STATEMENT SUBMITTED
BY THE
UNITED STATES NUCLEAR REGULATORY COMMISSION
TO THE
SUBCOMMITTEE ON ENERGY AND AIR QUALITY
OF THE
COMMITTEE ON ENERGY AND COMMERCE
U.S. HOUSE OF REPRESENTATIVES

CONCERNING
THE U.S. NATIONAL ENERGY POLICY: NUCLEAR ENERGY

SUBMITTED BY
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EXECUTIVE DIRECTOR FOR OPERATIONS

Submitted: March 27, 2001

1907

DOE003-0551

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Introduction

Mr. Chairman, members of the Subcommittee, I am pleased to submit this testimony on behalf of the U.S. Nuclear Regulatory Commission (NRC) regarding the NRC's perspective on how nuclear energy fits into the U.S. National Energy Policy. As the Subcommittee knows, the Commission's mission is to ensure the adequate protection of public health and safety, the common defense and security, and the environment in the application of nuclear technology for civilian use. The Commission does not have a promotional role -- the agency's role is to ensure the safe application of nuclear technology if society elects to pursue the nuclear energy option. The Commission recognizes, however, that its regulatory system should not establish inappropriate impediments to the application of nuclear technology. Many of the Commission's initiatives over the past several years have sought to maintain or enhance safety while simultaneously improving the efficiency and effectiveness of our regulatory system. The Commission also recognizes that its decisions and actions as a regulator influence the public's perception of the NRC and ultimately the public's perception of the safety of nuclear technology. For this reason, the Commission's primary performance goals also include increasing public confidence.

The Commission's primary focus is on safety. The Commission nonetheless recognizes that the quality, predictability, and timeliness of its regulatory actions bear on licensee decisions related to construction and operation of nuclear power plants.
Background

Currently there are 104 nuclear power plants licensed by the Commission to operate in the United States in 31 different states. As a group, they are operating at high levels of safety and reliability.

**NRC Performance Indicators: Annual Industry Averages, 1987-1999**

*Calendar year values used for 1986 through 1995. Fiscal year values are used beginning in 1996.*

**The hatched areas represent additional data that resulted from reclassification of safety system failures.**
These plants have produced approximately 20% of our nation's electricity for the past several years and are operated by about 40 different companies. In 2000, these nuclear power plants produced a record 755-thousand gigawatt-hours of electricity.

Net Generation of U.S. Nuclear Electricity, 1977-1999

THOUSAND GIGAWATTHOURS

YEAR

Improved Licensee Efficiencies (Increased Capacity Factors)
U.S. Commercial Nuclear Power Reactor Average Capacity Factor and Net Generation

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Reactors Licensed to Operate</th>
<th>Average Annual Capacity Factor (Percent)</th>
<th>Thousands of Gigawatthours</th>
<th>Percent of Total U.S.</th>
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<td>63</td>
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Electric Industry Restructuring

As the Subcommittee is aware, the nuclear industry has undergone a period of remarkable change. The industry is in a period of transition in several dimensions, probably experiencing more rapid change than in any other period in the history of civilian nuclear power. As deregulation of electricity generation proceeds, the Commission is seeing significant restructuring among the licensees and the start of the consolidation of nuclear generating capacity among a smaller group of operating companies. In part, this change is due to an industry that has achieved gains in both economic and safety performance over the past decade and thus has been able to take advantage of the opportunities presented by industry restructuring. The Commission has established a regulatory system that is technically sound, that is fair, predictable, and reaches decisions with reasonable dispatch.
Initiatives in the Area of Current Reactor Regulation

License Transfers

One of the more immediate results of the economic deregulation of the electric power industry has been the development of a market for nuclear power plants as capital assets themselves. As a result, the Commission has seen a significant increase in the number of requests for approval of license transfers. These requests increased from a historical average of about two or three per year, to 20-25 in the past two years.

The Commission has assured that our reviews of license transfer applications, which focus on adequate protection of public health and safety, are conducted efficiently. These reviews sometimes require a significant expenditure of talent and energy by our staff to ensure a high quality and timely result. Our legislative proposal to eliminate foreign ownership review could help to further streamline the process. To date, the Commission believes that it has been timely in these transfers. For example, in CY 2000, the staff has reviewed and approved transfers in periods ranging from four to eight months, depending on the complexity of the applications. The Commission will strive to continue to perform at this level of proficiency even in the face of continued demand.

License Renewals

Another result of the new economic conditions is an increasing interest in license renewal that would allow plants to operate beyond the original 40-year term. That term, which was established in the Atomic Energy Act (AEA), did not reflect a limitation that was determined by engineering or scientific considerations, but rather was based on financial and antitrust concerns. The Commission now has the technical bases and experience on which to base judgments about the potential useful life and safe operation of facilities and is addressing the question of extensions beyond the original 40-year term.
The focus of the Commission’s review of applications is on maintaining plant safety, with the primary concern directed at the effects of aging on important systems, structures, and components. Applicants must demonstrate that they have identified and can manage the effects of aging so as to maintain an acceptable level of safety during the period of extended operation.

The Commission has now renewed the licenses of plants at two sites for an additional 20 years: Calvert Cliffs in Maryland, and Oconee in South Carolina, comprising a total of five units. The thorough reviews of these applications were completed ahead of schedule, which is indicative of the care exercised by licensees in the preparation of the applications and the planning and dedication of the Commission staff. Applications for units from three additional sites — Hatch in Georgia, ANO-1 in Arkansas, and Turkey Point in Florida — are currently under review. As indicated by our licensees, many more applications for renewal are anticipated in the coming years.

Although the Commission has met the projected schedules for the first reviews, it would like the renewal process to become as effective and efficient as possible. The extent to which the Commission is able to sustain or improve on our performance depends on the rate at which applications are actually received, the quality of the applications, and the ability to staff the review effort. The Commission recognizes the importance of license renewal and is committed to providing high-priority attention to this effort. As you know, the Commission encourages early notification by licensees, in advance of their intentions to seek renewals, in order to allow adequate planning so as not to create unmanageable demands on staff resources.
Reactor Plant Power Uprates

In recent years, the Commission has approved numerous license amendments that permit its licensees to make relatively small power uprates (approximately 2-7 percent increases in the output of a facility). Collectively, these uprates supplied the electricity equivalent to that from two large power plants (approximately 2,000 MWe). The Commission has received applications for several substantial uprates, and anticipates more within the near term. In addition, some nuclear generators have requested Commission safety review of increasing fuel burnup, thereby extending the operating cycle between refueling cutages and thus increasing nuclear plant capacity factors. Such approvals are granted only after a thorough evaluation by Commission staff to ensure that safe operation and shutdown can be achieved at the higher power and increased fuel burnup.

High Level Waste Storage/Disposal (Spent Fuel Storage)

In the past several years, the Commission has responded to numerous requests to approve spent fuel cask designs and independent spent fuel storage installations for onsite dry storage of spent fuel. These actions have provided an interim approach pending implementation of a program for the long-term disposition of spent fuel. The ability of the Commission to review and approve these requests has provided the needed additional onsite storage of spent nuclear fuel, thereby avoiding plant shutdowns as spent fuel pools reach their capacity. The Commission anticipates that the current lack of a final disposal site will result in a large increase in on-site dry storage capacity during this decade.

The Commission is currently reviewing an application for an Independent Spent Fuel Storage Installation on the reservation of the Skull Valley Band of Goshute Indians in Utah.

Certain matters also need to be resolved in order to make progress on a deep geologic repository for disposal of spent nuclear fuel. The Energy Policy Act of 1992 requires the Environmental
Protection Agency (EPA) to promulgate general standards to govern the site, while the Commission has the obligation to implement those standards through its licensing and regulatory process. The Commission has concerns about certain aspects of EPA's proposed approach and is working with EPA to resolve these issues.

Risk-Informing the Commission's Regulatory Framework

The Commission also is in a period of dynamic change as the Agency moves from a prescriptive, deterministic approach towards a more risk-informed and performance-based regulatory paradigm. Improved probabilistic risk assessment techniques combined with over four decades of accumulated experience with operating nuclear power reactors have led the Commission to recognize that some regulations may not serve their intended safety purpose and may not be necessary to provide adequate protection of public health and safety. Where that is the case, the Commission has determined it should revise or eliminate the requirements. On the other hand, the Commission is prepared to strengthen our regulatory system where risk considerations reveal the need.

Perhaps the most visible aspect of the Commission's efforts to risk-inform its regulatory framework is the new reactor oversight process. The process was initiated on a pilot basis in 1999 and fully implemented in April 2000. The new process was developed to focus inspection effort on those areas involving greater risk to the plant and thus to workers and the public, while simultaneously providing a more objective and transparent process. While the Commission continues to work with its stakeholders to assess the effectiveness of the revised oversight process, the feedback received from industry and the public is favorable.
In addition to the three already certified advanced reactor designs, there are new nuclear power plant technologies, such as the Pebble Bed Modular Reactor, which some believe can provide enhanced safety, improved efficiency, lower costs, as well as other benefits. To ensure that the Commission staff is prepared to evaluate any applications to introduce these advanced nuclear reactors, the Commission recently directed the staff to assess the technical, licensing, and inspection capabilities that would be necessary to review an application for an early site permit, a license application, or construction permit for a new reactor unit. This will include the capability to review the designs for generation III+ or generation IV light water reactors including the Westinghouse AP-1000, the Pebble Bed Modular Reactor, and the International Reactor Innovative and Secure (IRIS) designs. In addition to assessing its capability to review the new designs, the Commission will also examine its regulations relating to license applications, such as 10 CFR Parts 50 and 52, in order to identify whether any enhancements are necessary.

In order to confirm the safety of new reactor designs and technology, the Commission believes that a strong nuclear research program should be maintained. A comprehensive evaluation of the Commission's research program is underway with assistance from a group of outside experts and from the Advisory Committee on Reactor Safeguards. With the benefit of these insights; the Commission expects to undertake measures to strengthen our research program over the coming months.

Human Capital

Linked to these technical and regulatory assessments, the Commission is reviewing its human capital to assure that the appropriate professional staff is available for the Commission to fulfill its
traditional safety mission, as well as any new regulatory responsibilities in the area of licensing new reactor designs.

In some important offices within the Commission, nearly 25 percent of the staff are eligible to retire today. In fact, the Commission has six times as many staff over the age of 60 as it has staff under 30.

And, as with many Federal agencies, it is becoming increasingly difficult for the Commission to hire personnel with the knowledge, skills, and abilities to conduct the safety reviews, licensing, research, and oversight actions that are essential to our safety mission. Moreover, the number of individuals with the technical skills critical to the achievement of the Commission's safety mission is rapidly declining in the Nation and the educational system is not replacing them. The Commission's staff has taken steps to address this situation, and as a result, is now seeking systematically to identify future staffing needs and to develop strategies to address the gaps. It is apparent, however, that the maintenance of a technically competent staff will require substantial effort for an extended time.

As the Commission is currently challenged to meet its existing workload with available resources, additional resources would be necessary to respond to increased workload which could result from some of the initiatives discussed in this testimony.
Implications of a National Energy Policy

The Commission has a stake in a national energy policy and has identified areas where new legislation would be helpful to eliminate artificial restrictions and to reduce the uncertainty in the licensing process. These changes would maintain safety while increasing flexibility in decision-making. Although those changes would have little or no immediate impact on electrical supply, they would help establish the context for consideration of nuclear power by the private sector without any compromise of public health and safety or protection of the environment.

Legislation will be needed to extend the Price-Anderson Act. The Act, which expires on August 1, 2002, establishes a framework that provides assurance that adequate funds are available in the event of a nuclear accident and sets out the process for consideration of nuclear claims. Without the framework provided by the Act, private-sector participation in nuclear power would be discouraged by the risk of large liabilities.

Several other legislative changes would be helpful. For example, Reorganization Plan No. 3 of 1970 could be revised to provide the Commission with the sole responsibility to establish all generally applicable standards related to Atomic Energy Act (AEA) materials, thereby avoiding dual regulation of such matters by other agencies. Along these same lines, the Nuclear Waste Policy Act of 1982 could be amended to provide the Commission with the sole authority to establish standards for high-level radioactive waste disposal. These changes would serve to provide full protection of public health and safety, provide consistency, and avoid needless and duplicative regulatory burden.

Commission antitrust reviews could also be eliminated. As a result of the growth of Federal antitrust law since the passage of the AEA, the Commission's antitrust reviews are redundant of the reviews of other agencies. The requirement for Commission review of such matters, which are distant from the Commission's central expertise, should be eliminated.

Elimination of the ban on foreign ownership of U.S. nuclear plants would be an enhancement since many of the entities that are involved in electrical generation have
foreign participants, thereby making the ban on foreign ownership increasingly anachronistic. The Commission has authority to deny a license that would be inimical to the common defense and security, and thus an outright ban on all foreign ownership is unnecessary.

With the strong Congressional interest in examining energy policy, the Commission is optimistic that there will be a legislative vehicle for making these changes and thereby for updating the AEA.

Summary

The Commission has long been, and will continue to be, active in concentrating its staffs' efforts on ensuring the adequate protection of public health and safety, the common defense and security, and the environment in the application of nuclear technology for civilian use. Those statutory mandates notwithstanding, the Commission is mindful of the need to: 1) reduce unnecessary burdens, so as not to inappropriately inhibit any renewed interest in nuclear power; (2) maintain open communications with all its stakeholders, in order to seek to ensure the full, fair, and timely consideration of issues that are brought to our attention; and (3) continue to encourage its highly qualified staff to strive for increased efficiency and effectiveness, both in our dealings with all the Commission's stakeholders and internally within the agency.

I look forward to working with the Committee, and I welcome your comments and questions.
The Subcommittee on Railroads

Hearing on

Railroad Infrastructure Policy

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PURPOSE

The Subcommittee will conduct a hearing on the infrastructure policies affecting the nation’s railroads on Wednesday, April 25, 2001, at 10:00 a.m. in Room 2167, Rayburn House Office Building. The Subcommittee will hear testimony both on the implementation of the direct and guaranteed rail and rail-intermodal infrastructure loan program enacted in the 1998 Transportation Equity Act for the 21st Century (TEA 21) and on H.R. 1020, legislation to address smaller railroads’ infrastructure needs.

BACKGROUND

Smaller railroads are generally labeled Class II or Class III rail carriers, using Surface Transportation Board (formerly Interstate Commerce Commission) size thresholds based on total annual revenues. Class III carriers each have $20.8 million or less in annual revenues, while the limit for Class II carriers is $259.4 million. Although some smaller railroads have existed for decades, hundreds of new short-line and regional railroads were created following the enactment of the Staggers Rail Act of 1980.

Prior to the Staggers Act reforms that permitted large (Class I) railroads to abandon unproductive lines more easily, deterioration of the rail network, especially on light-density lines serving smaller towns and rural areas, was widespread. The generally higher operating costs of the Class I carriers, combined with low traffic levels, made most light-density lines money-losing enterprises for the large railroads. Prior to 1980, most such lines were shed by Class I carriers (when the ICC regulatory process permitted) through outright abandonment—removing the lines permanently from the rail network.

After 1980, ICC policies and regulations were revised to permit easier sale or lease of marginal lines by Class I railroads to start-up operations. This led to a boom in the formation of Class II and Class III railroads, which include both union and non-union carriers. Some have succeeded financially, while others have not. In the vast majority of cases, the track, roadbed, and other infrastructure acquired by the new smaller operators was already severely deteriorated by Class I standards, but still sufficiently sound to allow low-density (and often low-speed) freight operations. Besides attracting sufficient revenue, a secondary struggle by the smaller freight railroads involved acquiring sufficient capital to maintain and possibly upgrade the quality of the infrastructure inherited from the former owners of these lines. In the early 1990s, an FRA study of smaller railroads’ infrastructure needs showed a severe shortfall in the capital resources of these carriers relative to the state of their infrastructure.

In the last several years, a new burden to the marginal infrastructure of smaller railroads has appeared. Class I railroads have begun to add large numbers of more efficient, but far heavier, 286,000-pound cars to their fleets. This increases the operating stresses and wear and tear on smaller railroads’ track systems, and depending on the level of deterioration, could entirely prevent operation of “286” cars on certain light-density lines. If such physical embargoes were to become widespread, it could result in a non-interoperable rail network, i.e., a rail system where the same fleet of cars cannot operate in all locations on the network.
The bill establishes a program of direct grants to smaller (Class II and Class III) railroads for rehabilitation and improvement of tracks and related structures, to bring the infrastructure up to a level permitting safe and efficient operation, including traffic containing the new heavier 286,000-pound rail cars being adopted as an industry standard by the large railroads. The general fund authorization level is $350 million per year for FY 2002-2004.

Matching contributions are required under an 80/20 federal/non-federal formula. The nonfederal contribution can be from any non-federal source, and may be cash, equipment, supplies, or other in-kind contribution. Generally, a project must have a 1.0 or higher cost-benefit ratio, with DOT Secretary empowered to waive this standard based on public interest. Track to be rehabilitated or improved must have been operated as a Class II or Class III rail property on date of enactment.

Grant funds must be contractually obligated within 3 full fiscal years after the award of grant. Besides direct funding of track rehabilitation and improvement, grants may also be used to supplement TEA 21 rail loans, including paying credit risk premium for loans, lowering rate of interest, or providing principal payment holidays.

Davis-Bacon standards applicable to Amtrak and transit apply to construction work financed by grants. Any rail employee adversely affected by a grant-funded project will receive standard New York Dock labor protection benefits, under current Surface Transportation Board standards.

DOT is required to conduct a study of future needs of light-density rail lines for federal infrastructure funding, and report to Congress by March 31, 2003.

**TEA 21 Rail Infrastructure Loan Program**

The new program expanded a predecessor loan program established by Section 511 of the "4R" Act. The TEA 21 program created a permanent, revolving authorization for $3.5 billion (face amount) in direct and guaranteed loans for virtually any form of rail or rail-intermodal equipment or infrastructure. This includes freight rail-port connections, commuter and passenger rail facilities, and rail-track transloading facilities. Of this $3.5 billion revolving authorization, $1 billion was dedicated to the primary benefit of Class II and Class III railroads. The amended TEA 21 loan program retained the labor protection requirements of the 1976 statute.

The TEA 21 program also created two alternative procedures for obtaining a loan. Prior to TEA 21 and after enactment of the Credit Reform Act of 1990, loans under the predecessor program could be obtained only if the credit risk premium (security deposit) for the loan was appropriated as federal funds. The new program permits either an appropriated credit risk premium or one furnished by public or private non-appropriated sources. Thus the second option created the possibility of loans being made on an off-budget basis without any need to become involved in the appropriations process.

**Initial Proposals by the Previous Administration**

Since TEA 21 was enacted in the summer of 1998, implementation of the loan program by the Federal Railroad Administration has proceeded very slowly. The Administration’s first official statement regarding implementation came in the President’s FY 2000 Budget (Appendix, p. 767) where the Administration stated its intention (1) to require market rates of interest on all loans made under the program and (2) to require a prior showing that the DOT loan represented a “loan of last resort” following private sector rejections.

**FRA Proposed Regulations**

Notwithstanding these concerns, no rules were proposed until the summer of 1999 [64 Fed. Reg. 27448 (May 20, 1999)].

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[64 Fed. Reg. 27448 (May 20, 1999)].
The proposed regulations deleted the universal market interest rate requirement, which directly contravened statutory language governing interest rates. Nevertheless, the proposed regulations continued to require a showing of "lender of last resort" status through at least two prior rejections of financing from commercial lenders (proposed 49 C.F.R. 260.23(o), 64 Fed. Reg. 27495).

The Committee again responded, this time with a joint comment in the FRA rulemaking docket, dated June 14, 1999, pointing out this and several other deficiencies. When 1999 ended without any final regulations in place, the Committee leadership again wrote to Secretary Slater, pointing out the urgency of having final regulations, so that loan applications could be processed. The leadership's letter of January 3, 2000, pointed out the immediate need for infrastructure funds to address transportation "choke points" such as intermodal port facilities, as well as the urgent need of smaller railroads for upgraded infrastructure to address the "286" car weight problem. Nevertheless, another half-year elapsed without the issuance of regulations.

Final FRA Regulations

FRA issued its final regulations last summer [65 Fed. Reg. 41838 (July 6, 2000)]. Responding to the Committee leadership's repeated comments pointing out the lack of any legal basis for the proposed "lender of last resort" requirement, FRA stated:

While FRA need not be a lender of last resort, it does not intend to replace private funding sources already available to the rail industry. Therefore, in order to establish that private funding on terms necessary to the viability of the applicant's project is not available, FRA will require that railroad applicants provide a letter from a commercial lender denying funding for the project [emphasis added].

This relabeled version of "lender of last resort" is codified at 49 C.F.R. 260.23(o) [65 Fed. Reg. 41844]:

Railroad applicants must also submit a copy of application [sic] for financing for the project in the private sector, including the terms requested, from at least one commercial lender, and its response refusing to provide such financing.

Administration delay in promulgating final rules has prevented any loans from being made (including loans that require no appropriation whatever) for more than two and one-half years since enactment of TEA 21.

DOT-OMB Memorandum of Understanding

At a Ground Transportation Subcommittee hearing on July 25, 2000, a memorandum of understanding dated June 23, 2000, between DOT and OMB was made part of the record. In the memorandum, a number of additional requirements were imposed on the loan program. These included (1) not approving any loan over 10 per cent of the annual "cohort" of loans, i.e., holding an early-month application until the entire annual cohort is defined at the end of the year; (2) capping any loan at no more than 6 per cent of the unused authorization, i.e., a constantly declining amount; (3) requiring collateral with a recovery value of 100 per cent of principal and interest, i.e., the equivalent of requiring the collateral for a $100,000 home loan to cover not only the $100,000 loan principal, but the entire 30-year interest stream as well. All of these requirements lack statutory basis, were never subjected to public notice and comment as part of the FRA rulemaking proceeding, and make implementation of the program more difficult. Mr. Rahall has introduced corrective legislation, H.R. 517, to expand the lender-of-last-resort requirement in the published regulations and the full-recovery collateral requirement in the DOT-OMB memorandum.

WITNESSES

PANEL I

Mr. Mark Lindsey
Chief Counsel and Acting Deputy Administrator
Federal Railroad Administration

Accompanied by:

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Chief of Freight Programs Division
Mr. Mark Vachmetz
Associate Administrator
Mr. Joseph Pompeiio
Attorney-Advisor

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Obtained and made public by the Natural Resources Defense Council, March/April 2002
Mr. Donald Griffin
Assistant General Counsel
Brotherhood of Maintenance of Way Employees

Obtained and made public by the Natural Resources Defense Council, March/April 2002
ALASKA SENATE LEGISLATURE

Senate Resources Committee

February 5, 2001

Presentation by

John Ellwood
Vice President, Engineering & Operations

Foothills Pipe Lines Ltd.

1925

DOE003-0569

Obtained and made public by the Natural Resources Defense Council, March/April 2002
Foothills Pipe Lines Ltd. / Alaska Highway Gas Pipeline Project

My name is John Ellwood. I am Vice President, Engineering and Operations at Foothills Pipe Lines Ltd. ("Foothills"). We appreciate your invitation to discuss the transportation of Alaska North Slope natural gas to markets in the lower-48 states through the Alaska Natural Gas Transportation System ("Alaska Highway Project"). I understand that your committee wishes to explore with us the current status of our pipeline project with a particular focus on our permits.

Let me begin by telling you about Foothills. Our company is jointly owned by Westcoast Energy Ltd. ("Westcoast") and TransCanada PipeLines Limited. ("TransCanada"), the two major players in the Canadian gas pipeline business. Our corporate mission is very specific: to build and operate the Alaska Highway Pipeline Project. We were leaders in the project that was conceived twenty-five years ago, and we are just as committed today.

Between Westcoast and TransCanada, we have nearly 100 years of experience in developing, building and operating gas pipeline projects. We have been involved with every major Canadian gas pipeline project built in the last fifteen years.

Our existing pipeline systems provide access to five of North America’s largest natural gas markets. Together, these systems have the capability to move fifteen billion cubic feet per day of gas from Western Canada to the consuming markets. Canadian gas accounts for almost 20% of all gas consumed in the United States and all of that gas currently moves through pipelines owned in whole or in part by TransCanada and Westcoast.

This map shows the existing and planned pipeline network of Westcoast and TransCanada.

TransCanada, Westcoast and Foothills have developed leading edge gas pipeline design, construction and operating technology, including expertise in dense phase designs. We are also well known for our development of environmentally sound design, construction and operation practices. We believe that our expertise in northern, remote and difficult terrain gas pipeline construction and operations is second to none.
Building and operating pipelines is our core business.

The Alaska Highway Project is the Alaskan gas pipeline project approved in accordance with the Alaska Natural Gas Transportation Act of 1976 ("ANGTA") in the U.S., the 1978 Northern Pipeline Act in Canada, and the 1977 Agreement Applicable to a Northern Natural Gas Pipeline between the two countries ("U.S./Canada Agreement"). The project is shown in black and green on this map. As approved, the Alaska Highway Project is a 4,800-mile international pipeline project commencing at Prudhoe Bay and terminating in the Midwest and California market areas. It is important to note that the southern part of this pipeline has been constructed and is in full operation. The route for this system parallels the Trans Alaska Pipeline System ("TAPS") to Fairbanks, where it angles southeast, following the Alcan Highway to the Alaska-Yukon border with Canada, down through the Yukon Territory and northern British Columbia, and into Alberta. In Alberta, the pipeline splits into two legs. The Eastern Leg proceeds southwest, crossing the U.S.-Canada border at Monchy, Saskatchewan and terminating near Chicago. The Western Leg proceeds southwest, crossing the U.S.-Canada border near Kingsgate, British Columbia and terminating at a point near San Francisco, California.

Foothills and TransCanada are the two remaining partners of the Alaska Northwest Natural Gas Transportation Company (Alaska Northwest), a partnership formed to construct and operate the Alaska portion of the Alaska Highway Project. In addition, Foothills is the Canadian sponsor of the Alaska Highway Project, and the majority owner and operator of the Canadian portions of the Eastern and Western Legs of the Alaska Highway Project.

Foothills has continuously championed the Alaska Highway Pipeline Project from the very beginning.

The Project is back "on the list" of possible solutions to the current North American concerns about high energy prices and the adequacy of natural gas supplies.
At the outset, there are some basic points that we should delineate:

- It is important to remember that this pipeline crosses the territory of two countries with different regulatory and political regimes.

- The Project has a long history, which adds unique attributes. The permits which have been issued are a product of this history and to understand the former requires an appreciation of the latter. Significantly, ANGTA in the U.S. and the Northern Pipeline Act in Canada create expedited procedures for completing the chosen system, the Alaska Highway Project.

- The pipeline permitting process can be very time consuming. In addition to the substantial work already completed on both the Alaskan and Canadian portions of the Alaska Highway Project, the special legislative and regulatory procedures in place in the U.S. and Canada will assist in expediting the construction and initial operation of the Project and keeping unnecessary delays to a minimum.

**Historical Background**

As I indicated, there are important historical dimensions associated with this project. We might focus on the time frame 1976-1982. Originally there were three competing Alaskan natural gas pipelines proposed. As shown on this map two of the projects were overland pipelines through Alaska and Canada. The third project would have transported gas by pipeline to tidewater, following the route of the “TAPS” pipeline, where the gas would be liquefied and transported to California by liquefied natural gas (“LNG”) tankers.

With respect to the transportation of Alaska North Slope gas to markets in the lower 48 states, ANGTA superseded the usual Natural Gas Act (“NGA”)
process for granting Federal regulatory authorization to construct and operate a pipeline. ANGTA assigned the responsibility for the overall Alaska pipeline agenda to the President and Congress. Much the same approach was followed in Canada, where the Government took an active role in the decision regarding the Alaska natural gas pipeline. The reason for the creation of this extraordinary authority was that the governments wanted to expedite a cumbersome regulatory approval process in order to move more quickly to a solution.

Prior to 1978, a Canadian Board of Inquiry (The Berger Inquiry) examined a proposal to move Alaska gas across the North Slope and along the Mackenzie Valley. At the same time the National Energy Board (“NEB”) held a hearing to determine which of the two overland pipeline routes was acceptable to Canada. Both processes rejected the North Slope route (primarily for environmental reasons) and the NEB recommended the Alaska Highway (Alaska Highway Project) option, being promoted by Foothills. The Berger Inquiry recommended that no pipeline should be built along the Mackenzie Valley for at least a decade and that a pipeline across the northern Yukon should never be built.

During this same period of time the Federal Power Commission (later to become the Federal Energy Regulatory Commission (“FERC”)) came to a split decision on the question of which route should be selected.

Following the enactment of the ANGTA, the President selected the Alaska Highway route and the Alaska Highway Project with his Decision and Report to Congress on the Alaska Natural Gas Transportation System (“President’s Decision” or “Decision”).

In 1977 just prior to the President issuing his Decision, the U.S. and Canada signed the U.S./Canada Agreement. This agreement or treaty, established the route, chose the companies who would build and operate the system, established tolling principles, and set the terms and principles to be followed in facilitating the construction and operation of the Alaska Highway Project pipeline. The President’s Decision reflected the U.S./Canada Agreement. The Decision and the Agreement were subsequently approved by the U.S. Congress.
In 1978 Canadian Parliament enacted the Northern Pipeline Act. The Act:

1) incorporated all of the terms of the U.S./Canada Agreement

2) issued statutory certificates of public convenience and necessity to the respective subsidiaries of Foothills Pipe Lines Ltd.,

3) created the Northern Pipeline Agency to “facilitate the efficient and expeditious planning and construction of the pipeline

4) established the methodology and rules for setting the Canadian tolls and tariffs for the pipeline

5) selected the route for the pipeline across Canada and

6) established Terms and Conditions respecting the socio-economic, environmental, construction and operations matters.

The complete Alaska Highway Project is shown on the attached map.

The President’s Decision designated Alcan Pipeline, a subsidiary of Northwest Pipeline Company (Northwest), as the party who would construct and operate the Alaska pipeline segment of the Alaska Highway Project. This authority was later assigned to Alaska Northwest, a partnership assembled by Northwest. At one time Alaska Northwest consisted of eleven (11) partners, all subsidiaries of U.S. or Canadian pipeline companies.

Given the magnitude of the pipeline undertaking Alaska Northwest sought to recruit the North Slope Producers to join the project and assist the financing of the pipeline. The Producers expressed a willingness to join but were restricted by the President’s Decision that disallowed the producers taking an equity position in the pipeline. In 1981, President Reagan submitted and Congress approved a Waiver of Law package allowing producer participation and including in the project, the North Slope gas conditioning facility.

In 1980, before the Waiver of Law was passed, Alaska Northwest and the Alaska Producers entered into a Cooperation Agreement providing for joint funding of the design and engineering of the Alaska Highway pipeline and the gas conditioning facility. Following the approval of the Waiver of Law,
the scope of the Cooperation Agreement was expanded to encompass efforts to achieve the remaining regulatory approvals and to jointly pursue financing arrangements. The two sides anticipated that affiliates of the Producers would join the Alaska Northwest Partnership.

Design, engineering, environmental, financing and regulatory work proceeded along parallel tracks in Alaska and in Canada during this period of time.

As world wide energy supply and demand came back into balance and the "energy crisis" eased, the focus of the pipeline shifted to the pre-building of the southern portions of the Alaska Highway Project. There was a disagreement between Canada and the United States over this issue, primarily as it related to the export of Canadian natural gas to the U.S. market.

The Canadian Government was unwilling to authorize the Pre-build or the gas exports without further assurance from the United States that the entire Alaska Highway Project, including the Alaska segment, would eventually be completed. This assurance was forthcoming in a letter from President Carter to Prime Minister Trudeau, along with a Congressional resolution. As a result the southern Pre-build pipeline section was completed by 1982. This involved constructing 650 miles of 36 and 42 inch pipeline from Caroline, Alberta to Monchy and Kingsgate on the US border. The Pre-build and subsequent expansions were constructed pursuant to the Northern Pipeline Act and it’s regulatory regime managed by the Northern Pipeline Agency.

When the Pre-build construction began it was widely anticipated that North American natural gas demand would quickly resume its upward trend. However the market did not recover as anticipated and demobilization of the Alaska Highway Project soon began.

In order to remobilize, we will be required to make modifications and enhancements to various elements of the Alaska Highway Project regime. Pipeline designs will have to be modified so that that the Project can respond to capacity and gas quality requirements of the shippers. We will have to incorporate the latest technology and techniques necessary to ensure that the maximum environmental protection measures are in place. We do not expect any difficulty in introducing these revisions which are so obviously of benefit to all parties.