encourage all-out production. In an important sense the disappearance of chronic excess capacity should be recorded as a success. With its disappearance, however, the second problem, instability, has now taken on more significance.

Wide swings in farm and food prices contribute to instability throughout the economy. This became especially clear in 1973 when rising food prices accelerated the overall inflation rate. Although instability will at times lead to reduced farm prices, there are existing standby measures that cushion the decline in farm incomes. Comparable measures do not exist at present to moderate an acceleration in consumer food prices.

New conditions now face agriculture. They have raised a new set of issues that are discussed in this section.

AGRICULTURE: FULLY EMPLOYED

The stabilization of agricultural markets, especially for grains, was an outgrowth of two related public policies designed to support farm income. There

was an underutilization of productive capacity in the farming sector, measured in terms of available cropland, underemployed labor, and underutilized capital equipment. In recent years this underutilization was a result of Government programs that provided payments to farmers and concurrently diverted or "set aside" land from production, usually on an annual basis. Since the early 1960's about one-sixth of the Nation's cropland was recorded as being withheld from production under Government land retirement programs. In addition to withdrawing land from production, farm programs caused sizable stocks of several commodities to be accumulated by the Government. Because of the stockpile program, substantial short-term fluctuations in either production or demand were largely offset by the accumulation or release of stocks of farm commodities under the various price support programs. These policies reduced instability in farm markets over the years at considerable cost in both Government budget outlays and intervention by the Government in the agricultural sector. As experience was gained, legislative and administrative actions were taken to "fine tune" production and restrict what was viewed as excessive accumulation of commodities under Government control. By the early 1970's the programs had become very effective in controlling total crop acreage to mesh prospective production with expected demand. Actual production varied, of course, with yields per acre, which were influenced by weather conditions. Nevertheless, a clear downward trend in stocks was evident and reflected the direction of Government policy (Table 31).

TABLE 31.—*U.S. grain stocks compared to grain utilization, selected periods, 1950–73*

Marketing year	End of marketing year stocks as a percent of total utilization			
	Wheat	Rice	Feed grains	Soybeans
Annual average:				
1950–54	52.1	8.5	24.9	2.9
1955–59	102.7	48.1	43.0	9.6
1960–64	96.5	14.0	49.4	8.6
1965–69	44.4	11.5	28.4	15.1
1970–73 [1]	45.8	14.6	21.2	9.2
1970	64.2	18.3	27.1	18.7
1971	48.6	23.0	18.9	7.8
1972	58.0	12.4	25.1	6.0
1973 [1]	21.7	5.7	15.0	4.6

[1] Preliminary.

Source: Department of Agriculture.

Disappearance of "Excess Capacity"

For years it was fashionable to talk of "excess capacity" in agriculture. The measure most widely referred to was the acres of cropland that were idled each year by Government programs. That measure seemed to be an adequate approximation, because if more output and hence more land were demanded the complementary inputs—labor, machinery, fertilizer, and seeds—would also be available to expand production. Several decades

of research and rapid mechanization had resulted in an abundance of these other inputs, particularly of labor, because of a continuous flow of work-saving technology into agriculture. If more production were needed—more crops, more livestock, or both—the resources were already on the farms of the Nation or could be readily purchased. Only during World War II, when vast amounts of manpower had been drawn off the farm, was a shortage of labor apparent. After that period, agriculture experienced a long succession of years with excess land, excess labor, and abundant supplies of purchased inputs.

This situation led to a widespread view that excess capacity was endemic in U.S. agriculture and that it would be large enough to cover almost any potential shortfall in world food production. Given time to expand production, the Nation's farmers could produce more of everything—more grain and soybeans, as well as more meat, milk, and other farm commodities—without substantial increases in costs or prices.

The amount of labor employed in agriculture adjusted downward throughout the 1950's and 1960's (Table 32). Without its being generally realized, the availability of labor to produce more livestock as well as crops slowly approached a balance with normal requirements for food production. So long as productivity of manpower in agriculture was growing rapidly from the addition of new capital equipment or other technological innovations, the remaining workers could meet the requirements for larger output without interfering with the continued exodus of workers from the agricultural sector.

TABLE 32.—*Change in inputs used in farming, 1950 to 1973*

Period[1]	Percent change (annual rate)			
	Cropland	Farm labor	Machinery	Fertilizer
1950 to 1955	−0.8	−3.7	2.9	5.9
1955 to 1960	−1.2	−4.5	−.2	4.7
1960 to 1965	−1.3	−4.2	.7	8.2
1965 to 1970	.0	−3.6	1.4	6.9
1970 to 1973[1]	2.8	−.5	.3	2.6
1969 to 1970	1.0	−5.3	−1.0	2.7
1970 to 1971	4.1	−1.1	2.0	7.1
1971 to 1972	−3.6	−3.4	−1.0	−.8
1972 to 1973[1]	9.5	4.7	2.9	3.3

[1] Preliminary.

Source: Department of Agriculture.

Labor productivity and farm output were moving uniformly upward until at least the mid-1960's. Then, recent evidence suggests, some of the trends flattened out. This was especially true in livestock production, which is more labor intensive than field crop production. The annual rate of increase in livestock output declined from 1.7 percent for each year in the 1960–65 period to 1.6 percent in 1965–70, and to only 0.9 percent annually after 1970 (Table 33). The reduced availability of labor placed new restraints on expansion of livestock production. Trade-offs between more crops or more

TABLE 33.—*Production and productivity in agriculture, selected years, 1950 to 1973*

Period	Percent change (annual rate)			
	Crop output	Livestock output	Crop output per acre	Livestock output per feed unit
1950 to 1955	0.9	2.1	1.3	1.3
1955 to 1960	2.3	1.3	3.7	−1.7
1960 to 1965	1.0	1.7	2.0	−.3
1965 to 1970	2.0	1.6	1.8	.1
1970 to 1973 [1]	4.2	.9	2.4	−1.5

[1] Preliminary.

Note.—Annual rates of change are based on 3-year centered averages for years shown except for 1973 which is for a single year.

Source: Department of Agriculture.

livestock became more significant, although their existence went largely unnoticed until the burst of additional export demands for farm products after mid-1972. When market prices and Government policy encouraged stepped-up farm production, the response was less than expected. Additional acres were planted, and crop production rose. Meanwhile livestock production declined in aggregate, and the indexes of labor used in agriculture, which have been declining steadily for years, either increased or declined only marginally in 1973. These results suggest that some significant changes had occurred in the structure and excess capacity of American agriculture.

The persistent decline in the hours of labor employed on farms at least temporarily bottomed out in the past year. If the long downward labor adjustment is largely over, agriculture will have to provide higher returns to labor in the future in order to compete with the nonfarm sector for workers.

The growth in productivity of all inputs used in farm production has shown some slowing, although there is no indication of a plateau. Nor has the rate of increase in yields of crops shown a decline. But the productivity of feedstuffs used in livestock production has shown some decline, partly because until recently it was economical to substitute feedstuffs for forages in dairy and beef enterprises. Dairy products and meat are an important part of consumer food budgets and continuous improvement in the efficiency of feed conversion would help to hold down their real cost. For this reason there may be a need to review the organization and use of public funds in livestock research.

Expanding Farm Exports

Growing exports have been the immediate cause of the new pressures on agriculture's productive capacity and have contributed to the shift toward crop production, particularly since mid-1972. For years the United States has nurtured foreign markets for food and fiber with Government supported export promotion efforts. A few months before the burst of world demand for U.S. agricultural products, projections had suggested that a record $10 billion of exports could be achieved by 1980, up from $8.0 bil-

lion in fiscal 1972. Actually the accelerated foreign purchases since mid-1972 caused agricultural exports to reach $12.9 billion in fiscal 1973 and $17.5 billion in calendar 1973. About 60 percent of the increase in fiscal 1973 was caused by increased volume; the remainder came from higher prices.

Causes of export growth. An important question is whether the increased demand for exports is traceable to abnormally poor weather conditions in other countries or a longer-term rise in world demand. Both of these have contributed to export demand in the 1972–73 period. Poor crop harvests during 1972 in many countries were certainly a major factor: world grain production fell 2.7 percent below the previous year.

However, there are two reasons to believe that U.S. exports have moved to a higher plateau. First, the demand for red meat and poultry in Western Europe and Japan has been expanding as incomes improved. The sharp economic expansion of 1972–73 combined with the depreciation of the dollar to augment this basic trend in 1973. In fiscal 1973, Japan and Western Europe accounted for about one-half of the growth in export volume.

The second factor has been growing markets in the Soviet Union, the People's Republic of China, and Eastern European countries. The key here is primarily how much these countries import in total, not how much they buy from the United States. The initial U.S. sales of grains to the U.S.S.R. in mid-1972 were caused partly by very poor Soviet crops, but they also stemmed from an earlier Soviet policy decision to improve consumers' diets. Implementation of the decision will mean higher Soviet grain imports, on average, in the future. Their grain purchases in 1972–73 together with Chinese purchases accounted for about a third of the increased export volume of U.S. grain in fiscal 1973. Even if such purchases are smaller in the future, they can be significant in maintaining exports at high levels.

Domestic market complications. Isolated from domestic food markets, the record on farm exports is impressive. However, the greatly expanded exports have had significant implications for domestic food markets. When more feedstuffs are shipped abroad, the result is increased competition and higher prices for the remaining supplies. This became clear in 1973 as the production of livestock products failed to respond to sharply higher livestock prices. The very large exports of feed grains and oilseeds raised the costs of livestock production, thus reducing incentives to producers.

The problem was highlighted in 1973 when the contracted supplies of soybeans for export were thought to have exceeded the amount that would be available after domestic demands were met. This finding led to a temporary embargo and a later licensing of exports of soybeans (and related products) for the months of July through September. After harvesting of large crops began in the fall months, all restrictions on exports were removed, although a newly instituted reporting system on forward export sales was continued under new farm legislation passed in 1973.

The controls on soybean exports seemed justified by special circumstances which made domestic processors and livestock producers unable to pay world prices for the available supplies of soybean products. The ceiling prices on red meats in March, the later freeze on all food prices in June, and the rising costs of feedstuffs combined to place producers in a severe profit squeeze. As a result, they cut back their production plans and began to slaughter breeding animals, a response that could have seriously reduced food supplies for many months and even years if it had continued. However, the export controls raised serious conflicts among a variety of national objectives. Removal of meat price ceilings and the earlier termination of all special efforts to expand exports gave domestic and foreign buyers equal access to U.S. supplies of feedstuffs and food commodities, thereby reducing the necessity of export controls.

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The recent shifts in resource use and output mix in agriculture have occurred in response to increased worldwide demands for agricultural products and tighter domestic supplies of farm resources. These changes have brought an end, at least temporarily, to the chronic excess capacity in agriculture. Exports have expanded swiftly, so much that large carryover stocks of grain commodities have been depleted. With supplies of feedstuffs for livestock extremely tight, livestock production has stopped expanding. Crop and livestock production are now competing more directly for the Nation's farm resources. Over the last year, extensive adjustments have occurred in agriculture in response to changing price relationships and sharply rising prices. Tightened markets for food have brought a new awareness of many interrelationships that could be safely ignored during periods of surpluses and have made policy decisions relating to food and agriculture more complex.

AGRICULTURAL POLICY FOR THE FUTURE

Significant progress has been made in the past decade toward less Government intervention in and control of farm production. The agricultural acts passed in 1965 and 1970 moved the Government out of mandatory control programs for major farm commodities and provided a more flexible and effective means of controlling farm output. Another significant step toward making farm legislation more market oriented was taken when Congress passed the Agriculture and Consumer Protection Act of 1973, whose principal innovation is a system of target prices for wheat, feed grains, and cotton. When market prices are above the targets, no Government "deficiency payments" are made to farmers and the Government has little involvement in agriculture. In years when market prices fall below the target prices, Government payments to farmers make up the difference between target and market prices on base production. The Government also places a floor under market prices by being ready to purchase crops from farmers at relatively low prices. Farmers are thereby assured in two ways of at least

a minimum income. Unless prices fall so low that the Government begins to accumulate inventories of commodities, however, its role is limited to making deficiency payments when they are required.

With this change in basic farm programs, market prices assume more importance in guiding resources into production. Market prices will also have greater importance in allocating U.S. agricultural products among competing buyers. The intensity of market competition is likely to be much greater in the coming year than was true under the surplus conditions of the past.

The Need for Improved Information

The 1973 act is particularly well suited to current conditions in agriculture. It permits the market to signal to farmers what priorities domestic and foreign purchasers are placing on various commodities and products. The act allows, and indeed mandates, the Government to provide market information to the private sector, so that decisions will be based upon the fullest possible knowledge about trends in market conditions. In fact, the production period for both crop and animal production is so long that current prices may be a misleading guide to the most profitable future operations. Under these conditions, advance information is especially necessary for efficient farm production.

Export demand is one important area in which a deficiency of information became apparent in 1973. The Administration has taken a number of steps to improve the flow of current economic intelligence regarding worldwide agricultural developments through consultations with other countries. Among other actions, it initiated a World Food Conference to be held in 1974 under the auspices of the United Nations. A bilateral agreement has been signed with the U.S.S.R. that will make possible more accurate forecasts of worldwide production and demand. The agreements between the United States and the Soviet Union will facilitate more prompt exchange of information on crop and livestock production. In June the Department of Commerce initiated a reporting system for forward export sales of major agricultural products. The new farm legislation later made this a permanent system under the administration of the Department of Agriculture.

Steps also have been initiated to improve domestic farm and food forecasting and planning. The Department of Agriculture has requested, and the 1975 budget will contain, increased funds to strengthen its information and analysis services to the rest of the Government and the private sector. The need and scope for such activities were less as long as agricultural reserves existed in the form of stockpiles or idle acres. Under today's conditions, it is essential to give high priority to this aspect of the Government's work.

Government Food Stockpiles

One very important issue has emerged in 1973 and remains unresolved: What policy should the Government pursue on grain stockpiles? In the past two purposes have been served by such stocks: as "operating stocks"

which the private sector needs if it is to function normally, and thus would elect to hold; and as "contingency reserves" over and above normal operating requirements to cover variations in production or demand.

As discussed above, Government policies were directed toward and succeeded in gradually reducing grain stocks in recent years. In earlier years, a substantial fraction of stocks had been held by the Government; but virtually all of these were released in 1973, and total stocks reached the lowest level since 1953. Stocks of wheat, in particular, are only adequate to provide for normal operating inventories this year; contingency reserves are nonexistent both in the United States and in the world.

The unusually low grain reserves mean that the world is at present more vulnerable to poor harvests than it has been for some time. But stockpiling obviously cannot begin until world production levels have been built up. Otherwise, such a step would cause already high prices to escalate further, or necessitate a system of nonmarket allocations. Once a more normal supply-demand food balance is restored, which should begin to occur in 1974–75, stocks can be accumulated again. In the past the world has sought protection against crop failure by relying upon stocks held principally by the United States and Canada. Although this arrangement has worked, the current supply-demand conditions provide an opportunity to improve on the system. The Administration is exploring several approaches which, through cooperative action, could improve supply stability:

1. As a minimum, improved worldwide information flows are necessary to signal a tightening of supply-demand conditions as promptly as possible. Producers and consumers will then have the best opportunity to react to higher market prices.
2. Beyond that, multiyear forward sales contracts negotiated either privately or by governments could be used to provide more supply stability. Events of 1973 have encouraged importing countries and exporting firms to seek commitments looking farther into the future. These contracts can contribute to greater stability because they provide valuable information on prospective export demand to supplying countries and because production can thus be planned to meet contract sales.
3. A broader approach has been put forth by the Food and Agriculture Organization of the United Nations. It would seek to establish stockpiling guidelines that participating countries would follow in developing their national policies. The system would be voluntary; but to the extent that the guidelines were appropriately set and complied with this approach could increase supply stability.
4. A more rigorous approach would be to establish an essentially autonomous international agency having the resources to operate a buffer stock. Such schemes take various forms. They all present common problems, however, with regard to control, financing, and interference with desirable market activity.

The Administration supports the examination of multilateral approaches to the stockpile issue. It also recognizes that this country has an interest, as the world's major exporter, in maintaining necessary levels of stocks, since otherwise we could not be a reliable supplier of food for the world. It is also in this country's interest to have adequate stocks to provide a measure of domestic price stability. According to preliminary estimates a contingency reserve would not have to be large or costly in order to offset most instances of poor harvests or abnormal demand. Large costs in the past have grown out of excessively large stock build-ups under price support programs. The prospects are reasonably strong that market conditions will not again lead to excessive stock-building in the near future. Any accumulation of contingency reserves would therefore require that the Government purchase commodities in the market or have ready access to farm-held stocks under the Government loan program.

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Agriculture has always been a cyclical industry; and the fluctuations, though relatively minor, have been around a trend of general abundance in the United States. One cannot say with certainty whether the unusually tight markets of 1973 signal a turning point toward a period in which fluctuations will be around a trend of relative scarcity, or whether 1973 represents only an abnormally large cyclical swing. This increased uncertainty implies that agriculture must be prepared to adjust to market developments as promptly and efficiently as possible. The current Government policy, with minimum restrictions on market mechanisms, is designed to make that possible.