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Over one-fourth of our total energy consumption is supplied by natural gas. One approach to increasing the supply of natural gas is to develop supplemental gas sources such as imported liquefied natural gas (LNG). According to Government and industry statistics, imported LNG has the greatest potential to add to our Nation's supplemental gas supplies by 1985. LNG is natural gas converted to liquid form by lowering its temperature to -259 degrees F. Despite the expense of special equipment for liquefaction and oceangoing transportation and storage, the great reduction in volume can make LNG economically feasible to transport and store for subsequent regasification and use elsewhere. As part of President Carter's National Energy Plan, a new LNG import policy was established. The limitation on LNG imports imposed under the previous administration was replaced by a more flexible policy providing for a case-by-case analysis of each project. Findings/Conclusions: The new policy provides for: national distribution to avoid a region being seriously affected by a supply interruption, development of contingency plans in case such interruption occurs, and prohibition of dock construction in densely populated areas. This policy has not alleviated uncertainties associated with imported LNG. Import policy should be related to the overall energy program, and a comprehensive energy proposal should clearly indicate how much imported LNG will be needed and methods of obtaining it. There is a need for adequate criteria defining what would constitute overdependence on imported LNG. As LNG imports increase, the United States increases its vulnerability to supply disruptions and price hikes. The policy does not address the problems associated with the lengthy regulatory process and curtailment of low-priority LNG users. Unclear, inaccurate, and misleading statements add to the confusion regarding LNG's future role in

supplying U.S. energy needs. Recommendations: The Secretary of Energy, in cooperation with other Federal agencies, should revise the policy statement for imported LNG to: define clearly goals and objectives for imported LNG; establish criteria on what constitutes national dependency for use in determining project acceptability; specify curtailments to be applied for low-priority users of imported LNG; and clarify or correct ambiguous, inaccurate, or potentially misleading statements. The Secretary of Energy should also initiate a study of the regulatory process to identify what actions should, or could, be taken to expedite decisionmaking. (Author/SW)

REPORT TO THE CONGRESS

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

The New National Liquefied Natural Gas Import Policy Requires Further Improvements

The new Presidential policy on imported liquefied natural gas is inadequate because it does not have the elements needed to be comprehensive and effective. It should be improved by

--defining clearly goals and objectives for importing natural gas and

--establishing criteria as to what constitutes excessive dependency on imported gas.

Until these and other improvements are made to provide clear guidance, the appropriate role for imported natural gas in the United States will not be established or implemented.

EMD-78-19

DECEMBER 12, 1977

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-178205

To the President of the Senate and the
Speaker of the House of Representatives

This report discusses the improvements needed to make the national policy for imported liquefied natural gas comprehensive and effective. We made this review because supplemental sources of natural gas, including imports, will become increasingly important as our domestic reserves continue to decline.

We made our review pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and Section 207 of the Department of Energy Organization Act, P. L. 95-91, 91 Stat. 565 (1977).

We are sending copies of this report to the Acting Director, Office of Management and Budget; the Secretary of Energy; and the Chairman, Federal Energy Regulatory Commission.

Elmer B. Staats
Comptroller General
of the United States

COMPTROLLER GENERAL'S REPORT TO THE CONGRESS

THE NEW NATIONAL LIQUEFIED NATURAL GAS IMPORT POLICY REQUIRES FURTHER IMPROVEMENTS

D I G E S T

Natural gas can be converted to liquid form by reducing its temperature to -259° F. This process reduces the gas to 1/600 of its normal volume, making easier its importation from overseas. On April 29, 1977, the President's imported liquefied natural gas policy was issued as a part of the national energy program. It replaces one which contained guidelines for total U.S. and per-country import levels with one which sets no limits. The new policy calls for a case-by-case analysis of each project to consider reasonableness of price, risks of dependence on foreign supplies, safety conditions, and costs. It provides for

--national distribution to avoid a region being seriously affected by a supply interruption,

--development of contingency plans in case such interruption occurs, and

--prohibition of dock construction in densely populated areas. (See pp. 1 and 5.)

CONCLUSIONS

The policy is inadequate because it does not alleviate uncertainties associated with imported liquefied natural gas. Without clear guidance, GAO questions whether the most appropriate role for imported liquefied natural gas will be established and implemented and whether industry planning can be effectively accomplished. (See p. 18.)

NEED TO RELATE IMPORT POLICY TO THE OVERALL ENERGY PROGRAM

The liquefied natural gas import policy provides no clear indication of what role imports are to play in meeting future gas needs. The President's proposed comprehensive national energy program has provided the framework for which natural gas will be used in the future. With this basis, specific goals and objectives should be established for domestic and supplemental gas sources. (See pp. 8 and 9.)

NEED TO ESTABLISH CRITERIA ON WHAT CONSTITUTES NATIONAL DEPENDENCY

A National Energy Plan objective, with respect to foreign oil, is to reduce U.S dependency and vulnerability to interruptions in supply. The objective of reducing dependency should also apply to natural gas imports. However, the new policy does not consider adequately those possibilities nor provide adequate criteria defining what would constitute overdependence on imported liquefied natural gas. The policy should be revised to provide criteria which, if effectively used, would protect the United States from becoming overly dependent on imported natural gas as an energy source. (See pp. 10 to 14.)

LENGTHY REGULATORY PROCESS NOT ADDRESSED

In developing a realistic liquefied natural gas import policy, the time required to rule on an import project must be recognized. This was not done. Currently, the regulatory process is lengthy and the costs of liquefied natural gas projects increase while this is being carried out. It is not only difficult for industry to make precise plans but contracts that have expired have been renegotiated at higher prices also. Imported liquefied natural gas cases have been pending before the Federal Power Commission for years. (See pp. 14 and 15.)

THE PROBLEMS OF CURTAILMENTS AND INCREMENTAL PRICING FOR LOW-PRIORITY USERS

The policy does not address the complex issue dealing with curtailments to low-priority users of liquefied natural gas. Based on what curtailment procedures are established, demand for imported liquefied natural gas could be affected significantly. Industry may not be willing to accept this high-priced gas if its supply could be curtailed during shortages. Not to curtail its supply, however, would mean that low-priority users would receive gas during shortages when it is needed by high-priority users. (See pp. 15 and 16.)

TOPICS WITHIN THE POLICY SHOULD BE CLARIFIED AND INACCURATE OR MISLEADING STATEMENTS CORRECTED

A clear and unambiguous policy is important for planning and implementation. Presently, the policy contains unclear, inaccurate, and misleading statements which add to the confusion over the future role in the United States of imported liquefied natural gas. The statements concern the possible impact the new policy would have on increasing natural gas imports, the potential imports from a single country, and how the imported gas would be distributed to avoid regional dependency. (See pp. 16 to 18.)

RECOMMENDATIONS

The Secretary of Energy should revise the policy statement for imported liquefied natural gas in cooperation with other Federal agencies, as necessary, so as to

--define clearly goals and objectives for imported liquefied natural gas;

--establish criteria on what constitutes national dependency for use in determining project acceptability;

--specify curtailments to be applied for low-priority users of imported liquefied natural gas; and

--clarify or correct ambiguous, inaccurate, or potentially misleading statements.

He should also initiate a study of the regulatory process to identify actions that should, or could, be taken to expedite decisionmaking. (See pp. 18 and 19.)

AGENCY COMMENTS

The Federal Energy Administration stated that the National Energy Plan was intended to provide a broad framework which would guide the development, through a new extensive study, of a more detailed and comprehensive policy on liquefied natural gas imports. Although the Agency agreed with the aim of the above recommendations, it characterized this report as premature and not to be issued. GAO, however, regards the current policy statement as inadequate even as broad policy guidelines and reaffirms that its concerns should be considered in revising the current policy statement and during the development of a detailed policy. (See p. 19.)

The Chairman, Federal Power Commission, said the report would make a valuable contribution to the further development of the administration's position. (See p. 19.) The Department of Commerce proposed that the Presidential policy statement be expanded to state that U.S. flag vessels should carry a substantial portion of U.S. liquefied natural gas imports. (See pp. 19 and 20.)

Other more specific comments provided by the Federal Energy Administration, Departments of State and Commerce, and the Export-Import Bank are recognized throughout the report. (See apps. V through IX.)

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ABBREVIATIONS

Btu	British thermal units
ERC	Energy Resources Council
FEA	Federal Energy Administration
FERC	Federal Energy Regulatory Commission
FPC	Federal Power Commission
GAO	General Accounting Office
LNG	liquefied natural gas
OPEC	Organization of Petroleum Exporting Countries
Tcf	Trillion cubic feet

CHAPTER 1

INTRODUCTION

Energy concerns are one of the Nation's most crucial problems. Because there is no product or service that does not directly or indirectly use energy, shortages can have drastic effects on our lifestyle. Over one-fourth of our total energy consumption is supplied by natural gas. Largely because of its lower cost, cleanliness, and ease of handling compared with other fuel sources, natural gas usage has risen over 300 percent since 1950. This increase, combined with dwindling domestic production since 1973, has resulted in a growing gas shortage. Curtailments have occurred during every winter season since 1970.

This growing natural gas shortfall could be lessened by reducing the demand for gas, increasing the supply, or a combination of these two measures. The demand can be reduced by switching to alternative domestic sources of energy, including both conventional and nonconventional forms; increasing oil imports, which could be substituted for domestic gas use; or undertaking a gas conservation program. Supply can be increased through greater exploration and development programs or developing supplemental gas sources. This report will examine the current policy for one supplemental gas source--imported liquefied natural gas (LNG). On the basis of Government and industry statistics, imported LNG has the greatest potential to add to our Nation's supplemental gas supplies by 1985.

LNG is natural gas converted to liquid form by lowering its temperature to -259° F. In its liquefied state, natural gas requires less than 1/600 of the volume in its gaseous form. Despite the expense of special equipment for liquefaction and oceangoing transportation and storage, the great reduction in volume can make LNG economically feasible to transport and store for subsequent regasification and use elsewhere.

The United States currently imports insignificant amounts of LNG, less than 1/10 of 1 percent of our annual natural gas consumption which was about 20 trillion cubic feet (Tcf) in 1976. However, based only on projects approved and pending before the Federal Power Commission (FPC) in June 1977, LNG imports could range from 0.6 to 1.8 Tcf by 1985. This would be 3 to 9 percent of 1976 gas consumption. The National Energy Plan projects the 1985 consumption to be about 19.2 Tcf, slightly below the 1976 level.

The variance in the potential amounts of imported LNG can be attributed to the uncertainty regarding LNG's role in meeting U.S. energy needs. The U.S. LNG import policy has been changed three times since early 1976. Critical siting and safety criteria have not been established, and the amount of LNG needed is unknown.

On October 1, 1977, FPC, which regulated LNG imports, was abolished and its functions transferred to the Federal Energy Regulatory Commission (FERC) and the Economic Regulatory Administration, Department of Energy, established that same day.

SCOPE OF REVIEW

This report discusses the LNG import policy presented by President Carter on April 29, 1977, as a part of the National Energy Plan. (See app. I.) We examined the policy in light of the National Energy Plan, prior LNG import policies, national dependency, and regulatory procedures and practices. We consulted Government and industry reports and conferred with officials of the Federal Energy Administration (FEA), FPC, Maritime Administration, Export-Import Bank, Department of State, Department of the Interior, Energy Research and Development Administration, Central Intelligence Agency, American Gas Association, and representatives of several interested companies. We also specifically examined the LNG policy statement and supporting documentation issued by the Energy Resources Council (ERC) on August 5, 1976. The President's National Energy Plan supersedes the ERC LNG policy statement. On October 1, 1977, ERC was abolished with the establishment of the Department of Energy.

Although we have examined into all major issues with respect to LNG import policy in this report, we are discussing only those aspects of the current policy that we believe need clarification or improvement. Also, we are conducting a separate review of the safety of liquefied energy gases, including LNG.

CHAPTER 2

THE CHANGING U.S. LNG IMPORT POLICY

The United States has had three significantly different liquefied natural gas import policies in the last 2 years. The first, which was very basic, was established by President Ford in his energy message of February 26, 1976. He also directed ERC to more fully develop a national LNG import policy which was formalized on August 5, 1976. (See app. II.) The third policy was established by President Carter on April 20, 1977, as part of his national energy program and detailed on April 29, 1977, in "The National Energy Plan." (See app. I.)

PRESIDENT FORD'S FEBRUARY 1976 IMPORT POLICY

The first U.S. LNG import policy, issued by President Ford, expressed strong concern about the growing dependence on imported LNG. The policy provided that the United States could import annually 1 Tcf of natural gas by 1985 without becoming overly dependent on foreign sources. The gas industry criticized this policy as being too restrictive in light of our growing gas shortage.

The President also directed ERC to implement a national LNG import policy and review an acceptable level of dependence based on current estimates of natural gas production.

THE ENERGY RESOURCES COUNCIL AUGUST 1976 IMPORT POLICY

ERC was established to coordinate energy policy among Federal agencies. It was an energy policy advisory board to the President and the Congress, composed of the heads of various Federal departments and agencies, certain White House staff members, and others the President designated. After an extensive 5-month study, ERC established a more definitive LNG import policy, which included a significant change in the acceptable level of LNG imports.

ERC concluded that LNG imports were needed as a supplemental source of natural gas. However, it also concluded that the United States must limit its longrun dependence on all imported energy, including LNG. The thrust of the policy was not one of discouraging LNG projects, but rather of (1) limiting imports, as necessary, on national security grounds and

(2) lessening our vulnerability by diversifying sources and mitigating the effects of supply disruptions or arbitrary price hikes.

This policy contained four basic recommendations:

--LNG imports from a single country should be limited to 0.8 to 1.0 Tcf per year for national security reasons. ERC concluded that about 2 Tcf per year was an acceptable level of total imports. This recommendation was aimed at encouraging diversification of sources and facilitating attainment of a national target level. The target of 2 Tcf was not intended as a quota, but represented an acceptable level of dependency, which could charge depending on domestic policy occurrences.

--Where administratively feasible, the price of imported LNG should be "rolled-in," or averaged, with other gas supplies for existing high-priority customers (residential and small commercial), and "incrementally" priced, or based on actual costs, for lower priority (high-volume industrial and boiler uses with alternate fuel capability) or new users. ERC's preliminary analysis indicated that pricing methods could affect the size of the LNG import market and would affect the sectoral composition of demand. ERC believed that expensive, relatively insecure imports probably should not be made available at rolled-in prices to lower priority domestic users, or in support of new growth. Such pricing, it thought, hides the full economic and security costs of the resource and can discourage development of domestic supply.

--ERC found no reason to recommend modifying ongoing policies of the Maritime Administration and the Export-Import Bank which have provided Government financial assistance to LNG projects. Also, it concluded that without subsidies from the Maritime Administration, LNG tankers would be available elsewhere and, therefore, such support was not essential to LNG ventures. Because Export-Import Bank loans and guarantees require approval from an interagency advisory committee with respect to national policy objectives, ERC believed that the security concerns of the executive branch were already adequately met. The First Vice President of the Export-Import Bank advised us that the Bank's authorizations do not require approval from the interagency advisory committee. However, he said that the advisory committee does provide guidance for authorizations over $30 million. He further stated that this does not alter the substance of the specific ERC conclusions.

--To guard against risks of supply disruption to high-priority users, contingency plans should be required of each LNG project prior to its approval. ERC later specified that the contingency plan should provide supply continuity to high-priority users during the 5 consecutive months of their estimated peak usage.

The ERC policy statement was developed without the benefit of a coordinated national energy policy. Considering this and the uncertainties in the domestic natural gas situation, the ERC action in establishing a flexible target level was reasonable under the circumstances.

PRESIDENT CARTER'S APRIL 1977 IMPORT POLICY

As part of President Carter's National Energy Plan, a new LNG import policy was established. The limitation on LNG imports, imposed under the previous administration, was replaced by a more flexible policy, providing for a case-by-case analysis of each project. Importation of LNG would not be concentrated in any one region. Strict siting criteria, yet to be established, would prohibit the location of future tanker docks in densely populated areas. 1/ The President also called for legislation allocating the cost of more expensive new gas, which would include imported LNG, to industrial users, not to residential and commercial users.

Of the four policy recommendations made by ERC, President Carter's LNG import policy most directly affects the one regarding national dependency. Where ERC placed country-of-origin limits and an acceptable national target level for imports, the new policy lifted all such restrictions and guidelines. As of June 1977, seven projects totaling 1.8 Tcf per year were approved (0.6 Tcf) or pending (1.2 Tcf) before FPC. (See app. III.) Of this, 1.6 is from Algeria and 0.2 from Indonesia.

1/We are currently conducting a review of the safety of liquefied energy gases, including LNG.

One effect of the new policy is the increased potential reliance on imports from Algeria. Only Algeria has projects approved and pending which surpass or even approach the 1 Tcf per year country limit set by ERC. Other countries may be be affected later as plans for imports from them progress.

Additionally, projects under discussion but not submitted for approval total about 2.4 Tcf per year. (See app. III.) This raises the total possible imports to about 4.2 Tcf per year, or over twice ERC's national target levels.

ERC strongly felt the need for contingency plans in the event of a supply interruption. Although the National Energy Plan's LNG import policy calls for "the development of contingency plans," it was not specific as to details. However, an FEA official advised us that there was no change from the criteria ERC established.

CHAPTER 3

ANALYSIS OF THE CURRENT LNG IMPORT POLICY

An effective LNG import policy should clearly relate to the overall national energy program by establishing meaningful goals and objectives. It also should be stated so that its meaning is complete and clear.

To quote from the National Energy Plan:

> "Reasonable certainty and stability in Government policies are needed to enable consumers and producers of energy to make investment decisions. A comprehensive national energy plan should resolve a wide range of uncertainties that have impeded the orderly development of energy policy and projects. Some uncertainties are inherent in a market economy, and Government should not shelter industry from the normal risks of doing business. But Government should provide business and the public with a clear and consistent statement of its own policies, rules, and intentions so that intelligent private investment decisions can be made." (Emphasis added.)

In spite of this statement, the current policy has not alleviated the uncertainties associated with imported LNG. ERC felt that the need for an LNG import policy was apparent. ERC concluded that the absence of such a policy

--increases uncertainty among suppliers and consumers;

--maintains divergent and often conflicting positions in the Federal Government;

--has allowed one Arab Organization of Petroleum Exporting Countries (OPEC) nation to emerge as a prospective dominant supplier; and

--opens the possibility that we will repeat our oil import trends and be forced to change consumption patterns, causing future economic disruption.

We believe that these are still valid concerns which have not been adequately addressed under the new policy. Specifically, the policy has not

--been related to the overall energy program and has not specified goals or objectives;

--established criteria on what constitutes national dependency to be used to determine project acceptability;

--addressed the lengthy regulatory process which has delayed projects and increased costs;

--addressed the problems of curtailments to low priority, incrementally priced LNG users; and

--contained ambiguities and some inaccurate or misleading statements.

These points are addressed below.

NEED TO RELATE IMPORT POLICY TO THE OVERALL ENERGY PROGRAM

The LNG import policy provides no clear indication of what role LNG is to play in meeting future gas needs. President Carter's proposed comprehensive national energy program has provided the framework within which natural gas will be used in the future. Specific goals and objectives could have been established for domestic and supplemental gas sources, as was done with oil. Although such goals should not be completely inflexible, we believe reasonably firm and definitive goals should be set to guide project planning.

Prior to President Carter's energy plan, various FEA scenarios for imported LNG ranged from 0.4 to 2.1 Tcf by 1985, while the American Gas Association felt LNG imports could provide 3 Tcf by 1990. The new energy program plans to reduce the use of natural gas, while still predicting a need for imports, but does not indicate any goals for imported LNG. With reduced consumption, 2 to 3 Tcf of imported LNG could represent sizable portions of our total gas supply.

The American Gas Association position is one of pessimism toward the total gas supply situation during all of the 1980s as a result of the National Energy Plan. However, various Government and industry officials, including ones from FEA, indicate that if the National Energy Plan is successful, domestic gas supplies may temporarily be adequate during the 1980s. Also, we note that high-priority uses of natural gas comprise only about one-half of the current usage. If the National Energy Plan's objectives to reduce low-priority uses of natural gas are successful, significant amounts of gas could be freed for high-priority use. The question would then arise on what to do with the high-priced imported gas. LNG projects require years of planning and construction, huge capital investments, and long-term commitments. 1/ Therefore, it would be unreasonable to expect LNG facilities to shut down if domestic gas is sufficient to meet our needs. Allowing industry and utilities to use the gas would contradict a National Energy Plan strategy of converting them to more abundant fuels to reduce imports and thereby make natural gas more widely available for household use.

Since a comprehensive national energy program has now been proposed, decisions can and should be made regarding the future role of imported LNG. A comprehensive energy proposal should clearly indicate how much imported LNG will be needed and methods of obtaining it.

In our report on the National Energy Plan (EMD-77-48, July 25, 1977), and a subsequent report (EMD-78-5, October 15, 1977), we indicate that, by itself, the Plan will not achieve the President's oil import goals. Since LNG can be used to reduce oil imports, we believe it is even more important that the administration clarify the LNG import policy.

The Associate Administrator, Policy and Program Analysis, Federal Energy Administration (see app. V) and the Assistant Secretary for Maritime Affairs, Department of Commerce (see app. IX), in commenting on our proposed report, agreed with us on the desirability of relating import policy to the overall energy program, but Commerce objected to setting quantitative goals now. We believe that to wait to set goals could allow uncontrolled approval of projects and result in increasingly high levels of LNG imports. Once large investments have been made in these costly projects, it will be difficult to reverse the trend, even if lower levels are recognized as an appropriate goal. In this regard, Commerce implies that the existence of planned projects for imports from Algeria, which would exceed the ERC goal of 1 Tcf per year, was reason enough to remove the ERC quantitative goal rather than disapprove the projects which would exceed the goal.

1/See app. IV for an analysis of the cost of imported LNG.

NEED TO ESTABLISH CRITERIA ON WHAT CONSTITUTES NATIONAL DEPENDENCY

When the United States imports energy, it becomes dependent on occurrences and situations outside its borders and often beyond its control. As LNG imports increase, the United States increases its vulnerability to supply disruptions, for political or technical reasons, and price hikes. Such occurrences have both national security and economic implications.

The new LNG import policy does not adequately address the concerns of dependency. A National Energy Plan objective is to reduce U.S. dependency and vulnerability to supply interruptions. This principle was stated with respect to oil. However, without adequate criteria defining what would constitute overdependence on imported LNG, this principle is ineffective for imported gas.

Such criteria, if effectively used, would prevent the United States from becoming overly dependent on imported LNG as an energy source. The new LNG import policy does not state what the specific criteria should be. In this regard, ERC's principal actions were to limit the amount of LNG that could be imported from any one country and to require that contingency plans be established for each LNG project to guard against risks of supply disruptions.

ERC concluded that an LNG supply disruption could have a great effect on high-priority consumers. Disruptions for political or technical reasons could be for significantly longer periods than the gas industry has ever experienced. The issue of politically induced supply cutoff emerged as a result of the 1973-74 oil embargo. An LNG embargo is easier to target than an oil embargo because the LNG exporting and importing infrastructure is tailored to specific projects involving large capital investments, long-term contracts, sophisticated technology, and dedicated markets in the consuming countries. Therefore, no significant "spot market" exists for LNG as it does for oil, and little opportunity exists for nations to share LNG as oil was shared during the 1973-74 embargo. ERC believed that Government involvement is warranted since a possibility exists of an embargo in which there would be little flexibility to cushion its impact.

With regard to the possibility of cutoff for technical reasons, a study done for ERC concluded that planning should allow for construction delays and operating problems in liquefaction plants of the size and complexity being built today. Even though the liquefaction process has performed successfully, an unpredictable mechanical failure in some key items of equipment is always possible. Poor communications of management and local plant operators with U.S. or European equipment manufacturers and process designers can increase the severity of technical problems. The ERC study stated that the simplest problems can cause serious delays; often equipment that cannot be repaired onsite has to be shipped thousands of miles back to the manufacturers.

Price increases are also a real possibility; they can be due to contractual adjustments or arbitrary price hikes. Most LNG contracts now link the base price to currency fluctuations and the price of imported fuel oil. In a decision approving such pricing, FPC noted that its staff argued that these provisions violate the Natural Gas Act which requires rate increases to be cost based.

In addition, there is no insurance against arbitrary price hikes. Most of the countries that are entering the LNG trade, or have the sizable gas reserves to support LNG projects, are also major exporters of oil. Price increases of imported oil have become a standard event during the last several years and are expected to continue.

The oil trade experience over the last few years gives little justification for placing much reliance on the hope that OPEC countries will not hike LNG prices unilaterally. The established pattern is for those countries to abrogate or unilaterally modify supply contracts at will. This kind of behavior on the part of LNG supplier countries would become more likely as our dependency on LNG imports increases and would be of more concern for several reasons.

Given that a supplier country may wish to force contractual modifications on companies, its leverage is stronger with respect to LNG than it is with respect to crude oil. LNG delivery interruptions would have serious consequences for receiving companies. Their large regasification facility investments in the United States will be based on, and tie them to, particular supply sources, with a consequent inability to draw on alternative sources if deliveries are interrupted. That lack of flexibility will make companies more prone to accept country demands for contractual modifications. At the same time, recognizing the companies' bind, supplier countries will be more likely to use such threats to gain their ends.

It can be argued that the same physical facts--large paired facilities in both the exporting and importing countries for liquefaction and regasification--will also tie the supplier country to particular customers. This could reduce the country's degree of freedom to terminate deliveries to particular customers, making its threat to do so less credible. Importing companies would perceive the country's limited ability to switch its LNG output to other purchasers. However, a countervailing factor exists when a country's LNG output is based significantly on gas from nonassociated gas fields --that is, wells that produce only gas. Unlike oil or gas produced in conjunction with oil, production of nonassociated gas fields can be reduced or stopped without damage to the field or significant loss in ultimate recovery. However, technical problems associated with shutting in gas fields for extended periods of time are significant. Resuming service is a complex and costly procedure which could lead to further loss of income to exporters. A large share of LNG exports will be based on nonassociated gas. For example, about 80 percent of Algeria's reserves is nonassociated gas. Although the heavy economic investments (supported by long-term financing) provide significant incentives to avoid revenue disruptions by imposing an embargo, we believe that these economic restraints would receive little consideration when an embargo is being considered for political reasons. We also believe that losses sustained during a short-term embargo to achieve price increases would be recovered over the longer term the higher prices would be in effect.

The impact of supply interruptions or price increases depends upon many factors, including each region's dependence on imports. Areas with high dependencies could experience significant reductions in natural gas supply in the event of a supply cutoff and significant increased cost impacts in the event of an LNG price increase. According to a consultant's study prepared for ERC, the potential areas that could become highly dependent on imported LNG are the New England States, Alabama, Georgia, South Carolina, New Jersey, and a number of other isolated sub-State market areas.

Dependency upon imported gas from approved and pending projects, if all come to fruition, could range from 15 to

30 percent in areas receiving LNG imports; 1/ some individual gas distribution companies could have even higher dependence. For example, on the basis of a recently approved project before FPC, by 1984 approximately 50 percent of a gas distribution system's supply will be from imported LNG. Even with imported LNG, the company projects that it will be able to serve only 75 percent of its highest priority customers, with no gas available for lower priorities.

Price increases would affect the cost of producer goods, increase costs to homeowners and businesses, and could result in a loss of market for LNG importers. A loss of market could be serious in view of the substantial fixed investment for those gas utility companies importing LNG.

In addressing the dependence question (see app. IX), Commerce looks favorably on an LNG import level of 10 percent of national natural gas consumption, while viewing with alarm the present dependence on imported oil now approaching 50 percent of oil consumption. The National Energy Plan did express proper concern about the level of regional dependency, and we are aware of an LNG import project that received preliminary FPC approval which would make the receiving pipeline system about 50 percent dependent upon imports.

Further, Commerce said that the dependency question relates to the reliability of LNG producers and, "This may be, but the relevant comparison is between the reliability of OPEC oil producers versus LNG producers, because realistically these are the competitive energy suppliers." As noted earlier, however, the major LNG producer countries are also members of OPEC.

Commerce recognizes the possibility of an LNG embargo, but argues, on the basis of economics, that it is less likely than an oil embargo. However, in its arguments it does not address the change in the likelihood of an embargo should our level of imports, ungoverned by clear goals, reach a high level of dependency and thereby give the exporting country a more powerful position than it now enjoys.

1/These figures are based on information prior to the release of the National Energy Plan, and could be higher if the Plan's gas-reducing proposals are accepted since there could be the same total amount of LNG, but less total gas consumption.

FEA concurred on the need for criteria on what constitutes dependency and stated that an interagency task force on LNG, created to develop the detailed elements of the LNG policy, would address the matter. (See app. V.)

LENGTHY REGULATORY PROCESS NOT ADDRESSED

A realistic LNG import policy must recognize the length of time required to rule on an LNG project. As stated in a National Energy Plan principle, "* * * unwieldy and confusing regulatory procedures have resulted in major bottlenecks in the development of energy resources." This issue, in relation to LNG imports, has not been addressed. The time is especially significant if the thrust of this policy is to encourage LNG imports. Currently, the regulatory process is lengthy and the costs of LNG projects increase during the process. (See app. IV.) LNG cases have been pending before FPC and now FERC for as long as 4 years. Much of this time can be attributed to the development of an Environmental Impact Statement. It is not only difficult for industry to make precise plans, but contracts signed with potential LNG exporters have expired and have been renegotiated at higher prices also. Furthermore, some potential exporters, recognizing the lengthy process, may be wary of entering into contracts with U.S. importers.

The new Department of Energy will have the authority to review and approve the export and import of natural gas. In its comments (see app. V), FEA stated that it is now reviewing the various procedures available to implement the new authority. One of the major factors that will be used to select the preferred procedure will be the capability to expeditiously handle these requests to import natural gas.

In addition, in a new and developing policy area, such as imported LNG, cases are likely to lead to court review since considerable controversy exists about importing LNG, particularly the siting and safety issue. An appeal from an FPC decision must, by statute, be taken to a United States Circuit Court of Appeals. The second and final chance for court review is the Supreme Court.

With regard to nuclear power, the National Energy Plan states:

> "The President has directed that a study be made of the entire nuclear licensing process. He has proposed that reasonable and objective criteria be established for licensing and that plants which are based on a standard design not require extensive individual licensing * * *"

A similar type of study is needed for LNG imports.

THE PROBLEMS OF CURTAILMENTS AND INCREMENTAL PRICING FOR LOW-PRIORITY USERS

The new policy has not addressed the complex issue dealing with curtailments of low-priority LNG users. The National Energy Plan would allocate most of the cost of the more expensive LNG to industrial users who are classified as low priority. The policy does not state if this gas would be subject to curtailment during shortages. If the gas is subject to curtailment, industrial users might be reluctant to accept imported LNG. However, if it is not subject to curtailment, the gas would go to lower priority users during shortages. The demand for imported LNG could be significantly affected depending on the resolution of this issue.

In an April 29, 1977, decision on one project, FPC decided to incrementally price LNG and make it free of curtailments. Two months later, FPC reversed itself and ordered that rolled-in pricing be used.

FEA in its comments (see app. V) stated that

> "The Administration's new incremental pricing policy would not alter these curtailment priorities, and would only partially tie the cost of LNG to specific consumers. * * * The problem addressed by the GAO would only arise if a strict marginal pricing policy had been adopted which tied a specific customer to a specific high-priced supplemental gas stream. The Administration did not adopt this policy."

From these comments, we conclude that the dilemma has not been resolved. Either high-priced imported LNG will not be incrementally priced to low-priority industrial users as other high-priced new gas would be or low-priority industrial users paying the full higher price of imported LNG would be subject to curtailment from use of it during periods of shortage. As indicated in the Department of Commerce's comments (see app. IX), this problem will have to be resolved by the Department of Energy.

TOPICS WITHIN THE POLICY SHOULD BE CLARIFIED AND INACCURATE OR MISLEADING STATEMENTS CORRECTED

A clear and unambiguous policy is important for both planning and implementation. The current policy contains unclear, inaccurate, and misleading statements which only add to the confusion regarding imported LNG's future role in supplying U.S. energy needs. The purpose of any policy statement should be to clarify administration position.

The policy states that:

> "This action could add as much as 500 billion to 1 trillion cubic feet annually to U.S. gas supply through the 1980s, without making an open-ended commitment for large volumes of this expensive resource." (See p. 21.)

It is unclear whether "this action" refers to a change from ERC's policy, which was referred to in the beginning of the paragraph, or whether it refers to the new policy itself. By removing import guidelines, thereby setting no upper limit, the new policy appears to favor additional LNG. However, this is never stated (terms such as "an important supply option" are used). However, according to the American Gas Association, the above figures have worried some gas companies because it implies that a potential new limit may be imposed. In its comments on our proposed report, FEA said that the statement refers to the increase in LNG supply that could be allowed above what has been allowed under the ERC policy.

The varying views by the American Gas Association and FEA reinforced our opinion that this statement is unclear.

The policy also states that "* * * the previous administration proposed guidelines to limit imports of liquefied natural gas to 2 trillion cubic feet per year." However, the ERC policy specifically stated that 2 Tcf " * * * is not a quota." This point was further emphasized in previous testimony before FPC. 1/

The policy further states that:

"Applications for LNG contracts now pending before the Federal Power Commission already approach the 2-trillion-cubic-feet limitation, with over 1.2 trillion cubic feet proposed to come from Algeria." (Emphasis added.)

This sentence is both inaccurate and inconsistent. The actual figures per year are shown below.

	Algeria	Indonesia	Total
		(Tcf)	
Applications approved (note a)	0.4	-	0.4
Applications pending	1.2	0.2	1.4
Total	1.6	0.2	1.8

a/A project approved April 29, 1977, for 0.15 Tcf/year is shown, for consistency, as pending since it was approved after the National Energy Plan was issued.

Actual applications pending, as of April 20, were 1.4 Tcf. Pending projects would have to increase over 40 percent to reach 2 Tcf. Furthermore, a more accurate policy statement would not only discuss applications pending, but would also account for projects approved when implying totals.

The policy also states that LNG imports would be distributed throughout the Nation so that no region would be seriously affected by a supply interruption. The policy gives no indication how this will be done. Two possible methods would be an actual physical distribution or distribution by displacement. Physical distribution could result

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1/See Federal Power Commission Testimony; Docket No. CP74-138, Trunkline LNG Company, et al; Vol. No. 19, pp. 2521-2522.

in transportation problems as well as increased costs. Displacement does not require the actual LNG to be shipped throughout the country. However, all regions would receive less domestic gas in case of an LNG supply interruption. The meaning and implementation of this statement should be clarified.

FEA's comments (see app. V) on our proposed report indicated that LNG would not be physically distributed throughout the Nation. FEA is currently reviewing this issue to determine what further action other than the contingency planning requirement, if any, is warranted.

CONCLUSIONS

We believe the National Energy Plan is inadequate with respect to the LNG import policy. The LNG import policy has not been related to the overall national energy plan so as to identify LNG import goals. Without clear guidance, we question whether the most appropriate role for imported LNG will be established and implemented and whether industry planning can be effectively accomplished.

We also believe that additional issues should have been handled. The policy does not adequately address the concerns of vulnerability. Criteria defining overdependence were not established. In addition, the policy did not address the problems associated with the lengthy regulatory process and curtailment of low-priority LNG users.

Finally, we believe the policy contains numerous obscure statements which only add to the confusion regarding LNG's future role in supplying U.S. energy needs. Clarifying the policy would simplify planning and implementation.

RECOMMENDATIONS

We recommend that the Secretary of Energy, in cooperation with other Federal agencies, as necessary, revise the policy statement for imported LNG to

--define clearly goals and objectives for imported LNG;

--establish criteria on what constitutes national dependency for use in determining project acceptability;

--specify curtailments to be applied for low-priority users of imported LNG; and

--clarify or correct ambiguous, inaccurate, or potentially misleading statements.

We also recommend that the Secretary of Energy initiate a study of the regulatory process to identify what actions should, or could, be taken to expedite decisionmaking.

AGENCY COMMENTS

FEA, in commenting on our proposed report (see app. V), stated that the National Energy Plan was intended to provide a broad framework which would guide the development of a more detailed and comprehensive policy on LNG imports. FEA said that the policy statement would be supplemented by a new extensive study to develop the detailed elements of a broader and more flexible policy. It suggested that this report is premature and should not be issued.

We believe, however, that the report should be issued now because the current policy statement is inadequate even as broad policy guidelines. We believe our concerns are valid and should be considered in revising the current policy statement and during the development of a detailed policy. By letter dated September 30, 1977 (see app. VII), the Chairman, Federal Power Commission, stated that this report will make a valuable contribution to the further development of the administration's position. According to the Chairman, he is confident that this report's specific recommendations will be given serious consideration by the Secretary of Energy.

The Department of Commerce, in its general comments (see app. IX), expressed unresolved ambivalent views on our recommendations, stating that there will be time enough later to build on and amplify the present statement of policy, while conjecturing that a policy statement to be issued by the President's Inter-Agency Task Force on LNG may well cover the primary areas of concern to us.

Commerce was concerned that future LNG projects may not contemplate U.S. flag vessel participation. Therefore, Commerce proposed that, " * * * the policy should recognize the value and benefits to the nation as a whole and endorse a policy that U.S. flag vessels carry a substantial portion of U.S. LNG imports." We believe that this issue would be appropriate for consideration by the President's Inter-Agency Task Force on LNG.

Specific agency comments have been recognized throughout the report, where appropriate.

THE LIQUEFIED NATURAL GAS IMPORT POLICY AS CONTAINED IN THE NATIONAL ENERGY PLAN DATED APRIL 29, 1977

The Energy Resources Council in the previous administration proposed guidelines to limit imports of liquefied natural gas to 2 trillion cubic feet per year. Of that, no more than 1 trillion cubic feet could be imported from any one country. Applications for LNG contracts now pending before the Federal Power Commission already approach the 2-trillion-cubic-feet limitation, with over 1.2 trillion cubic feet proposed to come from Algeria.

Due to its extremely high costs and safety problems, LNG is not a long-term secure substitute for domestic natural gas. It can, however, be an important supply option through the mid-1980's and beyond, until additional gas supplies may become available.

The previous Energy Resources Council guidelines are being replaced with a more flexible policy that sets no upper limit on LNG imports. Under the new policy, the Federal Government would review each application to import LNG so as to provide for its availability at a reasonable price without undue risks of dependence on foreign supplies. This assessment would take into account the reliability of the selling country, the degree of American dependence such sales would create, the safety conditions associated with any specific installation, and all costs involved. This action could add as much as 500 billion to 1 trillion cubic feet annually to U.S. gas supply through the 1980's, without making an open-ended commitment for large volumes of this expensive resource.

The new policy further provides for distribution of imports throughout the nation, so that no region would be seriously affected by a supply interruption. It also provides for the development of contingency plans for use in the event of a supply interruption. In cases where the proposed supplier retains a unilateral right to cut off supply, consideration should be given to conditioning FPC certification on recognition of a reciprocal right to cancel on the part of the U.S. purchaser.

Finally, strict siting criteria would foreclose the construction of other LNG docks in densely populated areas.

ENERGY RESOURCES COUNCIL POLICY STATEMENT

ON LIQUEFIED NATURAL GAS IMPORTS

DATED AUGUST 1976

BACKGROUND

In his February Energy Message, the President announced a strong concern about the nation's growing dependence upon imported liquefied natural gas (LNG) and directed the Energy Resources Council (ERC) to implement a national LNG policy. The policy announced in February would enable the U.S. to import one trillion cubic feet (Tcf.) of LNG by 1985 without becoming overly dependent on foreign sources. The ERC was also directed to review the acceptable level of dependence based upon current estimates of natural gas production.

Since the Energy Message, the following has developed:

--The ERC LNG Import Task Force has completed an in-depth analysis of the dependence issue, need for natural gas, and economic criteria for assessing dependence.

--The ERC held public hearings in Washington, D.C., and Los Angeles to ascertain the views of business, consumer, environmental, labor, and government officials.

--The Federal Power Commission (FPC) has now approved 0.4 Tcf of LNG import projects, and over 3 Tcf of additional projects are pending or in the planning stage.

--No long-term legislated natural gas price deregulation has been forthcoming.

SUMMARY OF KEY CONCLUSIONS

The ERC analysis focused on a number of key risks associated with LNG imports. Some of these risks would tend to discourage new projects, while others would lead to greater acceptability.

Risk of supply disruption

The ERC concluded that the risk of a supply disruption, either as a result of political action (such as an oil and gas embargo or gas embargo only) or because of technical problems, warrants government action. There are only a limited number of countries likely to export significant volumes of LNG to the U.S. in the next ten years. These nations have a diverse set of political and economic interests. Thus, supply diversification would reduce the impact of a disruption.

The Task Force believes that it would be easier to target an LNG embargo to one particular country than to target an oil embargo. This possibility exists because there are large capital investments, long-term contracts, sophisticated technology, and dedicated markets involved with LNG projects.

While the large capital costs of LNG projects ordinarily would exert pressure on producers to meet contracted deliveries to satisfy debt service obligations, such economic considerations may not prevent a politically motivated cutoff. In some countries, financial needs may make it difficult to sustain an LNG embargo over a long period.

While LNG is a reasonably difficult substance to process, handle, store, and transport, long-term disruptions of supply for technical reasons are not likely. Technical problems experienced earlier have been largely overcome; however, startup problems could occur in countries that are not experienced with LNG technology. Technical problems in the U.S. handling of LNG are possible, but highly unlikely.

The impact of a supply disruption depends upon many factors, including import dependence in each region. Dependency upon imported gas from approved and pending projects (if all come to fruition) could range from 15-30 percent in each region receiving LNG imports; however, some individual gas distribution companies could have higher dependence. If natural gas prices remain regulated, most of the LNG imports would be needed to serve high priority (residential and small commercial) customers and very little, if any, for new growth. On the other hand, quick deregulation would require little of the imported LNG for high priority needs and considerable amounts for new growth.

Risk of arbitrary price hikes

The price of recently negotiated LNG projects has been about $1.30 per million Btu (MMBtu) at the exporting country, with escalators. After adding transportation and regasification costs, the LNG delivered price is typically about $2.50-$3.00/MMBtu.

Since LNG contracts are long-term, with dedicated facilities, there is a risk of arbitrary price hikes (which grows over time as facilities are put in place). The base price for most LNG contracts is now being linked to currency fluctuations and the price of substitute fuels. Previous contracts have been renegotiated as energy prices have increased, and there is no insurance against price hikes, except the commercial integrity of the producer country.

Risk of insufficient natural gas supply

All analytical work points to the high probability of significant shortfalls of natural gas in the next ten years. The uncertainties associated with price, reserves, leasing policy, and the delivery of Alaskan natural gas make it difficult to project domestic production. Natural gas is a vital fuel, used by over 40 million residences and 200,000 industrial consumers. Continuing and growing curtailments in the interstate market will lead to further relocation of industrial users, and possibly residential cutoffs. Furthermore, significantly reduced volumes of natural gas in pipelines will lead to greater unit costs as pipeline capacity would be underutilized.

LNG imports could alleviate, but not eliminate, these expected shortages. Some of the LNG imports may be needed to supply residential and small commercial users. However, the use of LNG for such customers presents a policy dilemma. The impacts of interruption on the residential market are potentially severe, but the lack of gas can have similarly severe effects on a market without alternate fuel capability.

POLICY SUMMARY

Level of Dependence

The ERC concludes that LNG imports are needed as a supplemental source of natural gas, but also that the United States must limit its long-run dependence on all energy imports, including liquefied natural gas.

After consideration of a range of alternatives, the ERC has decided to recommend to the Federal Power Commission that LNG imports from a single country should be limited to 0.8-1.0 Tcf./yr. for national security reasons. Further, about 2 Tcf./yr. are an acceptable national level of import dependency within the specific country limits set above.

This policy is aimed at encouraging diversification of sources and at facilitating attainment of the national target level. The target of 2 Tcf./yr. is not a quota, but represents an acceptable level of national dependency (about 10 percent of expected natural gas demand), which could change depending upon domestic policy occurrences.

The ERC also recommends that those projects with the most desirable pricing and price escalation provisions for U.S. consumers and projects which afford the greatest assurance of uninterrupted supply flow should be acted upon expeditiously by the FPC, provided that they are sound ventures in all other respects.

The ERC's recommendation does not represent a mandatory requirement for the Federal Power Commission. Rather, the Executive Branch would present testimony at FPC hearings on proposed LNG import projects. Although use of Section 232 of the Trade Expansion Act was rejected as a means for controlling LNG imports, it could be applied if future import project approvals appear to threaten the nation's security.

Pricing

The ERC concludes that rolled-in pricing for existing high priority customers and incremental pricing for lower priority or new users are desirable where administratively feasible. This policy statement is intended as a recommendation for the FPC and State and local authorities. The ERC will continue to review the pricing issue in the context of all natural gas supplemental fuels.

New natural gas supplies have traditionally been priced on a "rolled-in," or averaged basis to the consumer. An alternative approach would be to price the supplies to the consumer on a marginal or "incremental" basis, in order to present the consumer with the full economic cost of each new supply source.

Preliminary analysis shows that the method of pricing could affect the size of the LNG import market, and would affect the sectoral composition of demand. It is clear that LNG imports needed for existing high priority residential and commercial customers cannot realistically be priced on an incremental basis at the retail level. Such a pricing treatment might not be administratively feasible, and social inequities would inevitably appear to result from any attempt to draw distinctions, such as forcing some existing residential customers to pay for LNG at a multiple of the price of domestic gas experienced by other residential customers.

The ERC believes that expensive, relatively insecure LNG imports probably should not be made available at rolled-in prices to lower priority domestic users, or in support of new growth. Rolling-in prices masks to the users the full economic and security costs of the resource, and provides disincentives to domestic supply development.

There remain several complex issues dealing with intermediate categories of users, provisions for curtailment, and coordination with State and local authorities. Incrementally priced gas would probably have to be kept free from curtailment in order to have a viable market; yet, such a policy would force gas to lower priority users and could result in inequities. Moreover, unless incremental pricing were mandated all the way to the burner tip, which means consistent policies at the state and local levels, its effectiveness as a means to control import quantities could be largely offset.

Government Financial Assistance for LNG Ventures

The Maritime Administration (MarAD) and Export-Import Bank have provided Government financial assistance to LNG projects. MarAd may grant ship construction subsidies and guarantees for U.S. built LNG tankers. It has approved almost $200 million in tanker subsidies and about one billion dollars in mortgage guarantees. In the absence of U.S. subsidies tankers would be available elsewhere; thus, MarAd support is not essential to LNG ventures. Its suppport is used to assist the U.S. shipbuilding industry in competition with other nations. The ERC finds no reason to recommend modification of the on-going MarAd policies with respect to LNG tankers.

The Export-Import Bank provides loans and guarantees for overseas LNG facilities. Loans have been granted for gas field facilities and pipeline compressor stations, with a total exposure of about $350 million. Its support for transactions is conditioned by approval from an interagency advisory committee to insure that lending meets national policy objectives. The ERC believes that this mechanism is sufficient for providing a timely and informed project review which will meet the concerns of the Executive Branch.

Contingency Planning

The ERC believes that there is a need for contingency plans prior to the FPC's approval of prospective projects, and that such plans should be required by the FPC. A project contingency plan would ensure continuity of gas supply to high-priority customers for a specified period. The plans could consist of any one or a combination of underground and LNG storage, exchange agreements through interconnections, curtailments or cutoff of predetermined lower priority users on the system, availability of standby supplemental sources of natural gas including synthetic gas, conservation, or any other appropriate mechanism or procedure.

Siting and Safety Concerns

Although the Federal Power Commission has jurisdiction over site selection of LNG import facilities, there are fragmented and overlapping responsibilities for LNG siting and safety among Federal agencies and to a certain extent among state governments. The ERC has agreed to address the administrative and legal problems associated with this issue. Working with the FPC and state and local authorities, the ERC LNG Import Task Force will report to the ERC on any expediting actions that can be taken, or any further analysis needed.

APPENDIX III

LNG PROJECTS--APPROVED, PENDING, AND POTENTIAL

STATUS OF LONG-TERM LNG IMPORT PROJECTS APPROVED

BY OR PENDING BEFORE FPC AS OF JUNE 1977

Project title	Nation of origin	U.S. terminals	Scheduled delivery	Annual volume	Time frame	Status
				(Tcf)	(years)	
Distrigas I	Algeria	Everett, Mass. Staten Island, N.Y.	1971	.015	20	Temporary authority. Everett receiving LNG
Distrigas IV (Replaces existing contracts effective 1-1-78)	Algeria	Everett, Mass.	1977	.043 (volume includes Distrigas I above)	20	Pending
El Paso I	Algeria	Cove Point, Md. Savannah, Ga.	1977--early 1978	.388	25	Approved
Trunkline	Algeria	Lake Charles, La.	1980	.153	20	Approved
Eascogas	Algeria	Providence, R.I. Staten Island, N.Y.	1980	.238	22	a/Partial FPC approval
El Paso II	Algeria	Port O'Conner, Tex.	1980	.365	20	Pending
Tenneco	Algeria	New Brunswick, Canada (via pipeline to U.S.)	1985	.416	20	Pending
Pacific Lighting	Indonesia	Oxnard, Calif.	1981	.197	20	Pending
Total				1.800		

a/Eascogas is restructuring project to import LNG into Cove Point, Md., and Staten Island, N.Y.

Source: LNG import policy briefing document for Administrator, FEA, dated March 10, 1977; and updated by an FPC official in June 1977.

LNG PROJECTS--APPROVED, PENDING, AND POTENTIAL

POTENTIAL LNG PROJECTS

Project title	Nation of origin	U.S. entry point	Scheduled deliveries	Annual volume	
				(Tcf)	
Nigeria I	Nigeria	East Coast	1982	0.237	
Nigeria II	Nigeria	East Coast	Unknown	a/.183	.420
Kalingas	Iran	Gulf and West Coast	1985	.292	
El Paso Iran	Iran	East Coast	1985	.548	.840
Yakutsk	Soviet Union	West Coast	1985	.365	
North Star	Soviet Union	East Coast	1985	.730	1.095
Total					2.355

a/This is a joint project with Southern Europe for 0.365 Tcf. FEA estimates half will come to the United States.

IMPORTED LNG COSTS

The high cost of imported LNG delivered to this country is an important issue. A major element of this cost is due to the high and escalating capital costs of an LNG project. An 8,000-mile round trip project, such as Algeria to the United States, which delivers 1 billion cubic feet daily, would involve a liquefaction plant in the exporting country, eight 125,000 cubic meter tankers, and a terminal facility on the east coast. The table below gives cost estimates of two similar projects--excluding producing and gathering costs in the exporting country. The first estimate was made in 1972, the second in 1975.

LNG Project Capital Costs--1 Billion Cubic Feet per Day

Project element	1972 estimate	1975 estimate
	(millions)	
Liquefaction facility	$ 600	$1,000
Tankers (8)	800	1,300
Receiving terminal (including regasification facility)	175	300
Total	$1,575	$2,600

Recent projects have continued to demonstrate escalation. A project approved April 29, 1977, for instance, is scheduled to use a 1-billion-cubic-foot-per-day liquefaction facility that is scheduled to be completed in 1980, at a cost of $2.3 billion. This is more than twice the cost of the similar-sized facility shown above. The receiving facility's estimated costs have also increased substantially since 1973.

The shipping distance is an important project characteristic. If the project in the above example involved a 16,000-mile round trip--such as an Indonesian-U.S. project--twice as many tankers would be necessary to maintain a 1-billion-cubic-foot daily flow. The one proposed Indonesian project is about half this size. Ocean shipping and the foreign based liquefaction facility are the major capital cost items. The domestic receiving and regasification facility's cost is minor relative to total project cost. These figures have implications for balance of payments and vulnerability to embargo or debt payment, depending on U.S. economic involvement in, and control over, the project's liquefaction and shipping.

Cost comparisons

Comparing imported LNG costs to domestic natural gas prices shows that LNG's expected costs are much higher. The unit cost from three LNG projects filed before FPC are listed chronologically in the table below. The cheapest cost delivered to the pipeline is for the El Paso I project--$1.66 per million British thermal units (Btus). 1/ More recent projects have substantially higher unit costs than the El Paso project.

Pipeline Costs of Imported LNG

Project	Date filed	Cost to pipeline
El Paso I	1970	$1.66/million Btus
Trunkline	1973	$3.37/thousand cubic feet
Tenneco	1977	$4.57/thousand cubic feet

LNG import prices are usually much higher than other sources of gas. The regulated rate for interstate gas at the wellhead is $1.45 per thousand cubic feet, less than half the cost for the Trunkline and Tenneco projects. President Carter has proposed new gas prices of $1.75 per thousand cubic feet. LNG can also be compared to the cost of producing electricity. In this case, on the basis of information provided by the American Gas Association, the cost to produce electricity is about two times the cost of the highest proposed delivered LNG price per unit of energy.

1/One million Btus is roughly equivalent to 1,000 cubic feet.

FEDERAL ENERGY ADMINISTRATION
WASHINGTON, D.C. 20461

SEP 16 1977

Mr. Monte Canfield, Jr.
Director
Energy and Minerals Division
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Canfield:

On behalf of Mr. O'Leary, I want to thank you for the opportunity to review your draft report entitled "Improvements Needed in the National Liquefied Natural Gas Import Policy," which you forwarded on August 31, 1977. Before proceeding to comment on the report's contents, I would like to make the following observations. The draft report stresses the need for a comprehensive LNG policy which is related to the Nation's overall energy program. I agree with this view. However, the report then proceeds with the assumption that the statements in the Administration's National Energy Plan (NEP) on LNG, at page 57, constitute the complete new policy on LNG and criticizes these statements as being insufficient.

The LNG statement in the NEP was intended to provide a broad framework which would guide the development of a more detailed and comprehensive policy on LNG imports. In view of the new overall energy plan proposed by the Administration in the NEP, it was felt appropriate to review the previous work done by the Energy Resources Council and institute new policy decisions and recommendations which would be consistent with the new energy plan.

It was never intended that the NEP contain a fully detailed exposition of the new LNG policy and it is incorrect for the GAO to have assumed that this was the case. In fact, representatives of GAO were advised that such a detailed review and analysis had been authorized, was being undertaken, and would be completed by the end of this calendar year.

As you know, since the third quarter of 1976, members of the Interagency LNG task force, originally created by the ERC and headed by the Federal Energy Administration (FEA), have discussed with representatives of GAO, the detailed review and analysis which went into the formulation of the ERC policy on LNG and provided the GAO representatives with copies of all reports which were used in the development of the recommendation made to the ERC. In May of this year, the task force informed your representatives, in an interview requested by GAO, that the NEP statement on LNG would involve a new, extensive study by the task force to develop the detailed elements of a broader and more flexible policy.

In view of this I recommend that GAO not issue the draft report since it would be premature for your office to criticize the Administration's LNG policy before it has had an opportunity to fully formulate and integrate it into the overall energy plan.

Specific comments on the draft are:

[See GAO note, p. 37.]

o Page 12 - The discussion on this page addresses the need to develop criteria on what constitutes national dependency. As previously stated, the interagency task force on LNG is now reviewing possible dependency criteria which may be used along with developing other criteria or guidelines to evaluate the reliability of the exporting country in individual cases. It is premature at this stage to discuss the outcome of this effort; however, FEA certainly concurs on the need for such criteria and would welcome any suggestions which the GAO staff may have on this matter.

[See GAO note, p. 37.]

o Page 17 - The discussion on this page addresses the need to streamline the review process to reduce unnecessary delays and eliminate unwieldy and confusing regulatory procedures. Here again FEA completely concurs in this recommendation. However, the GAO report concludes this discussion by asserting that the Administration ignored this issue since it was not contained in the NEP. This conclusion does not take note of one of the major actions proposed by the Administration on LNG and endorsed by Congress when it passed the legislation establishing the Department of Energy.

Specifically, the authority to review and approve the export and import of natural gas will be transferred from the Federal Power Commission (FPC) to the Secretary of Energy when that Department comes into existence. This action was based on the realization that such important national energy issues, such as the dependency created by approving imports of natural gas, required political/diplomatic considerations which a regulatory process could not adequately address.

We are now reviewing the various procedures available to implement this authority, and one of the major factors which will be used to select the preferred procedure will be the capability to expeditiously handle these requests to import natural gas.

On this page, the GAO report states that "the time [required to approve these ventures] is especially significant if the thrust of the new policy is to encourage imports." For clarification the thrust of the new policy is to provide timely approval for those import projects which are deemed acceptable. As with the ERC policy, the new policy recognizes that natural gas imports are needed as a supplemental supply, but unlike the previous ERC policy, the new policy will determine this need on a case-by-case basis.

o Page 18 - The discussion on this page on the use of LNG by low priority users appears to be confused. The existing FPC priority of service schedules for periods of curtailment ranks the major classes of end users according to their ability to use alternative fuels. All natural gas that is available to the interstate pipeline system, regardless of source or cost, is distributed in conformity with the priority schedule or an FPC approved curtailment plan. The Administration's new incremental pricing policy would not alter these curtailment priorities, and would only partially tie the cost of LNG to specific consumers. The actual physical distribution of LNG would not be related to the allocation of costs or the selection of candidates for service curtailment. The problem addressed by the GAO would only arise if a strict marginal pricing policy had been adopted which tied a specific customer to a specific high-priced supplemental gas stream. The Administration did not adopt this policy.

[See GAO note, p. 37.]

o Page 20 - The discussion on this page addresses the statement made in the NEP that the new policy could add as much as 500 billion to one trillion cubic feet annually to U.S. gas supply in the 1980's. This statement refers to the increase in LNG supply that could be allowed above what has been allowed under the ERC policy. As noted subsequently in your report (page 22) LNG projects approved and/or pending before the FPC include a total of 1.6 Tcf/yr. from Algeria. Under the ERC policy 0.6 to 0.8 Tcf/yr. would have been foregone since they would otherwise have exceeded the country of origin limitation. The difference between the approved numbers and the figures contained in the NEP take into account the possibility of an additional Algerian project or an expansion of an approved or pending one occurring in the near-term.

Under the new policy these projects can now be considered on a case-by-case basis and not be denied by an inflexible limitation. This, however, does not mean and should not be interpreted as implying a readiness to approve all of these projects. The criteria, now being developed, would still need to be satisfied in the evaluation of these individual projects.

[See GAO note, p. 37.]

- Page 23 - The discussion on this page on the possible methods for distributing LNG throughout the Nation, while not incorrect, requires some clarification. The new policy did not mean to imply that LNG would be physically redistributed, since as you correctly note, this would be cumbersome and unduly expensive. Rather the NEP highlights the need to ensure that LNG imports would not be approved and allowed to be distributed in such a manner that one or a limited number of U.S. regions would be inordinately affected by the supply disruption. FEA is currently reviewing this issue to determine what further action other than the contingency planning requirement, if any, is warranted to ensure that this does not occur.

- The report does not address some of the new initiatives contained in the NEP, particularly the requirement to develop guidelines on siting to foreclose on the siting of LNG facilities in densely populated areas. As you are well aware, the siting issue has emerged as one of the major concerns associated with LNG imports. The growing awareness of the potential hazards to public safety in having these sizeable import facilities located in densely populated areas has been a significant source of delay. Although extensive studies and analyses have been conducted, they have not alleviated public concern since they have not conclusively demonstrated that the potential hazards are acceptable. The decision of the Administration to resolve this and other issues is not discussed in the draft report.

The above specific comments, while presented as constructive criticisms to the technical contents of the draft report, should not detract from my central comment which I expressed earlier, that the issuance of the report is premature at this time since the interagency task force on LNG is now conducting an extensive study to develop the new LNG policy.

If you desire further assistance, please contact me or Mr. Ken Kincel of FEA (566-9133), the Chairman of the LNG Task Force.

Sincerely,

C. William Fischer

C. William Fischer
Associate Administrator
Policy & Program Analysis

GAO note: Omitted comments pertain to material contained in the draft report but omitted from the final report or to suggestions for improving presentation of matters in the report which have been considered in preparing the final report.

EXPORT-IMPORT BANK OF THE UNITED STATES
WASHINGTON, D.C. 20571

FIRST VICE PRESIDENT
AND
VICE CHAIRMAN

CABLE ADDRESS "EXIMBANK"
TELEX 89-461

September 20, 1977

Mr. J. K. Fasick
Director, International Division
United States General Accounting Office
Washington, D. C. 20548

Dear Mr. Fasick:

Thank you for the opportunity to review and comment on the GAO's proposed review of the national LNG policy. Eximbank has no comments to offer on the substance of GAO's analysis. The Bank would, however, like to correct a slight misconception concerning the relationship of Eximbank and the National Advisory Council (NAC). This misconception originates in the 1976 ERC study and appears on pages 6 and 33 of this document.

Specifically, Eximbank authorizations do not "require approval from" nor are "conditioned by approval from" an interagency advisory committee (the NAC) with respect to national policy objectives. All Eximbank transactions with an Eximbank authorization value of $30 million or more are sent to the NAC for national policy guidance, but the NAC does not have the authority to "approve" or "deny" an Eximbank transaction.

Although this adjustment does not alter the substance of the specific ERC conclusion, the Bank feels it is a misconception which could eventually lead to inappropriate conclusions.

Thank you again for the opportunity to comment. With best regards, I am

Sincerely yours,

Delio E. Gianturco

APPENDIX VII

FEDERAL POWER COMMISSION

WASHINGTON, D. C. 20426

OFFICE OF THE CHAIRMAN

SEP 30 1977

Mr. Monte Canfield, Jr.
Director
Energy and Minerals Division
U. S. General Accounting Office
Washington, D. C. 20548

Dear Mr. Canfield:

This is to acknowledge your letter of August 31 forwarding the draft of the proposed report on "Improvements Needed in the National Liquefied Natural Gas Import Policy" and inviting our comments on the report.

I note that the recommendations in the report are directed to the Secretary of Energy. This is appropriate in view of the transfer of jurisdiction over LNG imports from this Commission to the Secretary by the recently enacted Department of Energy Organization Act. One of the purposes of the Act is "to achieve, through the Department, effective management of energy functions of the Federal Government, including consultation with the heads of other Federal departments and agencies in order to encourage them to establish and observe policies consistent with a coordinate energy policy . . . ." Thus, the transfer of jurisdiction to the new Department should facilitate the development of a clearly defined policy regarding the future role of imported LNG in our national energy program. I am confident that the specific recommendations in your report--particularly the recommendation to establish criteria for project acceptability on the basis of national dependency and in relation to national energy goals--will be given serious consideration by the Secretary.

Mr. Monte Canfield, Jr. - 2 -

This draft report will make a valuable contribution to the further development of the Administration's position on LNG import policy in the months ahead. Should you desire it, members of our staff will be available to assist you in the preparation of a final report on this matter.

Sincerely,

Charles B. Curtis

Charles B. Curtis
Chairman

DEPARTMENT OF STATE

Washington, D.C. 20520

October 7, 1977

Mr. J. K. Fasick
Director
International Division
U.S. General Accounting Office
Washington, D. C.

Dear Mr. Fasick:

I am replying to your letter of September 7, 1977, which forwarded copies of the draft report: "Improvements Needed in The National Liquefied Natural Gas Import Policy."

The enclosed comments were prepared by the Acting Assistant Secretary for Economic and Business Affairs.

We appreciate having had the opportunity to review and comment on the draft report. If I may be of further assistance, I trust you will let me know.

Sincerely,

D. Williamson

Daniel L. Williamson, Jr.
Deputy Assistant Secretary
for Budget and Finance

Enclosure:
As stated

GAO DRAFT REPORT: "IMPROVEMENTS NEEDED IN THE NATIONAL LIQUEFIED NATURAL GAS IMPORT POLICY"

I am responding on behalf of the Secretary to your letter of September 7, 1977 concerning the draft report on LNG import policy.

The National Energy Plan (NEP) was never intended to provide a detailed exposition of LNG policy. It states that LNG can be an important supply option through the mid-1980's and beyond, until additional gas supplies may become available. The need for LNG will depend on a number of factors including the cost of competitive energy sources, conservation, the success of the program to convert low priority users to coal, and the degree to which new domestic production is stimulated by higher prices.

Those portions of the NEP requiring legislative action are currently under consideration by Congress. Many of these proposals, particularly those dealing with natural gas prices, will have a signficiant impact on the supply and demand for gas. It would be more appropriate to develop some of the specific aspects of LNG policy once they are enacted and the market for natural gas can be projected more accurately.

The lengthy regulatory process was not addressed in the NEP but is being examined elsewhere. Some LNG import applications are currently being handled on an expedited basis by the FPC and the organization and procedures of the new Department of Energy will be established with this problem in mind.

[See GAO note, p. 43.]

[See GAO note below.]

Contractual modifications would no doubt have to be approved by the FPC or its successor before the gas could be imported. Since the producing countries have significant debt service and other expenses arising from their ownership of the LNG facilities, they would seek to avoid any interruption in revenue. These factors would provide significant disincentives for a producing country to attempt unilateral contract modifications.

[See GAO note below.]

Sincerely,

Robert Hormats

Robert Hormats
Acting Assistant Secretary
for Economic and Business Affairs

GAO note: Omitted comments pertain to material contained in the draft report but omitted from the final report or to suggestions for improving presentation of matters in the report which have been considered in preparing the final report.

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Administration
Washington, D.C. 20230

17 OCT 1977

Mr. Monte Canfield, Jr.
Director, Energy and
Minerals Division
U.S. General Accounting Office
Washington, D. C. 20548

Dear Mr. Canfield:

This is in reply to Mr. Eschwege's letter of September 1, 1977, requesting comments on the draft report entitled "Improvements Needed In The National Liquefied Natural Gas Import Policy."

We have reviewed the enclosed comments of the Assistant Secretary for Maritime Affairs and believe they are responsive to the matters discussed in the report.

Sincerely,

Elsa A. Porter
Assistant Secretary
for Administration

Enclosure

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Maritime Affairs
Washington, D.C. 20230

OCT 3 1977

Mr. Monte Canfield, Jr.
Director, Energy and Minerals Division
General Accounting Office, Room 5120
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Canfield:

Secretary Kreps has asked me to respond to the September 1, 1977, letter she received from Mr. Henry Eschwege, Director of the U.S. General Accounting Office. Comments have been solicited on the GAO's draft report entitled "Improvements Needed in the National Liquefied Natural Gas Import Policy."

General Comments

The GAO draft report is well written and provides a concise, yet comprehensive review of past and present LNG import policy issues. However, we think the GAO criticism of the President's revision of LNG import policy represents something of an overreaction.

A major review or revision of the President's policy statement on LNG imports, contained in the National Energy Plan (NEP), is considered both undesirable and unnecessary at this time. Many of the GAO concerns reflect the same ground which was explored in detail during the deliberations of the Energy Resources Council (ERC) Task Force last year.

The draft report gives the impression that the NEP has essentially "repealed" the existing ERC policy on LNG imports. This is not the case. We believe the NEP has not changed the thrust of that policy, but has allowed greater flexibility by removing arbitrary limits on the quantities of LNG to be imported. This new approach was adopted to: (1) acquire some flexibility in dealing with the alternate sources of gas supply; (2) improve prospects for such supply in the critical 1980's and 1990's; and (3) reduce the dampening effect on LNG project development that past policy (with its arbitrary ceiling) may have imposed. The "case-by-case" approach adopted in the NEP still preserves flexibility in considering various options should it prove necessary. The opportunity to reappraise gas consumption and import trends and to review the policy issues cited in the draft report as time goes on also remains.

However, by not discouraging future LNG project development, the new policy enhances prospects for significant improvement in future U.S. gas supplies. While possible dependency on overseas sources for this vital fuel is a serious issue to be continuously addressed, any final determination should await an assessment of domestic supply trends and the evolving pattern of LNG import projects. The lead time on these projects is such that major dependency dangers can be fairly easily avoided.

Hence, we cannot agree with the recommendations reached in the report, i.e., it is necessary to immediately reconsider and revise the policy statement contained in the President's National Energy Plan. There will be time enough later to build on and amplify the present statement of policy.

In addition, continuing work in this area is being carried out by the President's Inter-Agency Task Force on LNG. It is our understanding that a complete LNG policy evaluation is underway and a policy statement is scheduled to be issued by December 1, 1977. Areas to be covered include U.S. dependence on foreign LNG, reliability of sources, safety and siting of facilities, and regional dependence. This statement may well cover the primary areas of concern to the GAO.

Finally, we would expect that the new Department of Energy and the Federal Energy Regulatory Commission, carrying out the former Federal Power Commission (FPC) functions, would clarify and expand on the NEP LNG policies, as well as propose new or revised policies as time and circumstances demand.

<u>Specific Comments</u>

1. On the conclusion: <u>there is a need to relate import policy to the overall energy program.</u>

This is, of course, desirable when articulating any aspect of overall energy policy. The implication, however, seems to be that LNG import goals must be quantified and related to overall energy and gas consumption objectives in order to render the policy effective.

Quantification is not necessarily a prerequisite for effective policy. The importance of natural gas to the over-all energy picture, its environmentally preferable character, the statistics on declining domestic gas production, etc. are, in fact, discussed elsewhere in the National Energy Plan. The role of LNG imports as an important supplemental source of natural gas during the possible shortage years ahead is also made clear. To establish a specific goal at this point (e.g., LNG imports should constitute 10 percent of U.S. gas supply in 1990, etc.) is neither desirable nor necessary. Clearly the President is saying that as long as we keep producing less gas domestically each year, and as long as we continue to suffer curtailments, we should not discourage the exploitation of this source of supply -- to the extent, of course, that undue dependency on foreign sources and safety or environmental hazards are not created.

The question of quantitative goals can be better addressed later as domestic production trends and the impact of the changed price structure become clear.

[See GAO note, p. 52.]

2. On the conclusion: there is a need to establish criteria on what constitutes national dependency.

This is, of course, the main bone of contention in the report. No one has satisfactorily resolved this question yet. The ERC Task Force wrestled with this and ended up begging the question somewhat (though one can infer from the ERC report that more than 1 Tcf of LNG from a single country and more than 2 Tcf overall would seem to constitute undue dependency). In fact, the Task Force realized that more than 2 Tcf of LNG imports by 1985 was very unlikely given the realities of LNG import projects then under serious consideration. What the Task

Force report did do was put a damper on further projects involving LNG imports from Algeria since only that country has the potential for exceeding 1 Tcf of LNG exports to the U.S. by 1985.

The President's statement, moreover, is quite explicit that project review, in each case, will take into account "undue risks of dependency on foreign supplies" and that import projects that are approved will provide for "distribution of imports throughout the nation so that no region would be seriously affected by a supply interruption." The GAO draft report does not seem to recognize this will be done during the "wait and see" period before declaring any arbitrary LNG ceiling.

The degree of national dependency on LNG importation is related to the percentage of such imports in U.S. energy supplies. The acceptability of such dependence is related to a number of factors. Among these are the reliability of exporting countries and the level of regional dependency in the U.S.

The discussion of the issue of dependence appears to us to represent a somewhat limited viewpoint. LNG imports, even at two to three trillion cubic feet per year, would amount to about 10 percent of U.S. gas consumption at current levels. The only realistic alternative to foreign gas supplies during the next decade is foreign oil. Present dependence on imported oil is now approaching 50 percent. While a goal of increased domestic production combined with conservation is the most desirable goal, energy demand will almost certainly continue to grow, and in the near future will not be met by purely domestic energy supplies. LNG imports at least diffuse the sources of energy supplies. The GAO draft paper makes the point that there is a question about the reliability of LNG producers. This may be, but the relevant comparison is between the reliability of OPEC oil producers versus LNG producers, because realistically these are the competitive energy suppliers.

This section of the report dwells heavily on the often repeated contention that an LNG embargo is likely to occur. It further includes the idea that an LNG embargo is "easier to target than an oil embargo." however, it is our opinion that the exact reverse is the correct situation.

There are two very strong reasons why an LNG embargo is significantly less likely to occur than an oil embargo.

First, LNG projects are essentially composed of mutually dependent and supporting facilities. In this highly capital intensive industry there is little, if any, excess liquefaction, shipping, or regasification capacity. The foreign plant, the ships, and the receiving facilities are built for one another and are tied together by common economic incentive. Unlike oil, opportunities to sell to alternative purchasers do not, as a practical matter, exist. A politically motivated interruption of commerce would result in severe economic and social repercussions in the selling country, almost as fast as in the purchasing country.

Second, the primary LNG exporting and potential exporting countries, with the exception of Iran, are not those which are "oil rich." They are developing their LNG capacity as an economic base from which they can improve the standard of living for generally large populations. They are forced to call upon worldwide capital markets to finance facilities. Unlike many of the large oil exporting nations, the price paid by them as a result of an embargo would be swift and dear, particularly from the world financial community which they have assiduously courted over the years. Finally, countries which by necessity are currently flaring gas are not apt to embargo its exportation after going to the expense of building liquefaction plants.

3. <u>On the conclusion: the lengthy regulatory process is not addressed.</u>

The lengthy regulatory process involved in FPC decisions about LNG projects is in many respects mandated by law, especially where safety and environmental factors are concerned.

The President has already noted the need to improve the approval process for major energy projects and one can assume that this will be addressed by the new Department of Energy and the Federal Energy Regulatory Commission, which will be a part of the Department.

Further, the Federal Power Commission recently has made substantial progress in expediting these cases, and the companies involved generally anticipate that the process in the future will be shortened considerably, perhaps reducing the present average time of two and one-half (2-1/2) years to less than a year.

4. On the conclusion: the need to address the problems of curtailments to low priority incrementally priced LNG users.

This is a good point, but one that we can expect will be addressed as the issue of incremental pricing is dealt with in future deliberations by the Federal Energy Regulatory Commission regarding proposed LNG import projects. In fact, this may be a moot issue. The recent FPC decision in the Trunkline case calls for rolled-in pricing. Should this be precedent-setting there will not be any problem of curtailments to either high priority or low priority customers for their LNG supplies.

[See GAO note, p. 52.]

The NEP statement on page 25 refers to a new policy where the Federal Government would review each application to import LNG so as to provide for LNG availability at a reasonable price without undue risks of dependence on foreign supplies. It then states that "This action could add as much as 500 billion to 1 trillion cubic feet annually to U.S. gas supply through the 1980's, without making an open-ended commitment for large volumes of this expensive resource." GAO also makes the point on page 21 that contracts are for 20 years or more and are for definite periods, and are therefore not "open-ended commitments." However, our own interpretation of the NEP statement is that it refers to a U.S. energy policy commitment on LNG imports, not to the term of any individual projects.

6. Proposed Policy Additions

Not mentioned in the GAO draft report, but a policy recommendation that we consider to be highly important, is the need for a substantial portion of participation by U.S. flag vessels in each LNG import project.

In all U.S. baseload LNG import projects under active consideration to date (i.e., El Paso I, Trunkline, Eascogas, Pacific Indonesia, El Paso II and Tenneco) the need for U.S. flag participation has been recognized. In the above projects the U.S. flag participation varies from 40 percent in the Trunkline Project to 66 percent in both the El Paso I and Pacific Indonesia Projects. By maintaining a portion of the "pipeline" under U.S. flag an added degree of control over the delivery of this prime product is ensured. Future projects may not contemplate U.S. flag participation. Therefore, to ensure this result, U.S. Government policy should recognize the value and benefits to the nation as a whole and endorse a policy that U.S. flag vessels carry a substantial portion of U.S. LNG imports.

In addition to the security and control benefits that accrue to a U.S. LNG import project through U.S. flag participation, there are obvious economic impacts of awarding work to a U.S. shipyard which would otherwise be performed in a foreign country. Where vessel construction is carried out in a foreign shipyard the negative results are: (1) the outflow of U.S. dollars thereby aggravating our balance of payments deficits; (2) elimination of millions of dollars worth of material and labor purchases many of which would be small business concerns in a labor surplus area; (3) the elimination of potential tax bases available to Federal, State and local Governments; and (4) the continuing need over the 25-year economic life of the vessel to secure parts from foreign sources provided the source is still available and on friendly terms.

Summary

In sum, we do not feel that a major review or revision of the President's policy statement regarding LNG imports is called for at this time. The present actions within the Executive Branch to analyze and revise, if necessary, LNG importation policies are more than adequate and the points raised in the GAO draft report are being given full consideration.

The Department of Commerce feels that the present policy is both proper and prudent -- i.e., one that does not discourage the development of LNG import projects, and yet recognizes the dangers of dependency and the need for appropriate controls in the environmental and safety areas, coupled with the recognition of the need for U.S. flag vessel participation.

Sincerely,

Robert J. Blackwell

ROBERT J. BLACKWELL
Assistant Secretary
for Maritime Affairs

GAO note: Omitted comments pertain to material contained in the draft report but omitted from the final report or to suggestions for improving presentation of matters in the report which have been considered in preparing the final report.

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