

For Release on Delivery
Wednesday, October 31, 1973
1:30 p.m. C.S.T. (2:30 p.m. E.S.T.)

PUBLIC POLICY ISSUES

IN THE FINANCING OF

NEW ENERGY CAPACITY

Remarks of
Robert C. Holland
Member
Board of Governors
of the
Federal Reserve System.

Before the
Financial Conference
National Coal Association

Chicago, Illinois

October 31, 1973

I am pleased to be with you this afternoon to discuss the financing of new energy capacity. Such financing presents a significant common ground of concern both to your industry and to the Federal Reserve. The magnitude of the nation's future capital requirements in the energy field seems so great, and the need for it seems so strong, that we all need to be preparing in earnest to deal with that challenge.

I speak as no expert on energy or its financing--but I expect that I and colleagues of mine in finance and government will perforce be learning a great deal more about the subject over the next decade. At the same time, these growing capital demands from your industry are going to press you hard against some of the most respected rules and traditions in the world of finance and some of the deepest-rooted goals of public policy. Therefore it behooves us to be talking together.

Let me explain what leads me to these conclusions.

Energy Supply and Demand

The increasing size of the capital financing requirements of our energy industry is, of course, the product of two basic factors: burgeoning demand for primary energy resources both here and abroad, and rising cost of tapping these resources world-wide.

I wish to acknowledge the invaluable assistance given me in the preparation of this paper by Mr. Paul Metzger, the chief long-range planner on the Board's staff. The views herein expressed, however, are my personal responsibility, and (except where specifically identified as such) they do not represent an official position of the Board of Governors of the Federal Reserve System.

As you well know, the United States is the single largest consumer of energy in the world. It is commonly observed that with six percent of the world's population, we consume annually about one-third of the world's energy output. Most of this has come from domestic supplies.

Our demand for energy has been growing recently at an annual rate of 3.6%, and reasonably conservative projections indicate that that rate may rise to about 4% between now and 1980. This is not an outlandish rate for energy demand to grow. It is about in line with the projected long-term rate of expansion in real national output. Yet, if this annual growth of energy use were to continue, our energy requirements would have doubled by 1990.

We have shifted over the past fifty years away from coal as our major source of energy to oil and gas (which provided 75% of our total energy requirements in 1970). Expert opinion appears to be that our increased dependence on these sources of energy cannot be substantially reduced much before 1985, either by cutbacks in demand that fall short of markedly altering our nation's life-style, or by sharply increasing domestic production of coal, or by development of other energy sources such as synthetic fuels or nuclear power. So our demand for oil and gas will grow during this period, and our reliance on imported oil, largely from the Middle East, will increase--if the Arabs allow it. Furthermore, because of rising world demand and the seller's market that has been created, the oil producing countries of that area have already been exacting and will no doubt continue to exact, higher prices for this much wanted resource. I should note here that a significant side

effect of this increased cost of oil imports will be its adverse impact on our balance of payments. But a possible offset to this will be touched upon shortly.

Experts tell me that even while paying a substantially higher price for imported oil, we must also marshal funds to expand domestic oil and gas exploration and production, provide for additional refinery, power plant, tanker and deep water port construction, open new coal mines automate old ones, build plants for coal gasification and liquefaction, develop more nuclear fission plants, and support augmented initiatives in the research and development of fusion, solar, geothermal and other longer-range future sources of energy. In addition, we will undoubtedly continue to bear to a large extent both the direct and indirect costs of protecting our environment. We will, however, I believe, be subjecting these latter costs to more intensive cost-benefit analysis than we have up until now, since our efforts to preserve our environment-- as desirable as they have been--have undeniably added to our burdens in meeting our energy requirements.

From all of this it is apparent that we will, as a nation, have to pay a significantly higher total price for our expanding energy needs. However concerned one may become about the welfare implications of having to pay considerably higher prices for something as basic to the needs of the American consumer as energy, two positive economic effects of such higher prices should be pointed out. First, they will probably help to

dampen the rise in energy demands somewhat, thus providing more time for energy production to catch up. Secondly, they will add to the funds available to the energy industry to finance its modernization and expansion. They will do so directly, by bolstering retained earnings; and they will do so indirectly, by providing a record of corporate revenues that will make it easier to raise both debt and equity funds from outside sources.

Financing Energy Costs

Against this background of supply and demand prospects for energy, let me turn now to the financing costs that might be involved. The National Petroleum Council has estimated the capital requirements of the United States' energy industries from 1971 to 1985 as between about \$450 and \$550 billion dollars (in 1970 dollars). Other knowledgeable estimates range up close to \$ 1 trillion (again, in 1970 dollars). These are, in absolute terms, very large figures. Continued inflation, of course, could make them even larger, although it would probably also have the effect of expanding the volume of funds available to finance such outlays.

For purposes of our further analysis here, I am inclined to use a figure close to 700 billion in 1970 dollars--that is, a figure toward the liberal end of the range of estimates that I regard as most persuasive. That would average about \$50 billion per year of energy facilities financing. Certainly this figure is not precisely right, but it does not have to be. The aims of helpful long-range planning are served when

the relevant estimates move you in the right direction. As the future unfolds and those estimates can be refined, plans ought to be adjusted accordingly.

Let me put that projected \$700 billion of capital financing in perspective. Between 1961 and 1971 the energy industry's capital expenditures aggregated \$198 billion. That averaged about \$20 billion a year, and amounted to 21% of the total capital outlays of all types of businesses. Projections of those same total business outlays from 1971 to 1985 (in 1970 dollars) indicate that a little over \$2.2 trillion may be expended. The figure of close to \$700 billion for the energy industry's capital expenditure that I cited is thus a bit over 30% of the total, a 9 percentage point increase in the industry's share over the 1961-71 decade. Some projectors show this share reaching 35% by the year 1985. But, for reasons I will explore later, various competing factors may act to hold the energy industry's share of the nation's capital outlays below this percentage.

Can the energy industry possibly do what needs to be done to command so large a share of the nation's savings capital? Many considerations will enter into the answer of so complex and vital a question. It is worth reemphasizing, however, that the most fundamental factor determining the energy industry's capacity to raise adequate funds over the next twelve years may be whether or not there is indeed over this time interval an increased price for energy. The revenue base provided by that higher price, together with a willingness to abandon traditional notions of what are appropriate debt/equity ratios, may

spell the difference in the energy industry's ability to raise external funds.

But higher prices and profits for the energy industry as a whole are far from ends in themselves. They serve public purposes best if they are conferred upon those segments of the industry whose added energy output is needed the most. This has not always been true. The earnings patterns of three main segments of the energy industry--petroleum, coal, and the public utilities--have differed markedly among themselves.

The oil companies have been doing rather well in recent years, buoyed by the demand shifts in their direction for purposes of environmental protection and convenience. But now a powerful shift of demand back toward coal seems to be impending, because of its abundant availability and assured U.S. sources of supply, if only the various technological and environmental obstacles can be overcome. The coal industry is not, it seems to me, in a strong financial position to respond to this challenge. Its recent earnings record is poor. The sheer size of its possible new investment dwarfs its existing capital resources; some experts place needed capital expenditures for coal between now and 1985 at close to four times its current total capital investment. Accordingly, your corner of the energy business may need the greatest financial innovation and ministrations if the country is to move through this so-called "energy crisis" speedily and effectively.

We must not forget in passing, however, that in terms of capital investments, the largest portion of the energy industry today

is made up of the regulated electric and natural gas transmission and distribution utilities. Because competition is limited in these industries, it will be particularly important for their rate-setting authorities to assure prices that foster the most efficient economic use of vital energy resources while giving rise to the minimum windfall profits. We are all aware of the economically inefficient uses that can flow from excessively low pricing of such a valuable resource as natural gas. At a minimum, I believe, prices in the regulated utilities industries should be designed so that the cost of incremental increases in output are covered and in addition a fair rate of return is assured. Of course, measuring those incremental costs, like determining what is a "fair" rate of return, have never been easy tasks. Over the next decade, these tasks are more likely than not to become increasingly difficult because of the conflicting pressures that will surround the issue of the cost of energy. But despite these difficulties, improvements in the pricing practices of the regulated industries should be of significant importance in terms both of the more efficient uses to which energy can be put and the capacity of those industries to generate adequate capital funds internally and externally.

It seems clear that whatever the exact amount of the energy industry's external financing requirements may turn out to be, it will be considerably more than the industry has ever before needed. And it will therefore be considerably more than either financial institutions or capital markets have been accustomed to providing. The financial intermediaries and the markets will be confronted by increasing challenges to their capacities to develop innovative financing arrangements fully responsive to the additional capital needs of the energy industry.

Because of the large amounts of money that will be required, even major firms may find that they individually lack adequate financial strength to support all needed debt funding. Under these circumstances it is possible that multi-company guarantees may be required to permit the necessary funds to be raised. Such guarantee networks will be soundest if the guaranteeing firms are themselves in the direct line from energy production to energy consumption, and are sustained in their guaranteeing ability by their own, direct market knowledge and customer contracts. The pressures to provide these and other credit arrangements to meet energy and other needs will probably test the flexibility and responsiveness of our financial system as it has seldom been tested before.

Just as new efforts will have to be made to improvise financial arrangements suitable to heavy capital demands, so too efforts will be needed to attract funds from institutional and individual sources that have previously been inadequately tapped or not before reached.

In this regard, let me touch again upon the balance of payments issue I mentioned before. It has been estimated that as a result of the increasing world-wide demand for petroleum, the oil-producing Arab states can--if they do not curtail their sales for prolonged periods--have acquired cumulative capital reserves on the order of one-half trillion dollars by 1985. As a major consumer of oil products from their countries, we undoubtedly will have incurred a sizable balance of trade deficit with them. It would be desirable, both to help finance that trade deficit and to provide a much-needed source of additional capital funds, if a

significant portion of this money could flow back to the United States for long-term investment. No firms are in a better position to attract such Arab capital than the corporations within the family of energy industries.

There is one ultimate source of external assistance to which the energy industry may turn in trying to solve its capital financing problems. That source, of course, is the Federal Government. Suggestions are already multiplying as to what the Government could do to help. Those that have come to my attention range from a Federal "Energy Bank" that would remove some of the burden of financing energy needs from the private sector, to more conventional measures such as larger depletion/depreciation allowances and special investment tax credits. Between these two poles lie direct government loans to firms in the energy industries, a debt-pooling agency similar to FNMA, and some form of Federal loan guarantee program akin to what FHA does for home mortgage credit.

While none of these ideas may ever be implemented, they may serve as useful reminders that in one way or another our nation's ingenuity usually enables us to meet the challenge of financing strongly felt public needs. What needs to accompany them is a corollary reminder, on behalf of the taxpayer, that each such program be carefully scrutinized to be sure it can pass cost/benefit analysis from the point of view of the long-run public interest. No Federal devices that flunk such a test will have much chance of lasting long enough to succeed.

Constraints of Public Policy

Having mentioned some of the ways in which public policy might possibly assist in the financing of energy if needed, I might also point to some important constraints that public policy may tend to impose upon energy financing. Three such constraints stand out in my mind--competing priorities, monetary restraint and financial soundness.

Competing priorities

Although it is undeniably true that any modern society is extremely dependent on energy and that therefore the financing of energy requirements has a correspondingly high priority, we still must take cognizance of the fact that our society has other high priorities as well. Financial innovations, and such governmental assistance as may be appropriate, must also be (and in some instances, already have been) made available to meet several of these other priority needs. We need only think of what has been done to assist the housing, sanitation, transportation, educational and environmental control industries to realize the importance the public rightly attaches to assuring that these other basic needs are adequately satisfied.

It strikes me as unlikely that the sizable financing requirements of these other priorities--which will no doubt increase both in number and in the size of their demands over time--will be or can be neglected. This is not to say that equal status will be assigned to all of these high

priority needs. That is obviously not possible. Nor is it my intention to de-emphasize the very high priority that energy financing must have. Rather, my purpose has been to sound a note of caution that in promoting increased public recognition of the importance of raising funds adequate to finance our energy requirements, we not disregard or deprecate the high value our society has placed on finding funds to meet these other needs. In short, what seems to me to be required is that we preserve a sense of the balance that our nation must strike among all its competing priorities.

It may be helpful at this juncture for me to add a word or two about the general economic climate in which these various priorities will be competing. Over the next decade or so, the United States will probably still be struggling with the problems of recurrent inflation. Cost-push inflationary pressures will be aggravated as the added costs of energy filter their way throughout the economy. In such a world, considerable emphasis will be (and to some extent, already has been) placed upon augmenting the productivity of both the public and private sectors. Such increases in productivity provide a most desirable means of reducing the strains on both our real and financial resources.

Any sector trying to expand its share of the national economic pie as much as is being projected for the energy industry, would be well advised to lay special stress on achieving productivity advances. Comparative rates of productivity advance may become increasingly influential

in rationalizing the difficult public decisions we will have to make among a multiplicity of priorities, all clamoring for additional financing.

In summary then, I would say that we should not count upon, and that it would be unrealistic to urge, an all-out effort to finance our energy needs to the neglect of other priorities--priorities, I might add, that have won the support of significant and vocal constituencies.

Monetary Restraint

The second constraint public policy may impose is that of monetary restraint. As you know, national economic policy sometimes requires periods of tight money. Between now and 1985 such restraint may often become necessary as an offset to outbreaks of inflation that will be a result, among other causes, of the higher cost of energy.

The innovative financing vehicles to which I made reference earlier will need to be designed to adapt to the pressures such monetary policy will necessarily impose. During tight money intervals, the financial markets tend to be most responsive to shorter-term needs. Longer-range needs, such as those of the energy industry, can find financing difficult to obtain and excessively costly when it is available. This has been the chronic complaint of the housing industry, for example.

In planning for the financing of energy over the next decade, I would urge you then to make allowance for the impact of monetary restraint. For its effect may well be to lead to occasional postponements of some long-term energy investments, even when the energy industry is most in need of such funds.

Financial soundness

I come now to the third constraint public policy may impose on energy financing--that of financial soundness. I think that all of us involved in finance during the next decade must be especially sensitive to the need to protect and promote the safety and soundness of our financial system at a time when there may be rising pressures to take unwise shortcuts in financing. A healthy financial system is the indispensable ingredient, the sine qua non, for meeting all our nation's needs. No priority should be misguidedly set so high that it threatens to displace this very first priority of maintaining the essential soundness of the financial system.

This seems to me a necessary caveat because we are already beginning to see espoused superficially attractive, but basically weak, methods of energy financing.

Earlier this year, in a case with which some of you may be familiar, the Board of Governors unanimously declined to approve an application by a major bank holding company to acquire a large firm engaged in leasing nuclear fuel cores. In that instance, the proposed acquisition would have resulted in the issuance by the holding company of very substantial amounts of its own commercial paper to support the leasing activities of the corporation it sought to acquire. The effect of this would have been to finance comparatively long-term assets with a very large volume of short-term debt. To assure acceptance in the market, this debt would have

required direct backing by the assets of the holding company. There would, in my judgment, have been an indirect--but nonetheless real--involvement of the holding company's major subsidiary, one of the nation's leading banks. Rather than strengthening the holding company, the acquisition posed the potential hazard of impairing its ability to provide future capital to its bank subsidiary should the need therefor arise. It was chiefly on these grounds that the Board denied the acquisition.

I have cited this case not, I should emphasize, because it illustrates a particularly weak financing scheme, but rather as a cautionary tale that illustrates the possible hazards inherent in these times even in a well thought-out acquisition proposal by a major financial institution.

Let me now go one step further and describe a method of financing that on its face is weak, but that nevertheless is gaining currency at what seems to me a disturbing pace. This scheme involves the creation of single-purpose "dummy" corporations to finance inventories, receivables and equipment leases on a continuing basis, in sizable dollar volumes, for large corporations. These "dummy" firms provide financing for their large client corporations through the issuance of commercial paper which, because of the lack of a capital base in the "dummy" firms, requires for market acceptance the guarantee of a bank or group of banks. This guarantee is often in the form of a bank letter of credit. And such letter of credit is not always supported by a thorough credit analysis nor confined within the same safety limits set by bank managements and supervisory regulations for regular loans. The great danger inherent in such a scheme--is that in a

period of tight monetary policy, one such "dummy" issuer of commercial paper would not be able to meet its maturities. A chain reaction might ensue, leading to the inability of a sizable number of such corporations to roll their paper over. This could in turn trigger calls on banks' guarantees at a time when loan commitments were at a peak, and some banks thus might be unable to respond effectively. At that point the Federal Reserve System could be impelled to supply reserve funds itself to the banking system to counter the threat of a partial collapse of the commercial paper market. As you will recall, the Fed was called upon to do just this in the Penn Central crisis.

All told, this type of use of letters of credit - much different in safety and in purpose from the typical letter of credit - strikes me as being potentially unsound and contrary to the purposes of monetary policy. Bank supervisory authorities are concerned with this development, and if bank managements themselves cannot deal with the undesirable aspects of this credit use, the supervisors may have to do so.

Conclusion

The energy-short and capital-shy world I have been discussing today is one in which we will all be living for some time to come, albeit uncomfortably at best. In sounding some of the notes of caution that I have this afternoon regarding the constraints that public policy may tend to impose on the financing of our nation's accelerating energy requirements, I trust that I have not led you to believe I am insensitive to the urgent task that faces us. For I make no bones about it--it is to my mind one of the

gravest problems confronting this nation. What I hope my remarks have conveyed, however, is my conviction that in pressing forward to meet our country's energy financing requirements, we should recognize that in the final analysis they can only be satisfactorily met within the context of the United States' total needs and within the confines dictated by the necessities of economic policy and the integrity of our financial system. The confines are those imposed by both reason and necessity. I believe that working together we can find the solution to our energy needs well within these parameters.