



Expanding Natural Gas
Pipeline Infrastructure
To Meet
The Growing Demand
For Cleaner Power

*Final Report Of
The Keystone Dialogue
On Natural Gas Infrastructure*

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Executive Summary

This report is the result of a year-long Policy Dialogue convened and facilitated by The Keystone Center, a nonprofit dispute resolution and public policy organization. The Dialogue process brought together a diverse and high-level group of people to address issues relating to interstate natural gas pipeline infrastructure. Participants included individuals from consumer groups, energy-producing companies, environmental organizations, government agencies, industry associations, the pipeline industry, tribes, and utilities. (Appendix E contains a participant list.)

Participants operated under the following ground rules.

1. Participants were not to be considered committing their organization, agency, or company to any binding agreement.
2. All discussions were “off the record” and not for attribution.
3. No written material was released without the agreement of the group.

This report summarizes the discussions and recommendations of the Dialogue Group. The views, opinions, and recommendations expressed in this report do not represent official government positions.

The Dialogue focused on three broad topics relating to natural gas pipeline infrastructure: (1) natural gas pipeline infrastructure **needs**, (2) the challenges of **siting** new or expanded pipeline infrastructure, and (3) the **safety, integrity, and reliability** of natural gas pipeline infrastructure.

Natural Gas Infrastructure Needs

Given that the demand for natural gas is expected to increase significantly over the next ten years, the Dialogue Group set out to discuss what infrastructure might be required to meet that demand. They discussed three major categories of issues. First, they talked about the new and expanded infrastructure that will likely be needed to meet the projected growth in demand.

Second, they looked at federal and state policies that affect companies’ ability to meet infrastructure needs. In particular, the group analyzed how the Federal Energy Regulatory Commission (FERC) assesses “need” as part of its determination of whether a project is in the “public convenience and necessity,” and should, therefore, be approved. Participants anticipated that they would uncover significant policy gaps and opportunities during these discussions. After months of detailed review, however, they concluded that FERC’s current (and relatively new) policy regarding the determination of need for new pipelines provides many of the appropriate steps to protect against the adverse consequences of overbuilding, and that FERC’s market-oriented regulatory philosophy will allow the infrastructure to meet the growing and changing demands for natural gas. .

The third category of issues focused on the need for better communications regarding needs—communications both between government agencies and their stakeholders and among the

agencies themselves. The bulk of the recommendations in the Needs chapter are in this section. Specifically, the group makes recommendations regarding:

1. **FERC's facilitation of public discussion on needs issues,**
2. **the Energy Information Administration's development of regional projections of supply and demand growth, and**
3. **the need for general public education regarding the importance of energy infrastructure.**

Siting

The Dialogue Group also sought to identify challenges in, and provide suggestions for, improving the siting of natural gas pipelines. FERC's policy regarding new pipeline certification is highly dependent upon a balancing of need for a project against the impact on various constituencies and the environment. In order to ensure that the burdens are fully explored in relation to the benefits cited by a project applicant, the Dialogue Group focused on improving the means by which even the "smallest" stakeholder can have an improved opportunity to participate in the certification process. These recommendations are a step toward addressing the identified perception that effective participation is too resource-intensive for small parties.

While the Siting chapter addresses the need for an open and transparent siting process, it is understood that this must be balanced with today's pressing national security issues. Any communications process must ensure that there is no disclosure of strategic information vital to our national defense.

The group talked specifically about the following topics. The bulleted items are the subtopics on which the group developed recommendations.

1. **Improving stakeholder communication**
 - the need for a point of contact and web-based information for each pipeline project
 - docketing issues
 - best practices
2. **Coordination of the pipeline review process**
 - the federal interagency task force established by Executive Order 13212
 - interagency agreements regarding pipeline reviews
 - streamlining opportunities
3. **Right-of-way challenges**
 - preferred rights of way
 - infrastructure on native lands
 - the pre-certification process
 - ways to minimize the need to resort to land condemnation

Safety, Integrity, and Reliability

Early in the Dialogue Group’s discussions, the safety of natural gas pipelines was identified as a central issue relating to the expansion of pipeline infrastructure. Because natural gas pipelines are an essential component of America’s energy delivery system, the safety, integrity, and reliability of those pipelines are of paramount importance. The public must feel confident that natural gas pipelines are safe, or else the siting of additional pipelines will continue to be a challenge.

Since September 11, security- and safety-related issues—particularly with regard to the operational integrity of pipelines—have taken on a new urgency. Concerns now exist not only about the possibility of accidents, but of sabotage. Clearly, these issues require attention within the broader context of expanding pipeline infrastructure.

To organize its discussions, participants grouped safety-related issues into five categories, as follows. The bulleted items are the subtopics on which the Dialogue Group developed recommendations.

1. **Pipelines and public confidence**
 - pipeline safety statutes and enforcement
2. **Regulatory considerations**
 - regulatory standards
 - safety assessment reports
 - funding for the Office of Pipeline Safety
3. **Industry/government/public relationships**
4. **Technology and its use**
 - commercially available technologies
5. **Communications**
 - the national One-Call system

Introduction

This report is the result of a year-long Policy Dialogue convened and facilitated by The Keystone Center. The purpose of the Dialogue was to enable diverse stakeholders to exchange information and perspectives regarding the increasing demand for natural gas, including the challenges involved in expanding the natural gas pipeline infrastructure in a safe and environmentally sensitive way to meet that demand. Dialogue participants reached consensus on a number of recommendations for meeting those challenges.

Dubbed the “Keystone Dialogue on Natural Gas Infrastructure,” the Dialogue process brought together a diverse and high-level group of people to address natural gas-related issues. Participants included individuals from consumer groups, energy-producing companies, environmental organizations, government agencies, industry associations, the pipeline industry, tribes, and utilities. (See Appendix E for a complete participant list.)

The Dialogue focused on three broad topics relating to natural gas pipeline infrastructure: (1) natural gas pipeline infrastructure needs, (2) the challenges of siting new or expanded pipeline infrastructure, and (3) the safety, integrity, and reliability of natural gas pipeline infrastructure.

It should be noted that the terrorist attacks of September 11, 2001 occurred about two-thirds of the way through this Dialogue process. As with nearly every facet of life in the United States, the group’s work was affected by these events. Because the attacks pushed the U.S. economy further into a recession, for example, earlier forecasts for future natural gas demand have been called into question. Also, issues regarding the security of gas pipelines have suddenly become of paramount importance, challenging formerly accepted beliefs about what the public has a right to know. It’s impossible to know how these and related issues will play out in the short term or long term. As a result, Dialogue participants simply had to acknowledge that they were operating in a time of significant change and uncertainty, and make the best recommendations they could given these circumstances.

As the country moves forward, Dialogue participants hope that this report will help to inform decisions regarding the development, operation, and regulation of natural gas facilities and pipelines. In particular, participants hope the document will be useful to federal, state, and local regulators; federal and state legislators and their staffs; the natural gas industry; and environmental and consumer advocates.

Background

The Energy Information Administration (EIA), using the most recent figures available (2000), reveals that the United States relies on natural gas to generate about 16 percent of its electricity, while coal fuels about 52 percent and nuclear power about 20 percent. The fastest growing of these electricity fuels is natural gas. The EIA estimates that gas consumption used to generate electricity will increase from 16 percent of generation to 32 percent in 2020. Natural gas

consumption reached almost 23 trillion cubic feet (tcf) in 2000. The demand for natural gas is expected to increase by 2 percent per year and reach 34 tcf by 2020.¹

This growth in demand for natural gas, which is unprecedented in U.S. energy markets and shows no signs of letting up, appears to be driven by several forces. First, the dramatic economic growth of the past ten years has absorbed most of the excess capacity in the nation's power markets, creating a need for new generation. Over this decade, the bulk of new generation has been gas-fired.

Second, due to the restructuring of the wholesale generating market, nonutilities are supplying more and more generating capacity. These companies are often choosing to invest in gas-fired generation plants. The reasons are fairly simple: New gas-fired facilities are less capital-intensive than new coal, nuclear, or renewable electricity generation plants, and gas-fired generation can be deployed relatively quickly and strategically close to the new load.

Third and perhaps most important, there remains a powerful movement to address clean air and climate change issues. Regulatory actions to address these environmental challenges are forcing companies to accelerate efforts to reduce emissions of sulfur, nitrogen, mercury, and other pollutants. Also, the regulation of greenhouse gas emissions may be on the horizon, and natural gas is a relatively low-carbon-content fuel. These environmental factors are driving many firms to use natural gas in new facilities. In fact, natural gas has increasingly become the fuel of choice in the environmental community and industry, who both see it as an acceptable alternative in the transition away from coal, nuclear, and hydroelectric power. This is due, in part, to the common view of natural gas as an abundant, economical, and cleaner fuel source.

Despite these powerful drivers, the current gas infrastructure has performed with distinction in terms of meeting demand reliably and safely. But challenges remain. To meet the forecasted demand of 34 tcf by 2020, additions to the current pipeline and distribution system will be needed, and some current infrastructure will need to be expanded and upgraded. The construction of new pipelines, however, raises a plethora of issues among pipeline companies, environmental groups, landowners, customers, and government agencies.

The Focus of the Dialogue

Dialogue participants sought to address the above issues and concerns in their deliberations. In general, they discussed the desire and need that many perceive for an increased reliance on natural gas for electricity generation, as well as concerns about how to handle the environmental, cultural, and safety impacts of any new natural gas pipeline infrastructure that may be developed. The group sought to understand the range of interests and opinions regarding these issues, and to seek consensus on recommended actions where possible.

¹ Energy Information Administration, *2002 Annual Energy Outlook* (Washington, DC: Energy Information Administration, 2002).

The Dialogue Group focused primarily on issues arising in the federal regulation of interstate pipeline facilities (although the Safety Work Group had a broader focus). The Dialogue Group did *not* focus on natural gas production or gathering, distribution facilities, state-regulated pipeline facilities, or gas storage or liquefied natural gas facilities. While all of these elements comprise the “natural gas infrastructure,” the group focused on interstate pipeline facilities because they are one of the lynchpins to the infrastructure system and are subject to the most all-encompassing federal regulation. In addition, Dialogue participants felt that this focus best fit their expertise. Participants recognized, of course, that other elements of the infrastructure are essential to the operation of the system. Indeed, many of the lessons for interstate pipelines and their regulations discussed in this report are also applicable to other types of gas infrastructure projects.

To organize their discussions, Dialogue participants split into three work groups: a Needs Work Group; a Siting Work Group; and a Safety, Integrity, and Reliability Work Group. The major findings and recommendations of these work groups, as modified and approved by the full plenary group, comprise the body of this report.

The Dialogue Process

The Keystone Dialogue on Natural Gas Infrastructure was convened and facilitated by The Keystone Center, a neutral, nonprofit dispute resolution and public policy organization with offices in Colorado and Washington, DC. The Keystone Center specializes in bringing together people from the private sector, environmental and citizen organizations, academia, and government to address pressing questions and develop consensus on public policy issues that would be difficult to resolve with traditional decision-making processes.

This Dialogue was a project of Keystone’s Energy Board, a 40-person group of senior-level individuals representing a broad cross-section of the energy industry. The idea for the Dialogue emerged from discussions at the Winter 2000 meeting of the Energy Board. At that session, the concept received expressions of interest from government officials; congressional staff; industry leaders from utilities, oil and gas supply companies, and pipeline companies; and environmental group representatives.

Judy O’Brien, director of the Keystone Energy Program, served as project director for the Dialogue. She, Keystone associate Becky Turner, and consultant Doug Brookman (president of Public Solutions, Inc.) served as facilitators.

The Keystone Dialogue on Natural Gas Infrastructure commenced in January 2001, with an inaugural meeting in Washington, DC. The group began by exchanging information and viewpoints on the key issues. All told, the Dialogue Group met in six plenary sessions and numerous additional work group meetings (in person and on the phone). Over time, the group moved from information exchange to deliberation to the drafting of proposals and recommendations, which ultimately led to this final report.

Dialogue participants operated under three ground rules.

1. Participants were not to be considered committing their organization, agency, or company to any binding agreement.
2. All discussions were “off the record” and not for attribution.
3. No written material was released without the agreement of the group.

Under these ground rules, participants had the opportunity to develop a common understanding of complex and controversial issues, explore respective interests, and clarify options to help inform public policy. The process facilitated a give-and-take between parties, which enabled them to advance the debate over natural gas infrastructure.

This report is designed to be an accurate portrayal of the Dialogue Group’s discussions. By including their names in Appendix E, participants agree that they are comfortable with the consensus recommendations in this document and with the way the issues are described. The views, opinions, and recommendations expressed in this report do not represent official government positions.

Chapter 1

Natural Gas Infrastructure Needs

Given the expected increase in demand for natural gas, the Dialogue Group set out to discuss what new or expanded infrastructure might be required to meet that demand. As a threshold issue, the Dialogue Group recognized the necessity for developing consensus on how projected increases in gas demand, and the corresponding need for infrastructure expansion, should be determined. To address these and related issues, the Dialogue Group formed the Needs Work Group.

The Needs Work Group focused on three major categories of issues, and this chapter summarizes their key findings and recommendations in each of these categories. First, they discussed the new and expanded infrastructure that will likely be needed to meet the projected growth in demand.

Second, they looked at federal and state policies that affect the industry's ability to meet infrastructure needs. In particular, the work group analyzed how the Federal Energy Regulatory Commission (FERC) assesses "need" as part of its determination of whether a project is in the "public convenience and necessity," and should, therefore, be approved. The group discussed FERC's reliance on market forces as a determinant and the investment community's role in determining, in a practical sense, what projects fill a true commercial need and will be economically viable once approved and constructed. Participants anticipated that they would uncover significant policy gaps and opportunities during these discussions. After months of detailed review, however, they concluded that FERC's current (and relatively new) policy regarding the determination of need for new pipelines provides an appropriate balance between encouraging market forces to act and ensuring that other key interests are served.

The third category of issues focused on the need for better communications regarding needs—communications both between government agencies and their stakeholders and among the agencies themselves. The bulk of the recommendations in the chapter are in this section. This section does not address specific issues relating to landowners; those issues were addressed by the Siting Work Group.

Please keep in mind that the events of September 11 changed the expectations of and discussions regarding needs. The projections in this chapter of expected needs were developed prior to September 11, and general uncertainty about future needs (especially near-term needs) remains.

Projected Needs

Interstate and intrastate natural gas pipeline companies have constructed and now operate some 278,000 miles of pipeline, transporting an estimated 22.8 tcf in 2000. In certain regions of the country, the interstate pipeline network runs at almost full capacity.

The EIA's *2002 Annual Energy Outlook* forecasts a need for a 22 percent increase in interregional pipeline capacity between 1999 and 2020—an increase of about 0.8 percent per year. In addition, individual pipelines will need to be extended to attach customers to new supply. The National Petroleum Council, in a December 1999 study, estimated that transmission and distribution companies will require \$123 billion in capital investments to meet infrastructure demand through 2015. This includes \$35 billion for transportation; \$84 billion for distribution; and \$4 billion for storage facilities.² Clearly, the pipeline network will have to be expanded or changed to meet future increased demand and the changing market.

Since 1997, the natural gas industry has spent more than \$8 billion on new pipeline projects in the United States. Many of those projects added transmission capacity around the nation, but they focused particularly on serving the growing demand in the Midwest and the Northeast. New interstate pipeline projects are in various planning stages. As of January 2002, the major pipeline projects pending certification at FERC would add 2,852 miles and 7.76 billion cubic feet (bcf) per day of new pipeline capacity. Other pipeline projects on the planning horizon would add 7,448 miles and 16.2 bcf per day of capacity.³ In total, the National Petroleum Council estimates that \$39-49 billion would need to be invested in pipeline and storage facilities if a 30 tcf natural gas market is to be achieved.⁴

Expected gas market growth will dictate the demand for new interstate pipeline capacity. Increased demand will not be the same in all regions of the country. The different growth profiles will determine the type of capacity needed to serve the different markets. Many of the pipeline investments made over the past several years have been to bring service to new markets. Also, many of the new projects are pipeline laterals that have been built to serve new power loads. New gas-fired power plants anchor these laterals, and electricity generation customers are signing agreements to contract for large amounts of capacity on new pipeline projects. Local distribution companies will need to invest in additional infrastructure to serve increased demands on their own systems.

Examples of interstate pipeline expansion projects include the expansion of existing pipelines to serve new or existing power plants in California, such as several recently announced expansions by Kern River. Pipeline expansions also include large-scale projects such as the recently approved Millennium Pipeline, a 424-mile, 700,000-dekatherm pipeline system from the U.S.-Canadian border to Westchester County, NY, at an estimated cost of \$684 million. Another example is the Northwest Pipeline Corporation's relatively small Gray's Harbor project—222 miles of pipe to serve a new power plant. Customers for these new projects vary. Islander East, for example, jointly sponsored with Algonquin Gas Transmission Company, will provide additional service to a combination of gas utilities, electric utilities, marketing firms, and industrial enterprises, if it is approved.

New storage facilities and other services also need to be available to meet future market requirements and enhance the potential use of the interstate grid by increasing its flexibility and

² National Petroleum Council, *Natural gas: Meeting the challenges of the nation's growing natural gas demand* (Washington, DC: National Petroleum Council, December 1999).

³ Mark Robinson, Director, Office of Energy Projects, FERC, personal communication, January 15, 2002.

⁴ National Petroleum Council, 1999.

efficiency. Current interstate storage proposals would add approximately 6.3 bcf of working gas capacity and 0.92 bcf per day of withdrawal capacity. These underground storage projects include both new projects and expansions of existing storage facilities. Planned projects as of January 2002, may include about 75 bcf of new capacity and deliverability of about 4.05 bcf per day.⁵

The distribution investment required to reach a 30 tcf natural gas market is estimated at close to \$100 billion. This amount can be broken down into direct investment costs in new facilities for new customers, and indirect investment costs to increase system capabilities to serve additional customers not linked directly to a specific new customer. An example of distribution expansion is PECO Energy's \$4.6 million project to replace underground gas mains, install large distribution facilities, and extend new mains to serve growing communities, including the addition of a new gas gate station.⁶

Policies for Determining Need

Dialogue participants agree that regulatory policies and requirements must be sufficiently flexible to allow natural gas infrastructure to grow and adapt as the market evolves. Participants found that FERC's current policy on the certification of new interstate natural gas pipeline facilities provides an appropriate balance between, on the one hand, regulatory oversight to protect against the adverse consequences of overbuilding and, on the other, market-oriented philosophies that will allow the infrastructure to grow with the market. This section describes FERC's policy, and then discusses how state policies influence interstate pipeline development.

FERC Policy

Section 7(c) of the Natural Gas Act requires FERC to determine (prior to certifying the pipeline) if a pipeline company's proposed construction project is "in the public convenience and necessity." FERC looks at a variety of aspects of the project to make its determination. Of relevance to our discussion here is how FERC determines whether the project is "needed."

FERC's policy on what is required by applicants to show need for new projects has evolved over the years. Until recently, FERC required an applicant for a certificate to show market support for the project through contractual commitments for at least 25 percent of the capacity. Generally, under that policy, FERC did not consider the possible economic impact of a proposed project on existing pipelines serving the same market or on the existing pipeline's customers. Additionally, FERC generally favored including the costs of the new facility in the rates charged to all customers on the pipeline system, if the rate would increase by no more than five percent and some system benefits would occur.

FERC examined this policy in the late 1990s because of concerns raised over FERC's sole reliance on long-term contracts to demonstrate demand. In addition, concerns were raised over

⁵ Mark Robinson, Director, Office of Energy Projects, FERC, personal communication, January 15, 2002.

⁶ See the November 14, 2001 press release at www.peco.com/corp/corp_formedia_news_fr.html.

the fact that the pricing policy of rolling in costs to the rates charged to existing customers masked the real cost of expansion, which could result in the overbuilding of capacity, the subsidization of pipeline expansion projects, and inefficient investment and contracting decisions. Some argued that these negative impacts, in turn, could exacerbate adverse environmental impacts, distort competition, and penalize existing customers of expanding pipelines and other existing pipelines. They also argued that the pricing policy was inconsistent with a policy that encourages competition while seeking to provide incentives for the optimal level of construction and customer choice.

FERC's new policy is detailed in its *Policy on the Certification of New Interstate Natural Gas Pipeline Facilities*, issued on September 15, 1999.⁷ With this policy, FERC seeks to foster competitive markets, protect captive customers, avoid unnecessary environmental and community impacts while serving increasing demands for natural gas, and provide appropriate incentives for the optimal level of construction and efficient customer choices.

The policy reaffirms FERC's general approach to "let the market decide" what infrastructure projects are needed. Under this policy, a project proponent demonstrates the need for the project by showing signed statements of intent to contract for a significant portion of the capacity. FERC doesn't "look behind" these precedent agreements to independently analyze the existence of a market. Nor does FERC pick winners and losers between competing pipeline applications. FERC instead prefers to give each company the opportunity to pursue its project and give the market the choice as to which company can offer the most attractive and timely service. Concurrent with FERC's certificating process, project sponsors continue their own internal analysis of many factors, such as routing, economics, and market development. Some projects may be withdrawn or postponed by the company due to various obstacles.

FERC's policy statement provides a number of incentives for pipelines to plan for and construct the optimal level of capacity. First, the policy requires that each project stand on its own. Generally speaking, the project costs must be borne independently by those customers who will use the new facilities. This policy guards against overbuilding, because pipeline companies won't invest in a project unless convinced they will recover the investment. Moreover, financial institutions will not provide capital for a project unless the project sponsor shows that it is a sound investment. Lending institutions have access to data such as projected needs and demands in a particular region and have a clear incentive to make informed decisions about project investments.

Second, FERC determines whether the applicant has made efforts to eliminate or minimize any adverse effects the project might have on the existing customers of the pipeline company proposing the project, existing pipelines in the market and their captive customers, or landowners and communities affected by the route of the new pipeline. Adverse effects include increased rates for existing customers, a degradation in service for existing customers, the potential for unsubscribed capacity on existing pipelines, and unnecessary construction and adverse impacts on affected landowners and communities. If some adverse effects *are* expected, then FERC evaluates the project by balancing the evidence of "public benefits" to be achieved against the

⁷ 88 FERC ¶ 61,227 (1999); 88 FERC ¶ 61,227 (1999); Order Clarifying Statement of Policy, 90 FERC ¶ 61,128 (2000); and Order Further Clarifying Statement of Policy, 92 FERC ¶ 61,094 (2000).

adverse effects. “Public benefits,” as characterized by FERC, include providing additional flexibility, reliability, and access to gas supply; mitigating potential reliability problems; and expanding service for recently attached or contemplated electric generation facilities.⁸

According to FERC, nearly every proposed major pipeline project is modified at some point in the application process, through environmental mitigation plans, route variations/alternatives, and other construction requirements, as well as modifications to rates and terms of service. In consideration of potential adverse impacts of pipeline construction, for example, FERC places conditions on pipeline certificates to address the impacts. In some cases, applicants simply withdraw the applications due to these conditions. Since the beginning of Fiscal Year 2000, applicants have filed to withdraw 13 applications involving construction projects. During that same time, the Commission rejected another ten construction applications—nine out of ten due to environmental deficiencies. All nine of those were corrected by the applicant and refiled: seven were ultimately certificated; one was withdrawn; and one is still pending.⁹

Third, when confronted by pipelines that look to serve the same market, FERC may at times encourage the sponsors to seek ways to mitigate environmental or landowner concerns. In a case that predated the new policy, FERC required Portland Natural Gas Transmission System and Maritimes and Northeast Pipeline, L.L.C. to study the feasibility of constructing a single line where possible or constructing two separate pipelines using the same right-of-way. FERC also required the applicants to consider a single pipeline that was large enough to serve the future needs of the market. As a result, the companies agreed to share certain facilities, thus reducing overall construction costs and the impacts of the two projects.

FERC’s certificate policies are well-known by the pipeline industry and the investment community. Companies perform internal analyses of a project under consideration to determine whether or not it will receive favorable review and approval. The borrowing of investment capital must be approved by a company’s Board of Directors, who themselves may require a project to meet challenging performance targets. Implicit in the internal review is the forecasted ability to receive timely certificate approval, make a viable route selection, address environmental challenges, and attain suitable financing. So there is an element of self-selection that occurs that results in projects either falling out of consideration before ever reaching the formal application stage, or being placed on the shelf until a market develops or other relevant challenges are resolved.

The group concluded that FERC’s current policy approach to proposals for new construction provides many of the appropriate steps to protect against the adverse consequences of overbuilding, and that FERC’s market-oriented regulatory philosophy will allow the infrastructure to meet the growing and changing demands for natural gas.

⁸ “Certification of New Interstate Natural Gas Pipeline Facilities” Docket No. PL99-3-000, 88 FERC para. 61,128 at 61,747-61,750, rehearing, 90 FERC at 61,396-397.

⁹ Mark Robinson, Director, Office of Energy Projects, FERC, personal communication, January 8, 2002.

How State Policies Affect Interstate Pipeline Development

State public utility commissions oversee the natural gas and capacity contracting policies of local distribution companies. Such commissions also have a role in developing the market structure within a state for both the natural gas and electric industries. As a consequence, the regulatory policies adopted by state public utility commissions affect the natural gas market.

Many states are in various stages of developing and implementing “customer choice programs”—in effect unbundling the services of local distribution companies at the retail level and allowing customers to choose between competing suppliers. The uncertainty associated with the structure and timing of customer choice programs affects the contracting choices of local distribution companies such that they may be unwilling to accept the risk of signing, or maintaining, long-term contracts with pipelines or natural gas suppliers. This risk aversion by local distribution companies may in turn make pipeline companies less likely to construct additional facilities.

In addition, the rules of the customer choice programs may also inadvertently impact the willingness of pipeline companies to construct additional facilities. For example, state programs may discourage or prohibit local distribution companies from signing long-term contracts, in order to avoid the potential for paying for unwanted or unneeded capacity. Gas marketers participating in customer choice programs may be unwilling to sign long-term contracts. This inability to secure long-term commitments for capacity may result in a perception in the market that transportation capacity is undervalued and may, therefore, mask actual need. If local distribution companies and/or marketers determine at a later time that a long-term capacity commitment is in their interest, there may not be sufficient lead time for the pipeline to add facilities to meet the unmasked demand for natural gas.

Recommendation: *It is important that the gas market be allowed to justify the need for pipeline facilities. State commissions should be sensitive to the potential impact their policies can ultimately have on the availability of sufficient pipeline infrastructure. Accordingly, state commissions should be encouraged to adopt policies that are “market neutral.”*

Communicating Information about Need

For specific interstate pipeline projects, information about need is made publicly available through the certification process. In general, however, there is uncertainty regarding the need for new infrastructure, due to the fact that some stakeholders—including the public at large—lack basic information about how energy is delivered. In order to successfully expand the natural gas infrastructure, members of the affected public must understand the need for pipeline projects, the link between the economical provision of energy services and a healthy economy, and the environmental benefits that can flow from the increased use of natural gas. It is also important that project sponsors understand the concerns of landowners, other members of the public, state and federal regulators, and existing customers of the natural gas industry.

Recommendations: Dialogue participants believe that the following avenues for information exchange should be explored.

- **FERC should continue to facilitate public discussion.** One means by which FERC has begun to pursue open, public discussion on infrastructure needs is to hold periodic, regional conferences exploring energy needs in different markets. These conferences should include views from project sponsors, customers of the pipelines—including distribution companies, electric generators and industrial plants, and consumers of natural gas—as well as state commissions, state siting boards, and regional transmission organizations. The discussions at these conferences, while not likely to lead to hard data on commercially sensitive capacity commitments or project locations, can add to the dialogue on energy infrastructure needs and community sensitivities.
- **The EIA should continue to develop regional projections of supply and demand growth.** The data compiled by the EIA is relied upon extensively by a variety of entities. In order to provide a benchmark for regional discussions of infrastructure needs, the EIA's projections of supply and demand growth should continue to include regional projections. Such data provides an independent point of reference in discussions of regional market needs.
- **Public education on energy infrastructure issues should be conducted.** Appropriate federal agencies, such as FERC and the U.S. Department of Energy (DOE), along with industry representatives and other interest groups, should establish public education programs to create an awareness of the importance of energy infrastructure to individual consumers. These public education programs work toward the recognition that some amount of new construction is necessary to meet the forecasted demand for natural gas. Previous conferences jointly sponsored by the National Association of Regulatory Utility Commissioners (NARUC) and the DOE are an example of this kind of coordinated education program.

Chapter 2

Siting

Early on, the Dialogue Group observed that the increasing demand for natural gas would require the establishment of additional pipeline infrastructure, and that many of the conflicts, concerns, and time constraints that occur in a pipeline project occur in the siting phase. The siting process commences as soon as a developer identifies possible routes to interconnect gas supplies with identified markets, and continues until property rights are secured for the selected route.

Issues relating to siting were discussed in detail by the Dialogue’s Siting Work Group. This work group sought to identify challenges in, and provide suggestions for, improving the siting of natural gas pipelines as it relates to:

- multistakeholder communication and coordination,
- coordination among and between local, state, tribal, and federal governments, and
- the promotion of environmental stewardship.

Dialogue participants agreed that the technical aspects of siting pipelines were beyond its expertise, so they concentrated on the policy components of siting. The three categories listed above—multistakeholder communication, intergovernmental coordination, and environmental stewardship—encompass a variety of siting policy concerns. Over time, the group’s discussion of environmental stewardship focused more directly on right-of-way issues. In the process of discussing all of these issues, participants recognized that it was important for companies to exchange ideas regarding best practices.

As indicated in the previous chapter, FERC’s policy regarding new pipeline certification is highly dependent upon a balancing of need for a project against the impact on various constituencies and the environment. In order to ensure that the burdens are fully explored in relation to the benefits cited by a project applicant, the Siting Work Group focused on improving the means by which even the “smallest” stakeholder can have an improved opportunity to participate in the certification process. These recommendations are a step toward addressing the identified perception that effective participation is too resource-intensive for small parties.

While this chapter addresses the need for an open and transparent process, it is understood that this must be balanced with today’s pressing national security issues. Any communications process must ensure that there is no disclosure of strategic information vital to our national defense.

Improving Stakeholder Communication

Better communication among stakeholders is a critical step in improving the quality and efficiency of pipeline siting. Developers, landowners, public interest organizations, and government agencies (federal, state, local, and tribal) all need easy access to information about a project and its review process, as well as opportunities to learn about each others’ interests and

concerns. Affected landowners often perceive participation in the certification and siting processes to be cumbersome and expensive. Lack of information can create misunderstandings and a sense of mistrust. Where there is confusion about rights and obligations, problems can surface late in a project, when they are more difficult and costly to address.

The improvement of communication among stakeholders will:

- lead to more widely supported siting decisions,
- increase public confidence in the siting process,
- reduce barriers to public participation and feedback,
- reduce conflicts by reducing misunderstandings, and
- allow developers to identify and address local concerns early in the life of a project.

Each stakeholder group—be it government, industry, the public, or concerned citizen groups—should accept the responsibilities, obligations, and duties that go along with their role. To achieve an effective and efficient siting process, all members should play an active role.

To some extent, FERC addressed the issue of stakeholder communications in Orders 608 and 609. Order 608, called Collaborative Procedures and issued in September 1999, allows for an optional collaborative process to resolve disputes among stakeholders prior to filing a certificate application.¹⁰ In this order, FERC modified its procedural regulations to offer prospective applicants the option of using a collaborative process to resolve environmental and interested party issues. To date, applicants have not made use of this option because the procedures are complicated and impractical. Nevertheless, FERC continues to seek other informal opportunities to work with applicants and other stakeholders in the pre-filing stage.

The role that stakeholders play in pipeline siting is critical and cannot be underestimated. If applicants wish to have a successful application, other interested parties, whether they are advocates or opponents, must be identified and their respective issues addressed. Pre-application discussions provide a beneficial and practical means of identifying these stakeholders and their issues.

In October 1999, FERC issued Order 609, Landowner Notification.¹¹ This order established certain early landowner notification requirements to ensure that landowners who may be affected by a proposal to construct natural gas pipeline facilities are formally notified by the pipeline company, so that they have sufficient opportunity to participate in FERC's certificate process. Under the regulation that codified Order 609 (18 C.F.R. § 157.6(d)(2)), the pipeline developer must notify all affected landowners, towns, communities, and local, state, and federal governments and agencies involved in the project shortly after filing the application. In addition, the project sponsor must publish the notice of application in a daily or weekly newspaper of general circulation in each county in which the project is located. Since Order 609 was issued, landowner communication and landowner participation in the certificate process have

¹⁰ Collaborative Procedures for Energy Facility Applications, Docket No. RM98-16-000; Order No. 608, 88 FERC ¶ 61,226 (1998); Order No. 608-A, Order on Reh'g, 93 FERC ¶ 61,099 (2000).

¹¹ Landowner Notification, Expanded Categorical Exclusions, and Other Environmental Filing Requirements, Docket No. RM98-17-000; Order No. 609, 89 FERC ¶ 61,023 (1998); Order No. 609-A, Order on Reh'g, 90 FERC ¶ 61,259 (2000).

significantly improved. The suggestions described in this chapter address stakeholder communication above and beyond that now required by FERC.

A recent report prepared jointly by the legal and regulatory committee of the Interstate Oil and Gas Compact Commission (IOGCC) and NARUC's gas committee recommended the involvement of a broad variety of stakeholders early in the siting process, including public groups, a state's office of economic development, and state environmental experts. (See Appendix A for a complete listing of these recommendations.)

Although pipeline developers are required to provide public notification, some community members are unaware of how to determine if pipelines and other utilities are in the area. For new or modified pipelines, the current FERC policy, which requires direct notice to landowners on the proposed right-of-way, as well as those adjacent to the proposed right-of-way, does not necessarily reach all parties who may have an interest in the location of the pipeline. For existing pipelines, the U.S. Department of Transportation (DOT) requires specific markings, public education, and annual notification.

Whether it is a newly constructed or existing pipeline, FERC's current policies require notification of immediately affected landowners; other members of affected communities would not receive direct notification. For those outside of the notification areas, the burden is on concerned parties to determine if public facilities exist in their community. In the case of pipelines, there are aboveground markers, as well as local deed records surrounding the area in question that can be searched by concerned parties. In addition, citizens can consult with local emergency responders to identify areas of concern. Nevertheless, some believe that further measures might be needed to ensure the public is sufficiently informed about existing or proposed natural gas facilities.

Recommendations: *Each pipeline development project faces a unique set of challenges in ensuring efficient communication and access to information. In each case, one of the fundamental issues to be discussed should be the communications needs of all stakeholders in any particular process, and how those needs can be met in a creative and efficient manner. The following recommendations identify specific tools to facilitate stakeholder communication. However, if these tools are utilized it will be only the first step toward success. These recommendations should be considered as tools to aid the siting process, and may or may not be appropriate in all cases. The recommendations are supportive of the findings included in FERC's Ideas for Better Stakeholder Involvement in the Interstate Natural Gas Pipeline Planning Pre-Filing Process, published in December 2001.¹²*

1. ***Point of Contact.*** *FERC should require in notices of application that a point of contact be established for each pipeline project. This contact—who could be at either the pipeline company or at FERC—could provide basic information about the project and direct any detailed questions to the appropriate government agency, developer, landowner, or interested party, thus reducing misunderstandings and misinformation and making the*

¹² See www.ferc.fov/news/staffreports.htm.

process more efficient. The services of the point of contact would be available to developers, contractors, landowners, or any interested party.

2. **Internet Access.** Each project should have a user-friendly web site, including information about the process, key project documents, the rights and responsibilities of all stakeholders, and links to related web sites. It is important that these web sites be seen as an impartial provider of information. FERC should maintain a master list of all project web sites, and provide links to such web sites whenever possible. FERC should require in the notice of application that such a web site be developed for each project, as described below.

The project web sites should include the following information.

- Project information—a map, timeline, company and contact information, and any additional information the company wishes to supply
- Landowner rights and responsibilities—the FERC fact sheet,¹³ information about eminent domain, and opportunities for public participation (state and federal)
- FERC information—FERC public education documents, access to the docket, draft and final Environmental Impact Statements, and opportunities for public education
- State-specific information—additional state permitting processes and opportunities for public participation
- Pipeline impacts/benefits—regarding land use, water consumption, air impacts, etc.
- Links to other sites related to the project, including opponents, proponents, interested parties, the company and relevant agencies
- Support—access to the site operator if difficulties arise. Both electronic and phone support should be available. This is particularly important if this tool is to be used by as many stakeholders as possible.

The project sponsor and FERC must have the discretion to keep information off of such sites for security reasons.

Also, to facilitate a successful sharing of information, FERC should create an electronic filing and service system for all documents in docketed proceedings. This will allow relatively easy access to all FERC documents by interested parties.

3. **Docketing updates.** Some stakeholders (who are not intervenors) that need to be kept updated on a timely basis may not have access to the internet. FERC should provide the option to interested stakeholders to receive every month by mail an index of the most recent filings for a particular FERC docket.
4. **Best practices.** Trade associations need to develop industry educational materials on best practices and facilitate an educational outreach effort to developers and contractors. These materials should focus on the importance of and methods for proactive outreach by project developers to affected communities in order to help identify and address problems early in a process. This effort should be recognized as a dynamic process. Each project will require an individualized strategy, and the outcomes will help further develop industry's understanding of best practices.

¹³ See www.ferc.gov/about/offices/abou_offi_public_reference.htm.

Coordinating the Pipeline Review Processes

Before submitting a proposal to construct a pipeline, each applicant conducts a variety of analyses to ensure that the project merits the substantial investment such proposals entail. After a proposal is submitted, government agencies must carefully review whether the construction, operation, and maintenance of the facility will affect water quality, cultural and historic resources, air quality, threatened and endangered species, and many other aspects of the human environment. Numerous local, state, tribal, and federal agencies are involved in the review of applications of pipeline projects, and some agencies are called upon to issue permits or clearances in their areas of expertise. Federal agencies are required to comply with the National Environmental Policy Act (NEPA), which may involve the preparation of an Environmental Assessment or Environmental Impact Statement for the proposed pipeline project.

The specific roles of key federal agencies in permitting interstate natural gas pipeline projects are as follows.

- FERC is responsible for the approval of interstate natural gas pipeline projects under the Natural Gas Act, so FERC is most often the lead federal agency for reviews performed under NEPA. FERC must consider whether a project will have a major effect on the environment and determine under NEPA whether an Environmental Assessment, or an Environmental Impact Statement, is necessary. FERC also has responsibility for evaluating the effect of the proposed project on cultural and historic properties and threatened and endangered species.
- Under Section 404 of the Clean Water Act, the project may need permits for major water crossings from the Army Corps of Engineers.
- Under the Endangered Species Act, FERC may need to consult with the U.S. Fish and Wildlife Service (FWS) regarding impacts to threatened and/or endangered species, and the FWS may need to issue a “biological opinion” and a statement on incidental takings of protected species.
- Under Section 106 of the National Historic Preservation Act, the state and/or tribal historic preservation officer(s) and the Advisory Council on Historic Preservation may need to comment and to develop an agreement with the lead agency on how to treat cultural resources.

Other agencies that may be involved in the review process include the U.S. Forest Service, the U.S. Bureau of Land Management (BLM), and the Environmental Protection Agency (EPA).

Because the construction and siting of natural gas pipelines requires this complex review process (see Appendix B¹⁴), it is not surprising that unforeseen delays can and do occur. Although FERC

¹⁴ The paper in Appendix B was not developed by the Dialogue Group. Rather, it was compiled by Enbridge Inc., MCN Energy Group Inc., and Westcoast Energy Inc., and distributed by the Interstate Natural Gas Association of America (INGAA). For more general information on the permits and clearances the must be obtained prior to the

continues to improve its pipeline certification process in order to reduce unnecessary delays, more work is needed to improve coordination among the many federal, state, and local agencies. Both applicants and agency reviewers experience problems coordinating the environmental permitting process. Most difficulties are encountered either during the initial planning and execution of the field surveys, or during the later period when the project is under complete review by multiple agencies.

Better coordination among these agencies would speed pipeline approvals, without compromising existing environmental requirements. (This coordination is facilitated where applicants have done extensive pre-application reviews of environmental and cultural issues.) Coordination would also help to reduce the burden (and associated time delays) on federal reviewers and applicants. Indeed, there are opportunities for streamlining the current federal review process and increasing efficiencies. The Dialogue Group is particularly confident that placing more emphasis on establishing early cooperation among agencies and developing more opportunities for concurrent reviews and decisions at the different levels of government would improve the current process.

Recommendations: *The Dialogue Group offers the following recommendations regarding the pipeline review process.*

1. *The Dialogue Group supports the efforts of the federal interagency task force, established under Executive Order 13212 (see Appendix C) and chaired by the White House Council on Environmental Quality (CEQ), to monitor and assist federal agencies' efforts to expedite their review of permits or similar actions, as necessary; accelerate the completion of energy-related projects; increase energy production and conservation; and improve the transmission of energy.*
2. *The CEQ should coordinate (whether as part of the interagency task force or independent of it) the development of an agreement among federal agencies in order to better integrate the environmental reviews associated with pipeline proposals. In particular, the interagency agreement should:*
 - *ensure that information needs for all necessary environmental reviews (e.g., NEPA analyses and Endangered Species Act and National Historic Preservation Act consultations) are developed early in the process and that relevant agencies concur on the study approach and the information developed at key stages of project planning;*
 - *merge the review responsibilities of the participating agencies;*
 - *develop methods to reduce unnecessary delays, including those caused by staffing constraints; and*
 - *actively solicit the participation of state, tribal, and local governments to assist in the preparation of Environmental Impact Statements.*

Some Dialogue participants believe that if CEQ resources are unavailable to coordinate this interagency agreement, FERC should take the lead. Others feel that the CEQ is the only entity appropriate for this task.

construction and operation of interstate pipelines, see: American Gas Association, *Regulation of the Gas Industry* (chapter 10) (Washington, DC: American Gas Association, 2001).

Appendix D contains a proposed model interagency agreement prepared by the Interstate Natural Gas Association of America (INGAA) to help stimulate discussion on this concept. This model agreement should not be interpreted as a commitment or an intent to commit by any agency referenced in the agreement; agency names are included only as examples.

3. *For certain aspects of the pipeline siting process, state agencies have responsibilities similar to federal agencies. Independent of a specific project, these federal and state entities should develop interagency agreements that would outline common review approaches and coordinate the timing of reviews. For example, the FWS may consider drafting such agreements with their state counterparts.*
4. *The Dialogue Group supports and encourages the development of streamlining opportunities on a project-specific basis, including the development of project-specific agreements to lay out mutual expectations, funding agreements in support of streamlining, and concurrent reviews with cooperatively determined timeframes, scope, data needs, and impact assessment methodologies. The group also endorses the recommendations in the IOGCC/NARUC Pipeline Siting Work Group report. (Recommendations #1, 2, 3, 5, and 7 of that document, which is included in Appendix A, relate specifically to these issues.)*

Right-of-Way Challenges

The developers of pipeline infrastructure become long-term members of the communities along the pipeline corridor. Good relationships with these neighbors can reduce or eliminate obstacles to the construction and operation of the infrastructure. To that end, industry awareness of landowner concerns, and a flexible, cooperative approach to identifying mutual benefits, can serve all stakeholders.

The Dialogue Group identified several issues relating to rights-of-way for energy infrastructure. These issues include determining preferred rights-of-way, negotiations with tribal nations, securing access to land, resorting to eminent domain procedures, and changing the status of existing pipelines. Each of these issues, with attendant recommendations, is discussed in this section.

Preferred Rights-of-Way

As the need for natural gas pipeline infrastructure grows, the ability to site pipelines in an efficient, effective, and environmentally sound way becomes more difficult. Increased demand for pipelines often occurs in areas where population growth and suburban sprawl have occurred. This fact, together with the increased sensitivity to the impacts of construction on environmental and cultural resources, limits the number of viable routes for new infrastructure construction. That is, many of the “easy” routes have already been taken in some regions.

Various government entities influence land use decisions, including property owners such as the BLM and regulators such as state infrastructure siting authorities and county zoning authorities.

Some of these agencies have already established preferred utility rights-of-way. (The BLM is a prominent example of this approach.) Also, many local boards and authorities establish utility corridors, whether for land use management or to encourage focused economic development. Where these corridors have been identified in advance of a pipeline project, their use can expedite the siting process. In other instances, a potential pipeline development can spur these kinds of land use decisions.

Recommendation: *Where feasible, land use agencies—whether federal, state, or local—and infrastructure developers should jointly explore opportunities to establish the best routes for pipeline and other utility infrastructure siting. To the extent that agencies have already determined preferred routes or utility corridors, infrastructure developers should consider such routes as a first resort, and encourage regulators that evaluate infrastructure proposals to view the utilization of such preferred routes as a favorable factor.*

Infrastructure on Native Lands

As the infrastructure of natural gas production becomes a strategic factor in U.S. energy policy, so does the strategy of integrating the Indian tribal nations' and Alaska natives' resource base into America's energy future. Tribal nations and Alaska natives own significant energy assets. For example, roughly 10 percent of natural gas reserves in the U.S. are located on Indian reservations. Much of this resource has not been fully developed. Tribal nations and Alaska natives will thus play an important role in meeting the forecasted demand for natural gas in the U.S.

Throughout the Rocky Mountain region, for instance, tribal natural gas resources are proving up in greater quantities than expected. The development of these resources, and with it the need for expanded infrastructure, has engaged tribes in a manner that offers both risks and rewards. Those tribes owning natural gas resources within their land base are active partners in this new era of energy resources development. Indian tribes that are party to this development—and those whose lands are adjacent to it—often enhance the value of their land base by negotiating the cost of a pipeline right-of-way. In this regard, tribal participants are dealing from the vantage point of self-governing sovereign nations. This unique status poses particular challenges for would-be developers of natural gas pipeline infrastructure that involves tribal resources.

Prior to 1982, the federal government, under its trust obligation to tribal nations, negotiated and approved rights-of-way on behalf of Indian tribes. With the passage of the Indian Mineral Resources Act in 1982, tribes were granted the right to negotiate right-of-way terms on their own behalf, subject to final approval by the federal government under their trust obligation to tribal nations. This period of tribal energy resources development ushered in the need for increased tribal participation in both the developmental and negotiating process.¹⁵

¹⁵ A prime example of this emerging “energy sovereignty” is the Southern Ute Indian Tribe of southwestern Colorado. The Southern Ute Tribe now owns, operates, and negotiates all aspects of the vast natural gas resource holdings within its land base. The Southern Utes’ success illustrates how Indian tribes can be contributing partners to the overall energy picture in the U.S. The impact of these potential partnerships is significant: Current Southern Ute natural gas production can supply up to 10 percent of the natural gas needs of all southern California.

Thus, with respect to pipeline infrastructure, the direct involvement of tribal nations and Alaska natives is of increasing importance. Those same native groups that control significant energy resources also hold large expanses of land, particularly in the Rocky Mountains, the Southwest, the West, and Alaska.¹⁶ A single right-of-way negotiation may concern 50, 100, or even 200 miles of a pipeline route.

Tribal negotiations, however, involve a process that is unfamiliar to even the most seasoned right-of-way negotiator. The legal concept of eminent domain, for example, does not apply if a proposed pipeline route crosses tribal land. Only an act of Congress can amend or repeal this legal restriction. Absent such a dramatic step, infrastructure developers and tribal representatives negotiate an agreement that is considered mutually beneficial to both parties—bearing in mind that a right-of-way through tribal land may be the most cost effective and perhaps only pipeline route.

Recommendation: *The DOE should convene a series of meetings—with representatives from tribal nations, Alaska natives, industry, and federal and state governments—to address special issues associated with gas infrastructure development on tribal lands. This will open a dialogue regarding pipeline siting and operations and energy exploration. This dialogue would be an important first step in building and improving relationships among pipeline developers, affected tribal nations, Alaska natives, interested agencies, and other stakeholders.*

Access to Land for Pre-Certification Surveys

Sometimes, pipeline developers are unable to file complete certificate and permit applications because they have had difficulty getting permission to enter private property for the purpose of conducting surveys. Surveys, in this case, may include topographical and geological surveys necessary to inform engineering decisions concerning pipeline design and siting, as well as surveys of natural resources (e.g., wetlands and habitat) and cultural resources (e.g., historical sites) needed to make informed siting decisions and evaluate the impacts of a pipeline project. Incomplete applications can slow the certificate application review process.

Landowners sometimes complain about developers trespassing on their land for the purpose of conducting surveys. Some landowners seek to block such access because they oppose the construction of a pipeline. Also, some landowners are particularly sensitive about surveys of natural and cultural resources because the identification of, say, endangered species habitat could substantially reduce the development value of the land. Agency outreach can improve understanding among stakeholders, and developers can establish good relationships with property owners early in the siting process. These steps will reduce the likelihood of impasse between landowners and developers.

¹⁶ For example, the Navajo Nation's 25,000-square-mile reservation lies between one of this country's most prolific natural gas-producing basins and one of the largest natural gas-consuming regions of the U.S. Natural gas production and future development in the San Juan Basin is currently constrained by the existing pipeline infrastructure. The producing economics of this region dictate that production flow west toward California. Therefore, any future production increases from this basin will result in new pipelines heading westward and across the land of the Navajo Nation.

Pipeline companies must do the best they can with existing tools for gathering site information for the purpose of developing applications. Under current statutes, FERC does not have the authority to require landowners to provide access prior to the issuance of a certificate. It could be beneficial if pipeline companies and regulatory agencies shared “best practices” with and among each other regarding (1) how to get the consent of the owner to access land; (2) what information available through indirect access (e.g., obtained via airplane flyover) can be utilized to adequately support a project application; and (3) what existing public information, such as databases or information available from government agencies, can serve as project support. Strategies for obtaining the consent of uncooperative landowners may include making small payments or providing other compensation for the rights of access.

Recommendation: *The pre-certification survey process is one of the earliest direct interactions between a pipeline company and landowners. Therefore, it is important to establish a cooperative relationship at this time. To achieve this, interested parties, including pipeline developers and regulatory agencies, should share strategies on how best to gather the necessary survey information.*

Eminent Domain

Eminent domain is the right of a state or sovereign to take private property for public use, with just compensation but without the consent of the property owner. In most contexts, there is a two-part approach to the process of exercising a right of eminent domain. First, the developer secures the right to appropriate private property for an authorized use, as defined by statute. This step is also referred to as “condemnation” of the property. The second step is to determine the level and nature of compensation that the affected property owner is entitled to receive. Debates over compensation are necessarily fact-specific. Interstate natural gas pipeline developers obtain rights of eminent domain from the federal government by obtaining a “certificate of public convenience and necessity” under Section 7 of the Natural Gas Act of 1938.¹⁷ In particular, Section 7(h) of the Natural Gas Act provides the statutory basis for delegation of eminent domain authority to interstate pipelines.¹⁸ Armed with a FERC certificate, the pipeline has established a basis for its claim in federal or state court, through which the appropriation and valuation process is then undertaken. For intrastate pipeline or local distribution projects, the pipeline developer is subject to a broader range of requirements and procedures.

Eminent domain is the mechanism of last resort that natural gas pipeline developers may use to secure rights-of-way when mutual agreement and negotiations fail.¹⁹ The Dialogue Group recognizes that the power to take private property for public use is a long-established means of ensuring that no individual can prevent the development of infrastructure for necessary public works; however, the serious effect on that individual must be respected, and this tool—while important—is to be used sparingly. As long-term neighbors along the pipeline corridor, both

¹⁷ 15 U.S.C. §717f (2001).

¹⁸ When interstate natural gas pipelines utilize eminent domain based upon a FERC certificate, the process for determining whether the facility is needed determines whether eminent domain will be warranted. Needs assessment is discussed in Chapter 1.

¹⁹ As discussed on p. 23, eminent domain is not available to developers on tribal lands.

property owners and pipeline operators stand to benefit when their relationship is established through mutual agreement, rather than eminent domain.

Improvements in other areas of public understanding of the role and operation of natural gas pipelines will provide significant benefits with regard to eminent domain. Adopting the recommendations in this chapter will improve landowners' willingness to enter into negotiations with project developers, and thereby reduce the need to resort to this measure. However, the Dialogue Group recognizes that sometimes the exercise of eminent domain will be unavoidable.

Recommendations: *To minimize the need to resort to condemnation for pipeline rights-of-way, the Dialogue Group recommends the following.*

- 1. Relevant regulatory agencies should encourage, require a demonstration of, or provide incentives for pipeline developers to use all reasonable efforts to acquire rights-of-way, as opposed to relying on eminent domain. An example of this approach can be found in FERC's policy statement, which includes the degree of reliance upon eminent domain as a factor in determining whether a facility proposal is "in the public convenience and necessity."*
- 2. Alternatives to eminent domain should be promoted. The Dialogue Group supports the use of creative bargaining to meet the interests of the affected property owner and the pipeline developer. Toward that end, regulators should provide maximum flexibility in the aspects of property improvement that pipeline companies are permitted to offer affected landowners, subject to environmental protection requirements. It is beneficial for both pipeline developers and landowners to allow as much flexibility as possible in negotiating compensation arrangements, including in-kind compensation. Regulators should encourage—or at minimum, not raise obstacles to—this creative flexibility. These negotiations are very fact-specific; nonetheless, a workshop or seminar including all relevant stakeholders could generate ideas and establish guidelines and best practices for creative bargaining. An organization such as the International Right of Way Association should convene this workshop.*
- 3. Regulators' and developers' efforts to inform the public about eminent domain requirements can ease the process of eminent domain. The Dialogue Group generally endorses the procedural suggestions developed through the FERC outreach process, as referenced more fully in the previous section on Improving Stakeholder Communication. FERC has established informal procedures and encouraged pipeline developers to conduct public forums on the siting process and where eminent domain fits within it. This guidance offers a productive approach that could be used by other agencies.*
- 4. In order to better inform pipeline developers and to transfer best practices among the states, some research regarding current eminent domain practices would be worthwhile. Eminent domain practices can vary from state to state, as a function of the laws in each jurisdiction. Given this range of jurisdictions, interested groups should conduct a study regarding eminent domain requirements. The INGAA Foundation has such a study underway, but a review of the literature did not reveal any recent, comprehensive surveys regarding eminent domain procedures. This is a long-range recommendation, and could perhaps be the subject*

for a law review article. To be of most use for infrastructure developers, a review of eminent domain requirements must:

- clarify and summarize the issues to be considered in the appropriation and valuation stages of the condemnation process;*
 - describe procedural requirements for eminent domain in various jurisdictions; and*
 - examine how other sectors of the economy apply eminent domain when siting similar infrastructure. For example, the rail, highway, and electric transmission industries may offer useful analogies, best practices, or ideas for procedural reforms.*
- 5. Regulatory agencies that issue certificates for pipelines should ensure that the authorized right-of-way is properly characterized. In particular, agencies should expressly describe the scope of uses that developers are authorized to secure through eminent domain. This will ensure that a court does not expand the developer's easement through a subsequent eminent domain proceeding, to include undisclosed rights-of-way for non-pipeline use(s).*

Chapter 3

Safety, Integrity, and Reliability

Early in the Dialogue Group's discussions, the safety of natural gas pipelines was identified as a central issue relating to the expansion of pipeline infrastructure. Because natural gas pipelines are an essential component of America's energy delivery system, the safety, integrity, and reliability of those pipelines is of paramount importance. And the public must feel confident that natural gas pipelines are safe, or else the siting of additional pipelines will continue to be a challenge.

Some Dialogue participants believe that safety is the single greatest issue of public and landowner concern faced by industry and regulators with regard to the siting of new pipelines. Others suggest that the safety of natural gas pipelines should be a starting proposition—that ensuring that all interested parties have an opportunity to participate effectively and fully in the deliberations leading to siting approval will have a positive role in establishing confidence in the integrity of the system.

Since September 11, security- and safety-related issues—particularly with regard to the operational integrity of pipelines—have taken on a new urgency. Concerns now exist not only about the possibility of accidents, but of sabotage. Clearly, these issues require attention within the broader context of expanding pipeline infrastructure.

The Dialogue Group formed a Safety Work Group to address these issues. The work group sought to:

- frame the debate by establishing the linkage between pipeline infrastructure issues and the safety, reliability, and integrity of pipelines;
- increase their understanding of underlying issues that affect safety, through information exchange within the work group as well as in the full plenary group; and
- if appropriate, provide recommendations on how to begin to address defined areas of concern.

There was general agreement that the technical aspects of pipeline safety were beyond the purview of the work group's discussions. However, the group did address the general issue of technology research and development as it relates to the expansion of pipelines.

To organize its discussions, participants grouped safety-related issues into five categories:

1. pipelines and public confidence;
2. regulatory considerations;
3. industry/government/public relationships;
4. technology and its use; and
5. communications.

The following sections each address one of these categories. Each section seeks to explain how safety, integrity, and reliability are linked to the broader discussion of expanding new and existing pipeline infrastructure. Most of the sections also include recommendations for action.

Pipelines and Public Confidence

In the past decade, a number of local and regional public interest and private organizations, including landowners, have become increasingly involved in issues regarding the safety, integrity, and reliability of natural gas pipelines. These organizations and individuals have:

- commented on rulemakings and initiatives of the DOT's Office of Pipeline Safety (OPS) and FERC;
- communicated with federal legislators and administrative decision makers regarding the reauthorization of the federal pipeline safety act; and
- become increasingly involved in decisions relating to pipeline siting and the conversion of services (i.e., the conversion of a crude oil pipeline to a natural gas pipeline).

This increased level of involvement is due in part to the expansion of pipeline infrastructure, the encroachment of development onto pipeline rights-of-way in no-longer-rural communities, and increased access to information via the internet—all of which have made the public more aware of the environmental and safety issues associated with natural gas pipelines.

Dramatic and high-profile natural gas pipeline accidents in recent years have heightened public safety concerns. In particular, two incidents that have occurred in the past seven years have been factors in contributing to this awareness. These accidents, which occurred in Edison, New Jersey and Carlsbad, New Mexico, resulted in considerable property damage and fatalities. The causes of such accidents vary; however, the primary reasons include excavation-related damage, corrosion, and manufacturing-related defects.

Contributing to the lack of confidence in pipelines generally are recent accidents that have occurred in hazardous liquid or oil pipelines (which are also regulated by OPS).²⁰ Although hazardous liquid pipelines are not the focus of this report, these incidents are worth noting because the public does not necessarily distinguish between natural gas and liquid pipelines—thus highlighting a key challenge for the natural gas industry.

There is room for improvement in pipeline safety, and every effort should be made to ensure that accidents like these do not occur. But the public needs to consider these accidents in a larger context. It is generally agreed, for example, that pipelines are the safest and most practical mode of transporting natural gas across the country. Approximately 2 million miles of natural gas pipeline exist in the U.S., and natural gas provides about 25 percent of all the energy consumed in this country.²¹ Natural gas, and the pipelines it travels through, are an essential and reliable

²⁰ For example, in Bellingham, Washington in 1999, fumes and fires from a ruptured hazardous liquid pipeline led to three deaths. This accident resulted in record civil penalties and criminal indictments for several employees of the pipeline company.

²¹ Energy Information Administration, 2002.

part of America's energy system. Although individual accidents have been deadly and have alarmed the public, such accidents are rare.

Another underlying cause for public concern regarding the safety of natural gas pipelines relates to the activities of Congress and federal agencies. While a number of members of Congress from both political parties have spoken out on the need to improve pipeline safety, and there is ongoing Congressional activity to do so, the pipeline safety law has not been reauthorized since its 1996 amendments. In addition, the National Transportation Safety Board, the DOT's Inspector General, and the U.S. General Accounting Office have all issued reports expressing concerns about the adequacy and rigor of existing pipeline safety regulations and their enforcement. To strengthen enforcement, multiple agencies may need to become involved.

Some regulators and members of the public have also expressed concern about changes in the natural gas industry resulting from mergers and downsizing. Because such changes can lead to a shift in operations and oversight within a company, these individuals are concerned that safety could be compromised. To assuage these concerns, companies must communicate with the public about corporate safety programs and priorities and other safety-related efforts.

Recommendation: *To help instill public confidence in the safety, integrity, and reliability of the natural gas pipeline infrastructure, pipeline safety statutes and regulations should be strengthened. Effective enforcement authority should be a priority, to protect against the risk of accidents to human health and the environment. Also, the administration should implement the recommendations of its May 2001 National Energy Policy. That report recommends that “the President support legislation to improve the safety of natural gas pipelines, protect the environment, strengthen emergency preparedness and inspections, and bolster enforcement,” and “direct agencies to continue their interagency efforts to improve pipeline safety and expedite pipeline permitting in an environmentally sound manner.”*

Regulatory Considerations

Federal and state government agencies play important roles in ensuring the safety, integrity, and reliability of natural gas pipelines. These agencies face many challenges in their oversight of pipeline operators. For example, the agencies must balance competing views regarding the safety of the nation's pipeline infrastructure and its relative costs and benefits—views that have resulted from increased scrutiny due to recent pipeline accidents and concerns regarding regulations and enforcement. The regulatory framework provided by state and federal agencies seeks to provide the necessary assurance that the benefits of natural gas pipelines will ultimately outweigh the costs. Examining these challenges and competing views is relevant for understanding the concerns expressed by the public, industry, and the agencies themselves.

The regulation-related issues considered by the Dialogue Group included fractured jurisdiction, regulatory approaches, and information and accountability. Participants also discussed current OPS activities, which seek to address some of these issues and concerns.

Fractured Jurisdiction

One significant area of concern regarding the role of government in the oversight of pipelines is that of fractured jurisdiction. Pipeline regulation is essentially split along two dimensions. First, it is split among different levels of government—federal, tribal, state, and local. Second, it is split according to the issue involved, be it safety, land use, environmental protection, rate setting, and so forth. So, different agencies at different levels of government are responsible for different sets of issues relating to pipeline regulation.

At the federal level, the relevant agencies include the OPS, FERC, the Department of Justice, and, as major landholders, the U.S. Department of the Interior (e.g., the BLM and Minerals Management Service) and the U.S. Department of Agriculture (e.g., the U.S. Forest Service). At the tribal level and with regard to Alaska native lands, the regulation of pipelines is further complicated by the sovereign status of the lands they cross. At the state level, decisions are frequently split among state agencies along similar lines of jurisdiction. Local governments typically make land use decisions relating to rights-of-way and appropriate planning and zoning. These decisions are critically important to protecting underground utilities, including pipelines, from excavation-related damage, as well as protecting people and the environment from resulting pipeline failures.

Fractured jurisdiction can lead to problems in overall accountability and decision making, not to mention public confusion. Pipeline safety oversight (i.e., inspection and enforcement) of *interstate* pipelines is predominantly a federal function carried out by OPS, though similar oversight of *intrastate* pipelines is frequently handled by a state pipeline safety agency. The minimum safety and environmental regulatory framework for pipelines is established by OPS; however, states can create additional requirements for pipelines wholly contained within their boundaries (i.e., intrastate pipelines and distribution lines).

The local control of land use decisions near pipeline rights-of way provides a good example of the problems that can arise due to fractured jurisdiction. Appropriate setback requirements for construction near rights-of-way can greatly minimize the risk of excavation-related damage to pipelines and other underground utilities and the consequences of a pipeline accident. However, local development pressures for the maximum economic use of available land often result in minimum setback requirements, thereby potentially jeopardizing safety. Localities have no national guidelines to draw upon in balancing these competing needs regarding setback requirements.

Regulatory Approaches

Clear-cut and legitimate differences of opinion exist over the approach to take in new regulations. For example, some stakeholders advocate for a purely performance-based approach that relies more upon goal setting and/or industry consensus standards, while others prefer a more command-and-control approach that relies upon prescriptive regulations.

Most agree, though, that, where industry standards are used, consensus-based efforts are an effective method for creating those standards and ensuring that a multitude of perspectives are

considered. Both Congress and the President have directed all federal agencies to use existing consensus standards in lieu of new regulations wherever possible. However, some believe that the state and local perspective, as well as that of members of the public, is not sufficiently considered. This results in some concern that consensus-based industry standards might not be as stringent or enforceable as regulations developed by government alone. To minimize this concern, the OPS should seek to include a wide range of stakeholders for such discussions. Also, mechanisms should be put in place to ensure that the standards are more readily enforceable.

Some Dialogue participants advocate civil liability provisions for accidents resulting in releases, as a mechanism that would help to decrease the number of release incidents and increase overall confidence in pipelines. Others disagree, arguing that the business realities of lost fuel and related expenses, along with the decrease in public confidence, are adequate incentives.

Recommendation: *When incorporated by reference in federal regulations, consensus-based industry standards must be enforceable to be effective. State regulators and members of the public should be more involved in the development of these standards, and the OPS should ensure that there is a stringency and enforcement review so that deficiencies in standards can be remedied.*

Information and Accountability

Differences of opinion also exist regarding the degree to which pipeline company-specific information should be made available directly to the public. Some think that right-to-know information on pipeline operations should be made readily available via the internet, in order to help the public become more engaged on a regular basis. (More information is intended to improve operator performance through “sunshine.”) Others contend that information made available directly to the public should be limited, due to security concerns over critical infrastructure protection issues, including the threat of terrorist activities.

Dialogue participants agree, however, that publicly available safety assessment reports are an effective, nonregulatory approach to improving industry performance. Such reports need not pose risks to either security or confidential business information. Rather, they could include information such as:

- the frequency of periodic testing—so that pipeline companies doing either extensive or little testing can be identified; and
- the testing method(s) used—e.g., high- or low-resolution pipeline pigging.

Recommendation: *Pipeline operators should be required to provide the Office of Pipeline Safety with a periodic “safety assessment report” covering important aspects of pipeline operations. This report (or an overview, by pipeline) should be available to the public via computer database.*

OPS Activities

The Office of Pipeline Safety regulates approximately 2.2 million miles of natural gas transmission, natural gas distribution, and hazardous liquid pipelines, and directly oversees compliance with those regulations on approximately 500,000 miles (with the states overseeing most distribution pipelines).

As the principal arbiter of pipeline safety issues at the federal level, the OPS has been taking deliberate steps to fortify both the regulatory framework and oversight of the nation's pipeline network. These steps include strengthening certain existing regulations and creating new risk-based regulations that strive to direct limited resources first to areas where the consequences of failures could be the greatest. The OPS is seeking significant increases in authorized funding levels for both federal and state oversight efforts. They are also creating new public information tools, including a suite of tools that provide community officials responsible for planning, emergency response, and security issues with the information they need to function effectively and to help their communities live safely with pipelines.

Funding for the agency is provided through a user fee paid by pipeline companies. Historically, industry, the OPS, and others have been supportive of providing additional resources for this important agency, which most agree is both underfunded and understaffed. Although the OPS has done a very good job within the parameters it has been given, its impact and effectiveness could be greatly enhanced with additional funding and full staffing.

Recommendation: Congress should appropriate additional funding (from general revenues, not user fees) to the Office of Pipeline Safety to enhance its ability to protect the nation's natural gas pipeline infrastructure. Increased funding could be used to hire additional federal and state inspectors, develop regulations that fill existing gaps in oversight, provide data to the public, and cover travel costs for certain representatives of the public to attend meetings.

Some believe that the idea of funding travel costs for stakeholders would be a difficult challenge for OPS to implement, as it may be unclear exactly which members of the public (e.g., nongovernmental organizations, community representatives, public interest groups, unaffiliated citizens) would be the most appropriate parties to receive such support.

Industry/Government/Public Relationships

The natural gas industry and government (particularly the OPS and the DOE) have consistently worked together toward improving the safety, integrity, and reliability of pipelines. The pipeline accidents mentioned previously have provided additional impetus for a more proactive approach by everyone involved in pipeline safety. As a result, the OPS has been working with industry on technical issues relating to new integrity management regulations, resulting in final liquids pipeline rules and the likelihood of a Notice of Proposed Rulemaking for natural gas pipelines by mid-2002. The purpose of the collaboration early on in the rulemaking process has been to investigate the technical issues and data involved.

This example of industry-government cooperation can engender a certain amount of skepticism from those not involved in the day-to-day machinations of the effort. The concept of looking for “new tools” to address risk-based alternatives for integrity management can be viewed as an approach that is difficult to enforce and therefore could be perceived as overly favorable to industry. Contributing to this lack of trust among some stakeholders is the fact that OPS funds are statutorily provided through industry user fees. This can create the appearance that the pipeline regulators are overly influenced by those they regulate, at the expense of those they are seeking to protect. Lastly, the OPS’s limited resources, along with its reliance on consensus-based industry standards for safety and operations, has resulted in concern by some members of the public and regulators that such standards may not be as stringent or enforceable as regulations developed by government alone.

In response to such concerns, the OPS currently seeks to ensure that all relevant meetings are open to the public and that notices and meeting summaries are made publicly available in the Federal Register and the on OPS web site. Also, the OPS has made changes recently in their processes to help ensure that the public is involved early in the rulemaking process. There are challenges to ensuring such involvement, however, including (as mentioned above) the resources available at the OPS and the lack of available financing for the participation of public interest groups. Another challenge is the difficulty in identifying exactly who the appropriate stakeholders might be, particularly given the often localized nature of pipeline siting issues. Continued education and communication with the public or its representatives (i.e., those skilled in technical issues) is essential. The failure to communicate effectively could exacerbate the inherent problems of distrust within the existing system.

Technology and Its Use

Some existing integrity technologies are not economically justifiable for certain pipeline facilities. So, R&D should be encouraged to create more cost-effective technologies. The natural gas industry and government alike must support adequate research, development, and commercialization efforts so that the best and most efficient technologies are utilized. Such R&D activities will enhance the reliability of the energy system, pipeline integrity, and overall safety in the infrastructure of the natural gas delivery system. However, specific barriers and challenges exist. Because R&D funding is expensive, a need exists to plan for further investments in technologies that will improve pipeline reliability and safety.

In addition, some believe that there are existing technologies available to alleviate certain problems, but that these technologies are not being fully utilized by all pipeline companies. An example that is cited is in-line inspection tools to detect defects in lines designed to allow passage of such tools.

R&D is of central importance to the natural gas pipeline industry and stakeholders alike. R&D serves as the pillar upon which the industry relies to develop safe and cost-effective strategies for building and maintaining the North American pipeline network. The natural gas pipeline industry

satisfies most of its R&D needs collectively by investing significant resources in collaborative research.

Industry R&D has focused on five major areas: safety and reliability, environmental performance, production capacity and deliverability, end use, and information technology. Collaborative R&D has historically been performed through several organizations, including those with an international focus. The main sources of industry research are (1) the Pipeline Research Council International (PRCI), which has been funded by member subscriptions; (2) the Gas Technology Institute (GTI, formerly the Gas Research Institute), funded by a rate collection mechanism now being phased out by FERC; and (3) the Gas Machinery Research Council, which is funded by income from the commercial vibration and pulsation analysis services offered. For the past three years, the PRCI and GTI have managed a unified program. By working in such a partnership, the pipeline industry is able to leverage both dollars and people and has, on average, spent approximately \$12 million per year on collaborative research.

The federal government also plays a key role in addressing these technology considerations. The Bush administration, in its *National Energy Policy Report*, has concluded that recent natural gas system failures highlight the need to develop technologies and policies that protect people, the environment, and the safety of the nation's energy infrastructure. The report states:

“The federal government has an important role in ensuring and improving the safety of the nation's energy infrastructure. New technologies need to be developed to improve monitoring and assessment of system integrity, improve data quality for system planning, extend the serviceability and life of the national natural gas transmission and distribution network, provide safer transport of energy products, and lessen the impacts of the energy infrastructure on the environment.”

The DOE initiated a natural gas infrastructure reliability program in FY 2001. It is designed to help ensure the integrity, deliverability, and reliability of the natural gas distribution and transmission system across the United States. The DOE, through an industry collaborative R&D program, is advancing technologies and tools to assist the industry in maintaining and improving system delivery and reliability. Its near-term priorities are to:

1. seek to develop longer-life, high-strength, noncorrosive pipeline materials that can operate at higher pressures;
2. work with industry to develop smart, automated inside-pipeline inspection sensor systems and repair technologies;
3. support the development of automated sensor systems capable of detecting external force incidents to pipelines; and
4. continue collaborative efforts with industry and the National Laboratories to develop a portable, real-time, laser-imaging technology to detect methane leaks and maintain system reliability.

The OPS is also engaged in research efforts to improve technology. Since 1990, its R&D program has increasingly focused on developing promising technologies for use in the early detection of risks that can be repaired and the early detection of failures. The OPS has

significantly expanded its approach to leveraging limited research dollars through partnerships with other agencies and with industry sources. Its near-term priorities are to:

1. increase collaborative efforts to continue leveraging scarce funds;
2. make opportunities to broaden public, industry, and government participation in setting its research agenda;
3. seek increases to Congressionally authorized pipeline research funding; and
4. increasingly focus on new technologies that can help to ensure pipeline integrity.

To address the problem of technologies that exist but are not being used sufficiently, OPS is beginning to require the use of such technologies in its new regulations (e.g., the integrity management regulation), as appropriate.

Recommendation: *Industry should be encouraged to utilize cost-effective and commercially available technologies capable of operating in new and existing pipelines. The most promising technologies available should be used in the construction of new pipelines. To support this and to ensure that new technologies are not cost-prohibitive for industry, government and industry partnership programs addressing R&D in pipeline reliability should be continued and expanded. In addition, industry should utilize existing, commercially available technologies whenever possible.*

Communications

Effective communication is critical to promoting and ensuring safe pipelines, as well as explaining the potential benefits versus the risks. Pipeline infrastructure issues and the laws accompanying them are complex and technical. It is difficult to adequately communicate information with regard to safety, integrity, and reliability issues. Government agencies and industry have various requirements in place for educating the public; however, these efforts are often not enough. As discussed previously (under Regulatory Considerations), differing opinions exist regarding what and how much information should be publicly available.

The national “call-before-you-dig” safety program, known as “One-Call,” provides a good example of the importance of communications. The natural gas pipeline industry, public interest organizations, and individuals are constantly working to improve and perfect this system for preventing excavation-related damage, which is a leading cause of pipeline accidents. In 1998, Congress enacted a law establishing One-Call. The One-Call program is aimed at developing a variety of best-practice procedures to prevent excavation-related damage to underground facilities. Industry estimates that the national One-Call effort results in cost-avoidance of at least \$58 million per year for gas pipelines through reduced damage to the environment, public safety, and property loss.²² Reducing the number of excavation-related damage incidents through One-Call programs will help to build public confidence in pipelines. But success in this area is impossible without effective communication to the public of the program’s existence.

²² “Special report: Achieving common ground,” *American Gas Magazine*, September 1999.

Although One-Call programs are in place throughout the country, they are not consistent in their level of effectiveness. Excavation-related damage to natural gas pipelines continues to be a significant cause of accidents. Adding to the inconsistent performance of existing One-Call programs is a lack of enforcement by appropriate parties. To further encourage the development and enforcement of these programs, Congress, appropriate agencies, industry, and the public should continue to work together through the Common Ground Alliance and other efforts to enhance national guidelines for One-Call programs. Because these programs cover not just natural gas pipelines, but all underground utilities, there are many benefits to improving their effectiveness.

Recommendation: *Congress and appropriate agencies should encourage further implementation and enforcement of nationally consistent One-Call systems to enhance the safety of the natural gas pipeline infrastructure by reducing the risk of excavation-related damage.*

Appendix A

IOGCC/NARUC Recommendations

A recent report prepared by the IOGCC/NARUC Pipeline Siting Work Group contained the following recommendations aimed at helping state and local bodies move through the permitting process. The work group (which was not affiliated with this Keystone Dialogue Group) was made up of members of the IOGCC's legal and regulatory committee and NARUC's gas committee, as well as representatives of the BLM, FERC, INGAA, the American Gas Association, and the DOE. All of the text below, including the recommendations, was prepared by that work group.²³

States striving to sustain and encourage economic development will find the challenge increasingly dependent upon energy availability. As a result of recent events, new and expanding businesses often no longer assume needed energy supplies will be available. In order to expand, or develop new businesses, as well as meet basic human needs of the population, states must ensure that an adequate energy infrastructure is available. The recent California experience with energy shortages has prompted businesses, generally, to ask state development offices about the availability of electricity and natural gas within a state. Governors will increasingly be called upon, as they promote economic development within their states, to respond to the energy availability question.

The current natural gas infrastructure was not planned to meet the expected rate of natural gas consumption growth which this nation will see in the next decade, particularly demand driven by needs in electric power generation. More than 90 percent of all planned new power generation in the United States will be fueled by natural gas. Almost all small, supplemental back-up generating units (such as those used by hospitals and schools) are powered by natural gas. Natural gas demand has been well documented by the National Petroleum Council (NPC) report which spurred the creation of this work group.

One of the key challenges to energy availability is an adequate natural gas pipeline and distribution system to provide an ever-increasing gas demand across the country. The NPC report estimates over 38,000 miles of new transmission lines will be needed, as well as 263,000 miles

²³ The Interstate Oil and Gas Compact Commission includes representatives of the governors of 37 states that produce nearly all of the domestic oil and gas in the U.S. According to its web site (www.iogcc.oklaosf.state.ok.us), the IOGCC: "assists states in balancing interests—maximizing domestic oil and natural gas production, minimizing the waste of irreplaceable natural resources, and protecting human and environmental health—through sound regulatory practices. The IOGCC serves as the governors' collective voice on oil and gas issues and advocates states' rights to govern the petroleum resources within their borders." The National Association of Regulatory Utility Commissioners, according to its web site (www.naruc.org) is a nonprofit organization whose members include "the governmental agencies that are engaged in the regulation of utilities and carriers in the 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands." NARUC's member agencies regulate the activities of telecommunications, energy, and water utilities. NARUC's mission is "to serve the public interest by improving the quality and effectiveness of public utility regulation."

of new distribution lines. That much pipeline will require the attention of every state, and many regulatory bodies within the states. It will require the attention of the Federal Energy Regulatory Commission (FERC), the Bureau of Land Management (BLM), the U.S. Forest Service and many other federal entities.

The work group has found pipeline siting controlled by a variety of state and local government offices, as well as by the federal government. In terms of permit volume, the bulk of individual permits, required for infrastructure expansion, are state and local. State and local regulations are not only necessary, but add an element of local oversight which is critical to a project being reviewed with the unique interests of the state or locality at the forefront. However, only a few states have effective coordination of the natural gas pipeline permitting process while state and local regulatory steps can add many months—sometimes years—to building a pipeline.

State and local regulation is perhaps the most effective level of regulation because it rests closest to the public being served. However, state and local regulation is sometimes duplicative both between levels of government and between different state agencies, and for interstate pipelines much take federal requirements into consideration.

Recommendations

1. Every governor should establish within the office of governor a coordinating effort to coordinate and expedite the activities of all state and local natural gas permitting entities. The purpose of the coordinator would be to monitor the process and encourage prompt consideration, while eliminating duplication of effort. This coordinating effort will not be a new level of regulation, but will draw upon the expertise of the appropriate state agencies. The coordinating effort will ensure all data needed is provided by the applicant in a timely fashion and will facilitate sharing of information and experts among state and federal agencies, and with local government.
2. States should decide, prior to beginning a natural gas pipeline siting process, what information they need to collect and communicate to the general public and to the pipeline. States should identify all of the participants in the permitting process and coordinate regulatory roles, with the goal of processing information only once. States should consider naming a lead agency that would have the authority to set processing schedules within existing regulatory requirements.
3. Every state economic development office (Commerce Department) should be involved with the coordination effort and recommend actions to streamline the process.
4. States should work with the federal government to conduct regional needs and utility corridor identification. This federal-state coordination is endorsed in Executive Order 13212, issued May 18, in which President Bush created a federal interagency task force charged with "...setting up appropriate mechanisms to coordinate federal, state, tribal and local permitting in geographic areas where increased permitting activity is expected."
5. States should consider a special task force of state environmental experts to focus and coordinate all environmental issues stemming from the proposed pipeline. When time-

sensitive issues arise, the governors need a plan for reaction, which would be coordinated with federal entities where appropriate.

6. States should encourage research spending, including government and pipeline spending, to continue the development of pipeline installation techniques to disturb less surface, complete the installation more quickly, and enhance safety.
7. States should undertake a comprehensive review of policies, procedures, and regulations for the siting and installation of natural gas pipelines to determine how to eliminate duplication and reduce the cost and time of review, without any compromise to state regulatory oversight.
8. States should be a partner in FERC pipeline pre-filing citizen meetings, and consider developing similar citizen meetings for intrastate projects. Stakeholder notification and involvement in the process must be adequate to evaluate their interests.
9. States should encourage public education and outreach on the part of the pipeline. Pipelines, and states, might exchange innovative and high quality effective public outreach techniques, including informing the public about economic development and human needs issues as they link to new natural gas infrastructure requirements. Such public education should include adequate information about steps taken to ensure public safety, details of construction and contingency plans (i.e., what happens when it rains for a week in the middle of construction?), and information about the direct benefits of the project.
10. States should consider developing a model for clear and accessible state and local regulations governing the siting of natural gas pipelines.

Appendix B

Vector Natural Gas Pipeline Project

The following paper is not a product of the Keystone Dialogue Group. Rather, it was compiled by Enbridge Inc., MCN Energy Group Inc., and Westcoast Energy, Inc., and distributed by the Interstate Natural Gas Association of America.

Background

In mid-1997, the need for a natural gas transmission pipeline from the Chicago area through Indiana, Michigan and on into existing gas storage of Ontario was recognized, and the Vector pipeline project was initiated. Ultimately, the 42-inch diameter, 348-mile-long project became a joint partnership of Enbridge Inc., MCN Energy Group Inc. and Westcoast Energy Inc. Enbridge Inc. was the lead partner and formed a team to oversee the planning, design, permitting and construction of the pipeline. The team was supplemented by experts from Vector's partners, consultants and contractors with expertise in large diameter pipeline projects. Vector began consulting with the Federal Energy Regulatory Commission and other federal, state, provincial and local agencies in the fall of 1997 and filed its application for a FERC Certificate of Public Convenience and Necessity on December 15, 1997. The public consultation, route finalization and federal, state, provincial and local permitting process took place over the next three years. Construction began on advance portions of the pipeline in December 1999 with the majority of construction taking place between May and November 2000. Initial plans were for two 30,000 horsepower compressor stations, with the Springville, Indiana station completed at the time of initial startup. Vector began operations on December 1, 2000 with an initial 700,000 cubic feet per day of capacity. This capacity will rise to one billion cubic feet per day upon completion of the second compressor station in Highland, Michigan.

The focus of this background paper is to highlight the extensiveness of government oversight within the U.S. and public outreach as a means of helping policy makers who are reviewing the current pipeline siting process. It should be noted that this particular pipeline project crosses the U.S.-Canada international border at the St. Clair River between Michigan and Ontario.

The Federal Energy Regulatory Commission Certificate and Environmental Impact Statement: A summary of FERC's role in issuing Certificates of Public Convenience and Necessity and its lead role in issuing Environmental Impact Statements (EISs) under the National Environmental Policy Act is provided on the FERC home page and other documents. The thoroughness of the application process is exemplified by the need for some 603 environmental filing requirements, according to Vector's internal management checklist developed for this project. However, rather than delving into the detail of these filings, the profile is aimed at a simple overview of the extensiveness of the process.

- *FERC EIS and Third Party Contractor:* To ensure the FERC has the resources needed to review and permit large projects that are very sensitive to market-driven deadlines, the FERC initiated a third-party EIS contractor program. Vector elected to participate in this program and funded a mutually acceptable third party contractor to complete Vector's EIS. The third-party contractor reported to FERC and acted as a FERC agent during the project. The initial budget of \$400,000 for this contractor was doubled due to the level of analysis and detailed information the FERC required within the EIS. Following submission of the original application, Vector was required to submit 66 additional data responses and supplemental

filings to address questions raised by FERC. Each of these filings were incorporated into the EIS by the third-party contractor while still maintaining the project's market driven schedule.

- Public Notice and Issuance Time Frames:
 - Vector's application was noticed for intervention in December, 1997 and for public comment in January, 1998 by placement in the Federal Register and mailings to 1,900 interested parties, including federal, state and local official and agency representatives; local libraries and newspapers; intervenors; and property owners along the route and abutting the proposed compressor station sites.
 - In September, 1998 the Notice of the Availability of the 241 page (plus appendices) Draft EIS was issued to these same interested parties following comments received in 198 letters and oral statements containing some 1,194 individual comments.
 - On October 19, 1998 the Preliminary Determination on non-environmental issues was issued.
 - On April 2, 1999 the notice of availability of the 271 page (plus appendices) Final EIS was issued by FERC following comments received from 9 Federal agencies and members of Congress, 8 state agencies, 16 county and municipal agencies, 13 companies and organizations, 999 individuals, and Vector.
 - On May 29, 1999 FERC issued the Certificate.
 - On November 26, 1999 FERC issued an order amending the Certificate in response to Vector's request to shift the Michigan compressor station to an alternative site following extensive opposition to the original site from the public.
 - In addition to the Preliminary Determination, Draft EIS, Final EIS and Certificate, FERC issued some 18 other official documents ("Notices to Proceed") approving construction, site-specific clearances and approval to commence operation. The third-party compliance manager issued another 366 site-specific approvals for variances during construction.
- Public Comment:
 - February 9-12, 1998 – four public "scoping" meetings held along the route were attended by a total of 258 landowners, interested citizens as well as local and state officials.
 - October 5-6, 1998 – four public meetings were held to receive public comment on the Draft EIS attended by a estimated 300 interested citizens and local and state officials.
- Environmental Assessments require access to property: A reality of this type of pipeline project is the need for thorough environmental assessments that require access to land. Such access is often granted by landowners so that each party can understand and discuss the project before final approvals. However, such environmental assessments cannot be obtained when access to the land is not granted by the landowner. Of the 348-mile-long route, there were 274 miles of new construction in the U.S. As of July, 1999, two months following receipt of the FERC Certificate, survey permission was still lacking for some 21 percent of the route, significantly affecting the ability to move smoothly forward on environmental assessments and permitting prior to the commencement of construction just months away from that date.

Other Federal, State and Local permits:

- Canadian Federal, Provincial and Local Permits: The National Energy Board of Canada was the lead federal agency for the 15-mile-long segment of pipeline in Ontario. The NEB Section 52 application was submitted on July 1998 and approval was received on March 1999. A total of 4 other federal and provincial permits were obtained for the Canadian portion of this project.

- Presidential Permit: Because the project crosses an international border, a Presidential Permit was applied for on December 15, 1997 and received on October 19, 1998.
- Presidential International Border Crossing Permit: The State Department's International Boundary Commission issued the U.S.-Canada border-crossing permit in a 16-day timeframe.
- Additional involvement or permitting by other U.S. Federal Agencies: Three separate environmental permits were required from the U.S. Army Corps of Engineers. The following federal agencies were also involved in reviewing this project. There were no tribal lands crossed by the Vector pipeline route.
 - U.S. Fish and Wildlife
 - U.S. Army Corps of Engineers
 - U.S. Environmental Protection Agency
 - U.S. Department of Agriculture, National Resource Conservation Service
 - National Park Service
 - U.S. Coast Guard
- State Environmental Permits: State agencies in Illinois, Indiana and Michigan were consulted and/or provided comments to the FERC. In addition, Vector had to obtain an estimated 26 separate state environmental permits prior to the commencement of construction. The state agencies Vector worked with during the three years of planning and construction included the:
 - Illinois Environmental Protection Agency
 - Illinois Department of Natural Resources
 - Indiana Department of Environmental Management
 - Indiana Department of Natural Resources
 - Michigan Department of Environmental Quality
 - Michigan Department of Natural Resources
 Additionally, Vector consulted with the three respective State Historic Preservation Offices as well as the respective state Departments of Transportation.
- Local, Township and County Permits: In addition to the 355 road crossing permits obtained at the local level, a host of other approvals were needed at the local level. While local involvement also included input to the FERC or State permitting process, some 146 separate local, township or county permits were acquired. The types of such permits included zoning variances for aboveground facilities, soil and water conservation district permits, licenses to cross local publicly owned lands, etc.

Examples of environmental and cultural resources included in assessment and construction mitigation plans:

The typical width of the permanently maintained right-of-way is up to 50 feet, depending on the presence of pre-existing adjoining utility or pipeline rights-of-way. The construction right-of-way was typically 110 feet wide. In addition to the approximately 1,200 acres of land included in the permanent right-of-way, approximately 3,940 acres of land was temporarily affected by construction and thus included in the environmental assessments. A study corridor wider than the temporary work space was necessary in light of the need for site-specific deviations that could be found necessary during the actual construction process.

- Vector crossed 88 perennial waterbodies, many of which required a site-specific pipeline crossing plan. Such waterbodies are crossed using a variety of pre-approved methods to mitigate potential environmental impacts, including open cut crossing, dry flume crossing, dam-and-pump crossing and horizontal directional drilling method.
- Assessment and mitigation plans for wildlife and plants that are federally listed in addition to such additional state listing of listed species.
- Permits for the discharge of hydrostatic test water and trench water.
- Identification-level assessment of the entire route for potentially affected cultural resources, which resulted in 67 evaluation-level surveys and one area of cultural resource data recovery.

- Air quality permits for facilities being constructed, as well as construction noise and air mitigation measures.
- Construction mitigation measures for facilities within flood zones.
- Agricultural protection practices, including topsoil protection.
- Erosion and sediment assessment and mitigation plans.
- Wetland crossing mitigation plans.
- Site specific plans for areas for residences within 50-feet of the construction work area.

It should be noted that Vector's environmental assessment, permitting and inspection costs for the U.S. portion of the project was approximately \$20 million, of which approximately \$7 million, one half of the total environmental assessment cost, was for the cultural resources assessments. The environmental assessment, permitting and inspection cost for the 15-mile-long segment in Canada was approximately \$1 million.

Public Consultation: In addition to the public consultation initiated by FERC, Vector conducted a public consultation and information program that included direct mailings, one-on-one consultations, community meetings and an informational website with project-related information.

- Landowners: The initial route proposed by Vector was 330 miles long. Following extensive negotiations, a 59-mile segment of an existing 36-inch natural gas pipeline was leased, reducing the amount of new right-of-way and new pipeline construction to approximately 270 miles. An estimated 2,700 tracts of land and 2,600 landowners were initially identified as being affected by the Vector Pipeline. Through the incorporation of the lease line and a number of route variations along other segments of the route, by the end of the project the number of tracts was reduced to approximately 1,900 involving 1,600 landowners. In addition to the notices sent by FERC to landowners, Vector initiated supplementary summary communications using a newsletter or letter format. In all, Vector sent about eight such mailings. In addition, during the process of acquiring the private or publicly owned right-of-way, Vector representatives meet individually (by personal meeting or phone call) with every landowner a number of times during the 3-year planning and construction process.
- Public Officials: An estimated 200 public officials with constituents along the route were identified (and periodically updated) by Vector and included in the FERC mailings and notices. These officials included U.S. and State Congressional members and Senators (and their District Offices), Governors, County Board Chairmen, County Board members, Mayors, Village Managers, Township Supervisors and other key administrators. Vector also initiated supplementary contact with these officials or their staff that included periodic mailings such as copies of the eight mailings sent to landowners, safety and public awareness materials when the pipeline began operations and a final wrap-up letter. In some cases where issues needed to be resolved, Vector participated in an estimated 60 special presentations at community-initiated forums, Township or County Board meetings or with one-on-one meetings with public officials or their staff.

Appendix C

Executive Order 13212

Executive Order Actions to Expedite Energy-Related Projects

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in order to take additional steps to expedite the increased supply and availability of energy to our Nation, it is hereby ordered as follows:

Sec. 1. Policy. The increased production and transmission of energy in a safe and environmentally sound manner is essential to the well-being of the American people. In general, it is the policy of this Administration that executive departments and agencies (agencies) shall take appropriate actions, to the extent consistent with applicable law, to expedite projects that will increase the production, transmission, or conservation of energy.

Sec. 2. Actions to Expedite Energy-Related Projects. For energy-related projects, agencies shall expedite their review of permits or take other actions as necessary to accelerate the completion of such projects, while maintaining safety, public health, and environmental protections. The agencies shall take such actions to the extent permitted by law and regulation, and where appropriate.

Sec. 3. Interagency Task Force. There is established an interagency task force (Task Force) to monitor and assist the agencies in their efforts to expedite their review of permits or similar actions, as necessary, to accelerate the completion of energy-related projects, increase energy production and conservation, and improve transmission of energy. The Task Force also shall monitor and assist agencies in setting up appropriate mechanisms to coordinate Federal, State, tribal, and local permitting in geographic areas where increased permitting activity is expected. The Task Force shall be composed of representatives from the Departments of State, the Treasury, Defense, Agriculture, Housing and Urban Development, Justice, Commerce, Transportation, the Interior, Labor, Education, Health and Human Services, Energy, Veterans Affairs, the Environmental Protection Agency, Central Intelligence Agency, General Services Administration, Office of Management and Budget, Council of Economic Advisers, Domestic Policy Council, National Economic Council, and such other representatives as may be determined by the Chairman of the Council on Environmental Quality. The Task Force shall be chaired by the Chairman of the Council on Environmental Quality and housed at the Department of Energy for administrative purposes.

Sec. 4. Judicial Review. Nothing in this order shall affect any otherwise available judicial review of agency action. This order is intended only to improve the internal management of the Federal Government and does not create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.

GEORGE W. BUSH
THE WHITE HOUSE
May 18, 2001

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Appendix D

Model Memorandum of Understanding

The following is an example of a potential memorandum of understanding that seeks to better integrate the environmental reviews associated with pipeline proposals. It was prepared by the Interstate Natural Gas Association of America, not the Dialogue Group. The Dialogue Group did not attempt to seek consensus on its contents, and has included it here only for information purposes. This example agreement should not be interpreted as a commitment or an intent to commit by any agency referenced in the agreement; agency names are included only as examples.

**(MODEL) INTERAGENCY AGREEMENT
ON
INTEGRATING NEPA, ESA, AND NHPA REVIEW
WITH THE ISSUANCE OF FERC CERTIFICATES,
BLM RIGHT-OF-WAY PERMITS,
AND COE 404 PERMITS
FOR INTERSTATE NATURAL GAS PIPELINES**

I. OVERVIEW

Numerous studies have concluded that the expanded availability and use of domestically produced natural gas is an important public policy goal. The efficient permitting of new interstate pipeline projects is essential to facilitate the nation's ability to meet this goal.

The Federal Energy Regulatory Commission ("FERC") is the federal agency responsible for authorizing the construction and operation of interstate natural gas pipelines. It issues certificates of public convenience and necessity for such pipelines under section 7 of the Natural Gas Act of 1938, as amended.

The Department of Interior's Bureau of Land Management ("BLM") is a federal agency responsible for the management of public lands. The BLM manages 270 million surface acres in 29 states that serve as habitat for many plant and animal species. The BLM is the federal agency principally responsible for issuing right-of-way permits for natural gas pipelines that cross federal lands. Section 28 of the Mineral Leasing Act of 1920, as amended, gives BLM the authority to issue right-of-way grants for natural gas pipelines through lands held by the United States, except lands in the National Park System, lands held in trust for an Indian or Indian tribe, and lands on the Outer Continental Shelf.

The United States Army Corps of Engineers ("COE") is a major Army command that is responsible for, among other things, the administration of laws for the protection and preservation of waters of the United States, including wetlands. The COE grants permits under section 404 of the Clean Water Act ("CWA") for the discharge of dredged or fill material into navigable waters, including wetlands.

The National Environmental Policy Act of 1969, as amended, ("NEPA") requires federal agencies to fully evaluate the environmental impact of every major federal action significantly affecting the quality of the human environment, through the preparation and consideration of an Environmental Impact Statement ("EIS"). Where the federal action may not significantly affect the quality of the human environment, but the action is not categorically excluded from the requirement that an EIS be prepared, the agency must prepare an Environmental Assessment ("EA"). Based on the EA, the agency must then

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either make a finding of no significant impact or prepare an EIS. 40 C.F.R. § 1501.4 (Regulations of the Council on Environmental Quality (“CEQ”) on NEPA implementation by federal agencies). The preparation of an EA is, in many respects, comparable to the preparation of an EIS.

The Environmental Protection Agency (“EPA”) is the federal agency responsible for administering a wide variety of environmental laws. The responsibilities of EPA relevant to the pipeline permitting process include commenting on Environmental Impact Statements of all federal agencies under section 309 of the Clean Air Act, the authority to restrict in certain circumstances, the COE’s authority to issue section 404 permits, and the authority to issue permits for pipeline-related activities that involve discharges of pollutants subject to the requirements of the National Pollutant Discharge Elimination System or emissions that may be subject to permitting requirements under the Clean Air Act.

The issuance by the FERC of a certificate of public convenience and necessity for a major pipeline construction project using right-of-way in which there is no existing natural gas pipeline is an action that normally requires the preparation of an EIS. 18 C.F.R. § 380.6(a)(3) (FERC regulations on NEPA). Similarly, the issuance of a right-of-way permit for a major pipeline is categorized by BLM’s guidelines implementing NEPA as an action that normally requires an EIS. 48 Fed. Reg. 43731, 43732 (September 26, 1983) (Para. 5.3.A.(5)(b) of Appendix 5 to 516 DM 6). These EIS requirements may be satisfied through cooperative efforts by the agencies. 40 C.F.R. § 1506.3(c). Significant pipeline projects that do not require an EIS typically require the preparation of an EA, which should also involve the relevant agencies in a cooperative effort.

The Endangered Species Act of 1973, as amended, (“ESA”) requires each federal agency to insure that any action it authorizes is not likely to jeopardize the continued existence of any endangered or threatened species (“listed species”) or result in the destruction or adverse modification of critical habitat for such species (“critical habitat”). Section 7(a)(2) of the ESA.

The Department of Interior’s U.S. Fish and Wildlife Service (“FWS”) is the federal agency principally responsible for implementation of the ESA. Other federal agencies are required by section 7 of the ESA to consult with the FWS in carrying out their ESA responsibilities and the FWS is responsible for issuing biological opinions on the impact of a proposed agency action on listed species or its critical habitat. The consultation and other ESA requirements applicable to federal agencies may be carried out in coordination with and as part of the agencies’ NEPA processes. 50 C.F.R. § 402.06 (Joint Regulations on ESA).

The National Historic Preservation Act requires federal agencies to take into account the effect of the actions that they authorize on property listed or eligible for listing in the National Register of Historic Places and to afford the Advisory Council on Historic Preservation (“ACHP”) a reasonable opportunity to comment with regard to such actions.

The Council on Environmental Quality (“CEQ”) was established by NEPA within the Executive Office of the President in 1969. Its purpose is to formulate and recommend national policies to promote the improvement of the quality of the environment. CEQ has issued regulations applicable to all federal agencies for implementing the procedural provisions of NEPA. 40 C.F.R. Parts 1500 through 1508.

II. PURPOSE

The purpose of this Agreement is to establish a general framework for cooperation and participation among the FERC, the BLM, the COE, the EPA, the FWS, the ACHP and the CEQ (the “Participating Agencies”) that will merge the processes through which their environmental review responsibilities are met and their substantive decision-making authorities are exercised in connection with the authorization of interstate natural gas pipeline projects. The Participating Agencies will work together—and with appropriate involvement of other federal agencies, the public, States, Indian Tribal Governments, and local governments—to achieve the common goals of insuring that in decisions regarding the authorization of new pipeline projects, the responsibilities of each agency and of the authorities they administer, including the purposes of NEPA, the requirement to conserve listed species under the ESA, and the provisions of the NHPA encouraging the preservation of historical places, are met.

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The overall objective is to build consensus among all involved agencies to assure the timely, cost-effective development of needed, environmentally sensitive natural gas pipeline projects. Formal concurrences from the relevant agencies should be given at appropriate key stages of project development. This process should provide an orderly procedure through early identification of environmental resources at sufficient level of detail to develop quality documentation to meet NEPA/ESA/NHPA requirements.

In consideration of the above premises,

III. THE PARTICIPATING AGENCIES AGREE TO THE FOLLOWING:

Each individual agency that is a party to this Agreement will:

- A. **Seek Early Involvement.** As soon as practicable after an application for authority to construct a pipeline project has been accepted for filing by the FERC, and before a Notice of Intent (“NOI”) to prepare an environmental document is published, the Participating Agencies will, in consultation with each other, conduct a preliminary review of the proposed project. Based on such review, the Participating Agencies will:
1. Identify the lead agency for preparation of the EIS or EA. This will normally be the FERC, in light of its overall responsibility for determining whether such projects are consistent with public convenience and necessity.
 2. Identify a person or persons at each agency who will serve as the contact for that agency for purposes of the NEPA, ESA, CWA, NHPA, and other relevant review processes concerning the proposed project.
 3. Identify principal areas of potential concern to each agency and assess the need for and availability of agency resources needed for participation in the NEPA/ESA/CWA/NHPA/other relevant review process.
 4. Agree upon a schedule for further steps in the NEPA/ESA/CWA/NHPA/other review process and pipeline authorization that will be as expeditious as possible, consistent with the periods for analysis and response by the agencies and others that are required by the statutes and regulations applicable to the particular project. In establishing this schedule, the agencies will strive wherever possible to ensure that individual permitting processes and permit review activities occur on a concurrent, rather than sequential basis, with the objective of reducing the overall permitting timeframe to the greatest extent possible.
 5. Establish a common repository in which all filings with all of the agencies involved in reviewing or authorizing the project will be maintained, along with all orders, requests, etc., issued by all of the agencies. The agencies may maintain their own permit dockets or files in addition to the common repository.
 6. Include in the published NOI guidance to the public regarding the foregoing subjects.
- B. **Be Proactive Participants.** The Participating Agencies will provide on their own initiative the information and expertise they have available within their agencies that are appropriate for consideration or application in the NEPA/ESA/CWA/NHPA/other review process. The Participating Agencies will provide such information and expertise at the earliest possible time and on a continuing basis. To this end, the Participating Agencies agree that they will:
1. At the scoping stage of the process, identify the statutory, regulatory and policy responsibilities of each agency that are applicable to the review and ultimate approval of the proposed project.
 2. Also at the scoping stage, identify the significant issues and concerns related to the proposed project that need to be addressed in order for each agency to meet its obligations under NEPA, ESA, CWA, and NHPA, and under any other relevant statutory or regulatory requirement.
 3. In connection with the preparation of draft and final NEPA documents, furnish relevant studies, data (such as maps showing features over which each agency may have jurisdiction), and any other information concerning the status of relevant matters (including matters that may be under consideration, such as proposing a species for listing as endangered or threatened, or proposing an

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- area for wilderness status), which the Cooperator may have in its possession or to which it may have access.
- C. **Compile a Common Data-Base.** The Participating Agencies will assure that facts will be gathered, considered and relied upon by all Participating Agencies in a single NEPA/ESA/CWA/NHPA/other review process involving all Participating Agencies. The Participating Agencies will:
1. Cooperate in the preparation of requests for additional studies or data from the applicant, to avoid duplicative requests and to compile a common data-base on which all of the Participating Agencies will rely.
 2. Cooperate in deciding the level of detail that will be required for the NEPA/ESA/CWA/NHPA/other review and the level of detail that will be addressed at later stages of project development.
 3. Cooperate in the development of a common set of alternative actions for consideration.
 4. Cooperate in proposing mitigation measures that are agreed upon by mutual consent of the Participating Agencies.
- D. **Adopt an Efficient Schedule.** The Participating Agencies will conduct the comprehensive review required under NEPA, ESA, CWA, NHPA and other relevant authorities as efficiently as possible, taking into account statutory and regulatory time requirements. To this end, they will:
1. Not exceed the statutory or regulatory minimum time requirements except for exceptional circumstances.
 2. Provide informal comments in advance of deadline for written comments, to reduce the amount of time and effort that is otherwise involved in cataloging and reviewing comments on areas where no significant differences of opinion exist.
- E. **Agree on Decision Points.** The Participating Agencies will agree on appropriate major decision points for significant decisions and will seek to achieve consensus among the Participating Agencies on such issues at the agreed-upon decision points. The Participating Agencies agree, for example:
1. To agree upon the choice of a recommended action, where alternative courses of action have been considered, prior to the issuance of the final NEPA document.
 2. To agree upon all significant mitigation measures that will be required, prior to the issuance of the final NEPA document.
- F. **Resolve Disputes.** To avoid unnecessary delay and to enable the agencies to take a uniform position, the Participating Agencies agree to resolve potential disputes by mutual agreement, if possible, or by reference to CEQ, if necessary. If a dispute cannot be resolved among the Participating Agencies, the Participating Agencies agree that:
1. All documentation concerning the dispute will be forwarded to the CEQ.
 2. The Participating Agencies will defer further action regarding the subject of the dispute for a reasonable time within which to receive comments from CEQ.
 3. Comments received from CEQ will be taken into account by the Participating Agencies in determining further actions regarding the subject of the dispute.

IV. IT IS MUTUALLY AGREED AND UNDERSTOOD THAT:

- A. Nothing in this Agreement shall obligate the Participating Agencies to expend appropriations or enter into any contract or other obligations.
- B. This Agreement may be modified or amended upon written request of any party hereto and the subsequent written concurrence of all of the Participating Agencies. Cooperator participation in this Agreement may be terminated with the 60-day written notice of any party to the other Participating Agencies.
- C. This Agreement is intended only to improve the internal management of the executive branch and is not intended to, nor does it create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any person.
- D. This Agreement is to be construed in a manner consistent with existing law and regulations.

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E. The terms of this Agreement are not intended to be enforceable by any party other than the signatories hereto.

V. PRINCIPAL CONTACTS

The following persons will be the principal contacts for their respective agencies at the time of execution of this Agreement. These contacts may be changed at an agency's discretion upon notice to the other Participating Agencies.

Federal Energy Regulatory Commission:

Bureau of Land Management:

Corps of Engineers:

Environmental Protection Agency:

U.S. Fish and Wildlife Service:

Advisory Council on Historic Preservation:

Council on Environmental Quality:

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Appendix E

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Appendix F

Acronyms

ACHP	Advisory Council on Historic Preservation
bcf	billion cubic feet
BLM	Bureau of Land Management
CEQ	Council on Environmental Quality
COE	U.S. Army Corps of Engineers
CWA	Clean Water Act
DOE	Department of Energy
DOT	Department of Transportation
EA	Environmental Assessment
EIA	Energy Information Administration
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
FWS	U.S. Fish and Wildlife Service
GTI	Gas Technology Institute
INGAA	Interstate Natural Gas Association of America
IOGCC	Interstate Oil and Gas Compact Commission
NARUC	National Association of Regulatory Utility Commissioners
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOI	notice of intent
NPC	National Petroleum Council
OPS	Office of Pipeline Safety
PRCI	Pipeline Research Council International
tcf	trillion cubic feet