

THE ENERGY CRISIS AND THE PIPELINE

REMARKS BY

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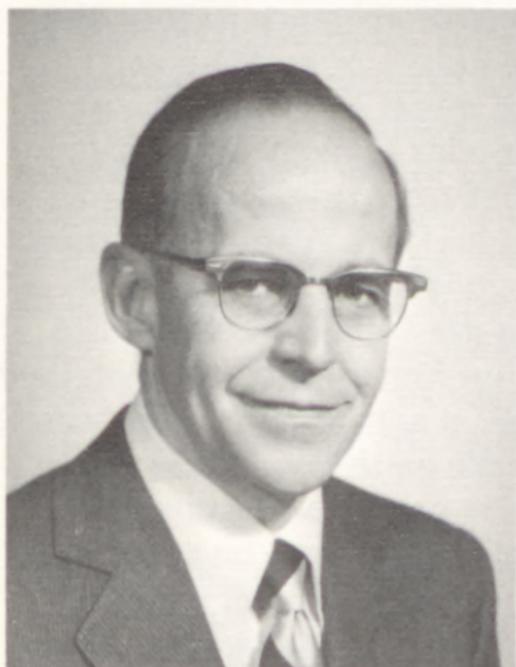
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John J. Balles

I am very glad to be with you here today, on my first official visit to the largest and one of the most exciting states in the Union. Like many others before me, I am quite impressed with the vastness of this region and with the vastness of its economic potential. I can understand how Governor Baranof must have felt when, from his palace here in Sitka, he spearheaded that first wave of development which spread from Siberia as far as Northern California.

Because of the state's potential, it has a major role to play in solving the nation's energy problem, which is the topic of my talk here today. This problem has been with us for many years, but apparently it failed to arouse much attention until it came to be labeled a crisis. Now, with the publication of the President's energy report last month, we can better understand the dimensions of the problem and can begin to work out some solutions.

There are many facets to this problem. It is most visible to urban dwellers, especially in the East, in electric power shortages. Other important pieces of evidence include the widespread shortages of gasoline and heating oil, the threat of termination of natural-gas supplies to many industrial users, and the sharply rising costs of electric power and fuel throughout the nation. (For instance, consumers pay 6 percent more today for gas and electricity and 16 percent more for fuel oil and coal than they did just last fall, at annual rates of increase.) Less visible to the general public is the fact that the nation is consuming energy resources at a rate that cannot be sustained very much longer, and the fact that it will probably require larger and larger imports of petroleum and liquefied natural gas over the years ahead.

The production record of the past several years is somewhat sobering. Domestic production of fossil fuels—crude oil, natural gas and coal—has peaked. Moreover, the nation no longer maintains excess crude-oil production capacity. Environmental concerns have brought about delays in developing energy facilities, and have also greatly increased the demand for scarce low-sulphur fuels, displacing high-sulphur fuels.

Rising energy usage

Behind these troublesome developments is an interesting shift in energy usage. Between World War II and the Vietnam War, energy usage increased about 3 percent annually, yet lagged behind the growth of the national economy as measured by GNP. In a sense, energy came to be used more efficiently over those two decades. In more recent years, however, the trend has been reversed; energy usage has increased almost 5 percent annually, and we now

encounter a rising ratio of energy to GNP.

This shift may simply reflect the acceleration of certain trends already apparent over the past several decades, largely because of increasing electrification of energy use. The growth of electricity consumption has considerably exceeded that of aggregate energy consumption over the past several decades. This reflects the increasing affluence of the nation's population, evidenced by the heavy rate of acquisition of high-load appliances and equipment, such as color T.V. sets, air conditioning, and electric space heating.

Paradoxically, much of the upward surge in energy consumption has developed because of the environmental conflict. Although miles-per-gallon performance of passenger cars first declined because of the increasing size and weight of Detroit's products, the downward trend has accelerated since 1971 with the advent of auto emission-control devices.

Gas requirements have increased markedly with the rise in the percentage of cars with emission controls, and this has meant a substantial increase in overall energy demand. And lest we on the West Coast become complacent and think that gasoline rationing occurs only in the East, I refer you to a front-page news story in the **San Francisco Chronicle** on Saturday, May 19. The article quotes a spokesman for a major oil company who warns of a potential gasoline shortage during the forthcoming long Memorial Day weekend when millions of Californians will be taking to the freeways to escape the congestion and frustrations of the cities. It could be they will find even more congestion and considerably more frustration when they try to gas up for the trip back home. To those who do, the

holiday mood may quickly disappear as they encounter the energy crisis first-hand.

The recent growth in the use of energy per unit of economic output may simply be a deviation in the long-term trend toward more efficient usage of energy. However, we cannot count on this; simple prudence demands that we plan for larger capability to supply energy than we might have done a decade or so ago.

Long-term solutions

The President's recent energy message gives us a basis for planning for the nation's long-run energy needs. To the layman, some proposals may sound quite futuristic, but since the 21st Century no longer is so far away, we should consider them here.

To begin with, nuclear power already appears commonplace. It now provides about 4 percent of the nation's electricity, and it may account for as much as 25 percent of the total in 1985, and as much as 60 percent of total usage by the end of the century. Thus, nuclear capacity is expected to grow from about 15 million kilowatts today to 1200 million kilowatts by the year 2000.

The Atomic Energy Commission has several development programs now underway to overcome potential shortages of fuel that could develop with continued reliance on current nuclear processes. One program involves a fast-breeder reactor, which holds the promise of making the reserves of uranium fuel last for centuries. Another involves a controlled thermo-nuclear fusion which, if harnessed in a reactor, would use as fuel the virtually limitless supplies of deuterium found in sea water.

Bringing these programs to fruition won't be easy. For example, the scientific feasi-

bility of producing a sustained thermonuclear reaction has yet to be demonstrated. Even if this can be achieved, there will remain a tremendous engineering problem of building commercial reactors capable of withstanding the unprecedented energy of high-speed neutrons.

Fossil fuels

In the long run, these futuristic solutions will be supplemented with help from an old standby, coal. At present rates of consumption, known reserves of this abundant fuel could supply the nation's energy needs for at least 300 years. Today, however, coal supplies less than 20 percent of our energy demand. Production has remained relatively level for the past several years, despite the rapid increase in overall energy requirements. This stagnation is attributable in some degree to health and safety standards, environmental restrictions on sulphur content of coal, and possible restrictions on strip-mining.

Coal's potential will not be realized until some of the present drawbacks are overcome—in particular, until ways are developed to remove its high sulphur content. The best way would be to convert coal to natural gas of pipeline quality, as is now being done in several pilot plants. This approach is promising, and by the turn of the decade it may contribute to overcoming the gas shortage.

The availability of these new and old energy sources should contribute to the long-run solution of the energy problem. The crux of the problem, however, is the likely shortage of essential fuels in the next decade or two. Fossil fuels (including coal) have historically supplied the vast majority of the nation's energy. Until 1947, coal supplied more than one-half of all the fuels con-

sumed, but over recent decades, petroleum and natural gas have increased to more than three-fourths of the total. In 1972, petroleum accounted for 46 percent and natural gas for 32 percent of total energy, in BTU equivalents.

Yet the domestic production of oil and natural gas has failed to expand adequately to meet rising demand. For example, discoveries of natural gas declined for several years in a row, and then turned around last year only after the Federal Power Commission provided higher producer prices and the industry geared up in anticipation of further regulatory changes. Even at that, the nation is consuming about twice as much natural gas each year as it is finding and adding to its proven resources. A beginning of a solution to this problem may be the President's legislative proposal to permit the price which interstate pipelines pay to producers for new supplies of domestic natural gas to be determined by the competitive forces of the market, rather than by the FPC.

Oil demand and supply

The largest and most troublesome aspect of the energy problem is petroleum, especially in view of our earlier underestimation of oil requirements. Only three years ago, the President's Task Force on Oil Imports concluded that the country could remain self-sufficient in that vital field. It projected domestic requirements in 1980 of 18½ million barrels per day, of which 5 million barrels would be imported, mostly from the Western Hemisphere. On national-security grounds, the group favored limiting imports from the Eastern Hemisphere to no more than 10 percent of domestic consumption—preferably to 5 percent.

These 1970 projections have turned out to

be underestimates, to put it mildly. This very year, 1973, total consumption may reach 17 million barrels per day, and imports could total 6 million barrels or one-fifth above the original 1980 estimates. Imports from the Middle East in 1973 are likely to reach not 5, not 10, but 20 percent of total U.S. consumption.

That picture is sobering enough, but even more sobering are the figures on total world reserves. According to fairly rough estimates, proven reserves in the non-Communist world approximate 500 billion barrels today. At current consumption levels, and in the unlikely event that no more oil is found, the remaining reserves in 1980 should approximate 300 billion barrels. That figure equals 10 years' supply at estimated 1980 consumption levels, which normally would give no cause for alarm; it is about the same ratio of reserves to production maintained historically by the U.S. domestic industry.

However, there is no certainty that oil, in adequate amounts and at reasonable prices, will always be available to all potential domestic buyers. The reason simply is that three-fifths of today's proven reserves are located in the area centering around the Persian Gulf. The same proportion—perhaps even higher—holds for probable reserves, that is, those reserves that must still be found to meet our long-term future needs.

The effect on our balance of payments of this situation could be considerable, partly because of the upsurge in U.S. import demand, and partly because of the rising prices resulting from growing world demand and from several devaluations of the dollar. The balance-of-payments outflows for oil imports approximated \$5 billion in

1972, and the 1980 outflows could be three times that amount, requiring ever-increasing amounts of exports to finance our soaring fuel requirements.

Recognizing the dangers in increasing import dependence, the President announced several initiatives in his energy message—in particular, the termination of the mandatory oil-import program. The new program attempts to stimulate future domestic exploration and production, as well as the expansion of refinery capacity, through the phased imposition of license fees on petroleum imports above the 1973 levels. In an effort to minimize the impact on the consumer during the transition period, while production incentives take hold, the President eliminated current tariffs on crude oil and products, so that imports at the 1973 level will enter the country duty-free. However, duty-free import rights will be phased out over seven years and increased license fees imposed.

Unexploited North Slope oil

The nation obviously is facing a difficult problem, given its increasing dependence on oil imports, and given the phenomenal world-wide demand which threatens to use up as much oil in the next dozen years as in all past history. In this situation, we must put forth a strenuous effort to find and exploit Western Hemisphere sources, and especially domestic sources. The first place to look is towards the North Slope of Alaska.

As you well know, the discovery of North Slope oil was announced over five years ago, in February 1968, and yet the 10 billion barrels (or more) of proven reserves in that area still remain unexploited. Those crucial reserves amount roughly to one-fourth of the nation's total proven reserves. If con-

struction began today on production facilities and the related pipeline, it could take three years to bring the first shipment to market, and several more years before production reached the targeted flow of 2 million barrels a day.

Consider the long chronology of delays that have befallen this project over the past five years. The year after discovery, producers announced plans to construct the 789-mile pipeline from Prudhoe Bay to the ice-free port of Valdez, and at the same time, ordered \$100 million of Japanese pipe for construction of the line. In September 1969, the state held its \$900-million lease sale of North Slope properties, but in December, Congress passed the National Environmental Policy Act, which required the Department of the Interior to consider ways to minimize the environmental impact of the pipelines.

In April 1970, a Federal Court upheld two suits, filed by environmental and native groups, enjoining Interior from issuing the pipeline permit without a court-approved environmental impact statement. In January and February of 1971, Interior issued a preliminary impact statement and held public hearings, while in July, the pipeline company submitted a 29-volume description of the project with its environmental safeguards. In December 1971, Congress acted to clear up one major problem affecting the project by passing the Native Claims Act, which gave the natives 40 million acres of land, \$462 million in cash over 11 years, and \$500 million in mineral royalties.

The environmental problem remains. In March 1972, Interior published a 9-volume environmental impact statement, and in May Secretary Morton issued the permit for

pipeline construction. That decision was appealed to the courts, and in February 1973 the Federal Court of Appeals in Washington ruled the Secretary could not grant the permit unless Congress amended a 1920 law governing pipeline rights-of-way across public lands. Finally, last month, the Supreme Court refused to review the lower-court ruling. This led the President to submit legislation to Congress which would allow the Secretary of the Interior to provide for adequate rights-of-way for all pipelines over Federal lands.

Perhaps as much as \$2 billion (including lease payments) has been spent to date to develop the North Slope field, without as yet one drop of oil to show for it. In the process, the estimated cost of the pipeline has doubled to about \$3 billion. It must be said, of course, that environmental safeguards imposed on the project will make the eventual pipeline a much sounder project than originally conceived, saving the environment and the companies from having to deal with costly oil leaks and spills. Under the revised plan, almost one-half of the proposed pipeline will lie above ground—instead of being almost completely buried—to avoid the danger of line breaks caused by the melting of permafrost. Part of the original route has been altered to avoid areas susceptible to avalanches, floods and earthquakes, and a great deal of effort has been put into plans for quake-proofing the Valdez facilities and developing fool-proof navigational aids in the Valdez channel.

Canadian vs. Alaskan routes

This is all to the good, but further progress depends on a solution of the political and economic questions surrounding the pipeline, including the major question of a choice of routes. As you know, there is a

frequently-mentioned Canadian alternative, with a pipeline proceeding East from the North Slope across the Yukon territory of the Mackenzie River delta, then south to Alberta and on into the Midwestern United States. The Canadian route would be four times longer than the Alaska route, and probably would cost almost twice as much and take several more years to build.

These factors aside, the proposal has several advantages. The pipeline would parallel another line planned to carry more than 26 trillion cubic feet of badly needed natural gas from the North Slope to the Midwest. Advocates of this route point out that the Canadian Government has approved, in principle, a transportation corridor that would include not only the gas line but also a highway and space for the oil pipeline; thus, they say, it would be unnecessarily harmful and wasteful to build a separate route through Alaska. They also claim that the trans-Canadian route would be more profitable, because of the higher levels of prices prevailing in the Midwestern market than on the West Coast, and because this route would preclude the need for major investments for port facilities and tankers.

In rebuttal, Secretary Morton points to the greater environmental impact of a line four times longer than the proposed Alaska line. He admits that the Canadian route would not cross as much seismically active terrain or require marine transport, but argues it would involve many more crossings of large rivers, which from past experience can be a major source of environmental damage from pipeline breaks. He also claims that the Alaska route would deliver oil to the U.S. market sooner than the Canadian route, because construction of a trans-Alaska line can start as soon as legal questions have been resolved, whereas

construction of a Canadian line would have to await a number of environmental impact studies and probably legal delays. In addition, the Alaska pipeline would deliver more U.S.-owned oil to the U.S., since the Canadian Government insists on management and majority equity ownership of any Canadian pipeline, and also insists on reserving up to 50 percent of pipeline capacity for Canadian oil in any such line.

Oil and Alaska's future

From all I have already said about the nation's energy situation, it would seem essential that this important source of domestic oil be developed, and developed soon—no matter what route is finally chosen to bring the oil to market. Speaking personally, I find the arguments in the President's Energy Report to be persuasive in favor of the Alaska Route. As stated by President Nixon: "I oppose any further delay in order to restudy the advisability of building the pipeline through Canada. Our interest in rapidly increasing our supply of oil is best served by an Alaska pipeline." In addition, harnessing the North Slope oil field is a necessary element in Alaska's development plan, especially in view of the gradual depletion of the valuable Cook Inlet field.

The State's budget planning has depended on the timely development of this vital resource. The \$900 million received in the September 1969 lease sale has gone into the general fund, to finance construction and maintenance of public facilities of all types. Yet if the state fails to receive severance fees and royalty income from North Slope oil production—budgeted eventually at \$234 million a year—the general-fund surplus could be eliminated by late 1977 and the State would "face bankruptcy," to use a phrase heard around Juneau for the last

several years. The alternatives, both unpleasant, would be to cut down the rate of growth of State spending or to search out new revenue sources, such as the several proposed in Governor Egan's 1974 budget—including the 4-percent increase in the bank license tax and the 20-mill tax on oil and gas transportation property. Perhaps State planners should be grateful for any favors, remembering that the \$900-million lease sale was originally expected to bring in only \$11 million, but this is scant consolation in trying to budget ahead to meet the State's many developmental needs.

Forward planning in the business community also is likely to be affected by uncertainty until the pipeline is finally built, and then some dislocations could be expected after completion of the project, comparable to those occurring in the abortive boom of several years ago. The generally accepted view is that the construction boom might last perhaps three years, with employment peaking at about 24,000 in the second year and dropping off rapidly thereafter. Moreover, most higher paid jobs are likely to be filled by specialized workers hired from "Outside," rather than Alaska residents. Following the construction boom and subsequent adjustment period, however, the State's economy should experience a lengthy period of stable but profitable development of basic oil resources.

Economic and financial gains

I should emphasize, too, that the economy has experienced a remarkable period of growth in recent years despite all the delays and uncertainties I have already listed, because of the rapidly expanding worldwide demand for Alaskan products—not only oil, but other products as well. (For example, I noticed recently that Alaskan lumber exports to Japan increased 40 per-

cent last year alone.) This boom has brought about a 50-percent gain in Alaska's personal income between 1968 and 1972, compared with a 36-percent gain for the Western economy as a whole.

Your own banking statistics have reflected this growth in income, and much more besides. For the West as a whole, commercial-bank deposits increased about in line with the growth of personal income between 1968 and 1972—39 percent as against 36 percent. In contrast, Alaska bank deposits jumped 88 percent over this period, as against the 50-percent increase in Alaska income, reflecting in part the rapid expansion of deposit funds from "Outside."

Sharp loan increases indicate the extent to which you Alaska bankers have responded to the community's needs for financing. Over this short four-year period, business loans have increased 75 percent, mortgage loans 85 percent, and consumer loans 110 percent. Your efforts have supported the growth of a number of activities that are ancillary to the development process—local manufacturing, trade and service activities of all types—along with the housing and consumer demands that follow in the wake of economic growth. (Those consumer-loan figures seem to indicate that you have financed quite a few snowmobile purchases recently.) As the development process goes on, I would expect you to continue channeling the flow of deposit funds, whether from local sources or from "Outside," in such a way as to broaden and deepen the foundations of the Alaska economy.

Finally, long-term development funds are a necessary prerequisite to a strongly growing economy, and the petroleum industry's investment has a major role to play here, somewhat comparable to the Federal

Government's role in the construction booms of the 1940's and 1950's. The State government, with its investment of funds obtained from sales of oil leases, has an important part to play also. In this connection, it is important to remember that the State of Alaska, unlike other oil- and gas-producing states, owns its subsurface resources, so that State revenues can be derived both from the taxation of resources and from participation in their development. But to repeat, the crucial factor in future decades is likely to be the investment of private funds from "Outside," whether these be American, Canadian or (increasingly) Japanese investment funds.

In conclusion, I hope I have made my point that the nation is facing a major problem in developing adequate energy resources, and that Alaskan North Slope oil should be a key factor in providing a solution. The development of that crucial resource is likely to bring with it the infusion of outside capital still sorely needed in this developing economy. As in the past, sharp fluctuations in business and financial activity will be encountered as the development process continues, especially with the pipeline controversy remaining unsettled. The most important point to remember, however, is that the state's vast potential for growth is rapidly being achieved.

