

The States and Energy Siting:

Cooperation in the
Ohio River Valley

Executive Summary

This study is presented in two volumes. Volume I: Main Report describes the multistate siting issues, activities needed to address them, the need for and constraints to multistate cooperation, the adequacy of existing institutional arrangements for multistate problems and major conclusions and recommendations. Volume II: Appendices includes staff working papers, existing and proposed major energy facilities in the Ohio Valley, and a list of existing state and federal permit requirements and institutional arrangements for energy facility siting. The report is available from The Council of State Governments, Box 11910, Lexington, Kentucky 40578. Volume I: Main Report (RM-708) is priced at \$8.00; Volume II: Appendices (RM-709) is \$8.00.



The selection of sites for major energy facilities affects economies, social structures and environments without respect for state boundaries. Industry and government attempt to minimize adverse impacts, but disagreements occur and conflicts involving two or more states arise. This is particularly true in the Ohio Valley, where existing and proposed facilities are clustered and affect several states.

Determining how best to deal with multistate siting is a challenge. States are reluctant to participate in any institutional arrangements that jeopardize their sovereignty or compromise their self interest in economic competition with other states, and any institutional arrangement must be sensitive to political and legal issues.

Several institutional arrangements—defined as structured patterns of interaction—exist to deal with multistate issues. Some are procedural, some involve primarily the developer or the host state, and others require a multistate organization. Any assessment of institutional arrangements must consider the type of problems to be solved, the activities needed to address them, and their feasibility and effectiveness. Not all are likely to be equally effective (able to resolve the issue) or feasible (capable of being supported by those whose participation is important).

The diversity of multistate problems complicates the task of finding appropriate institutional solutions. Some issues focus on the operation of existing facilities and others on anticipated impacts of proposed facilities. An institutional mechanism concerned with proposed facilities must be prepared to deal with perceived impacts as well as impacts which can reasonably be expected to occur. Some issues revolve around a specific facility, while others—air quality or water resources management—are regional and may not be traced directly to a specific facility. Some issues involve definitive decisions made as part of the site evaluation process while others involve negotiation among state officials, industry representatives, or citizens. A mechanism designed to address facility specific issues is likely to involve different purposes, activities and participants than one designed for regional issues.

Several activities can contribute to instilling a multistate perspective in siting decisions made by the developer or by state officials. Early and open communication between the developer, the host and affected states, and citizens is the single most effective means to identify and resolve multistate issues. Though difficult to achieve, communication early in site selection and site evaluation allows consideration of issues by the developer and the host state at a time when project modifications are still possible. Open communication encourages identification of all stakeholders and helps establish the conciliatory atmosphere necessary to resolve issues. Communication is also the key to a second activity, conflict management, which anticipates conflict and promotes negotiation of disagreements. A third activity is regional analyses, which provide the information needed by public or private decision-makers to understand the significance of individual siting decisions to the cumulative impacts of energy development and the long-term interests of the states. How each of these activities is conducted will vary, depending upon whether the issue is site specific or regional, when it occurs during the siting process, and whether it involves primarily state, citizen, or industry participants.

Designing effective, feasible institutional arrangements for multistate energy issues in the Ohio Valley states is difficult for a number of reasons. Basic perceptions of what the issues are vary within and among states. There is no

widespread awareness of siting impacts and their significance to the immediate and long-term interests of the states. There are differences among state officials on the proper state role in the complex siting process. There is ambivalence among state officials about cooperative approaches to multistate issues. Together, these add up to a noticeable lack of urgency about the consequences of regional energy development on the economic well-being of the states and a reluctance on the part of state officials to consider multistate concerns when making decisions about siting. Unless the economic, energy and environmental ties that bind the Ohio Valley states together, and the importance of energy facilities to these ties are recognized, few institutional arrangements for multistate issues will be both effective and feasible.

State officials are guarded in their attitudes toward new proposals to encourage a multistate perspective in decision-making on energy facility siting, even though existing procedures and organizations are recognized to have major shortcomings. The need for each state to improve its internal capability for siting is generally recognized as a first step in dealing with multistate issues. On the whole, voluntary and advisory mechanisms are considered as having limited usefulness—they have the advantage of being informal, flexible and sensitive to the concerns of each state, but they too easily collapse when major disagreements arise. Voluntary arrangements are also unable to provide definitive solutions to disputes among states. Sensitivity to state sovereignty and self interest appears to preclude strong state support for authoritative intergovernmental institutions outside the federal courts. State officials appear more receptive to procedural approaches which depend largely on unilateral state action rather than on creation of new multistate arrangements. Yet there is some acknowledgement that regional issues may require cooperative actions apart from siting procedures.

The low level of concern, the ambivalence toward multistate institutions, the frustration with existing means to deal with multistate issues—all point to the need for incremental steps to bring a multistate perspective to energy development. Certain guidelines are evident in determining which institutional arrangements are feasible and effective. The arrangements must be flexible—able to accommodate political sensitivities and institutional differences within each state. It must be informal—not impinging on the states' basic authority or interest. It must provide continuity—the capability to continue in spite of conflicts or indifference. It must encourage communication among all parties—the states, developers and citizens. It must be appropriate to the type of issue and activity. It should assist states in recognizing economic, energy and natural resource interdependencies.

Several institutional arrangements are needed to assist the energy industry and state officials in the Ohio Valley in effectively addressing multistate siting issues. Some may be primarily unilateral and procedural; others may be multistate and involve an organization. Each is intended to improve communication among all stakeholders. Most importantly, any institutional effort to address multistate issues requires the interest, commitment and support of top officials in the states and in the industry.

The primary activities and institutional arrangements which appear feasible and effective for multistate siting issues in the Ohio Valley states are:

- Encourage greater public awareness of the significance of energy development for the states and the region through a regional symposium, bringing together key public officials, industry representatives from all

economic sectors and citizens to begin a dialogue on energy development and its implications for the economic well-being and environmental health of the Valley states.

- Establish a central communication channel, serving as a multistate information clearinghouse for policy concerns and technical issues in order to facilitate early and open communication among affected states, developers and citizens. The central channel would serve as a catalyst, not as a vehicle for direct communication among affected parties.
- Use the National Environmental Policy Act (NEPA) process as an effective procedural vehicle for solving facility specific/multistate problems. Affected states would participate as cooperating agencies and devote adequate resources for early and active participation.
- Establish a regional environmental mediation center to facilitate communication and negotiation among industry, public, and governmental disputants on selected multistate siting and other energy and environmental conflicts.
- Use a multistate forum, such as the ORSANCO Steering Committee on Energy Facility Siting, to encourage identification and continuing discussion of shared regional issues in the Valley states that call for individual and cooperative state action.
- Establish a regional association of state air quality officials to identify and assess shared and long-term air quality concerns and to identify opportunities for cooperative action.
- Improve each state's ability to anticipate and address regional issues through development of state policies and goals for energy and natural resource development and through analyses which allow it to identify those broad candidate regions for future energy development and avoidance areas which reflect its particular needs and concerns.

This study was conducted by The Council of State Governments for the Ohio River Valley Water Sanitation Commission (ORSANCO) under grant No. 80441-IE provided by The John A. Hartford Foundation of New York City. The contents of this report do not necessarily reflect the views of The Council of State Governments, ORSANCO or The John A. Hartford Foundation.

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**Cooperation in the
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**Volume I
Main Report**

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The Council of State Governments
Lexington, Kentucky

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A Note on Volume II

Documents and information supporting this *Main Report* have been collected and published as *Volume II, Appendices*. The supplementary volume includes:

- Comments on the study by representatives of electric utilities in the Ohio River Valley.
- An overview of existing and proposed energy facilities in the Ohio River Valley.
- A series of working papers on the siting process, regional organizations, central communications, the National Environmental Policy Act, mediation, the Association of State Air Quality Officials, legal institutions, and a multi-state perspective on the Ohio River Valley.
- Existing state, federal and regional institutional arrangements for multi-state cooperation.
- A description of the research design for the study, including an extended bibliography.

The States and Energy Siting, Volume II, Appendices (RM-709, ISBN 0-87292-027-5) is available from The Council of State Governments, Iron Works Pike, P.O. Box 11910, Lexington, Kentucky 40578 at a cost of \$8 per copy.

Preface

The siting of major energy facilities in the Ohio River Valley attracted the attention of the Ohio River Valley Water Sanitation Commission (ORSANCO). Concerned with multistate issues created by the potential clustering of facilities, the member states of Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, West Virginia and Virginia initiated a study of institutional options capable of resolving multistate siting issues. The key criterion for evaluating alternatives was that any proposed institutional arrangement be effective and able to be supported by the Ohio Valley states.

The study focuses on energy facility siting in the Ohio River Valley, but its analysis and recommendations are applicable to other regions where controversial facilities are being proposed. The study is not limited to energy siting, but provides insight to the roles and relationships among states and the role of multistate institutions in addressing interstate problems. States currently face many problems that cut across state boundaries—hazardous waste management, low-level radioactive waste disposal, water resource planning, air pollution control, fisheries. The report's findings and recommendations can be applied to resolving many of these troublesome issues.

The report is presented in two volumes: Volume I contains a description of multistate siting issues, activities needed to address them, a discussion on the need for and constraints to multistate cooperation, an analysis of the adequacy of existing institutional arrangements, and major conclusions and recommendations. Volume II (Appendices) includes staff working papers on the siting process and the recommendations, a list of existing state and federal institutional arrangements for energy facility siting, comments on the study by the electrical utility industry, and a description of the study method and design.

This report was prepared for the Ohio River Valley Water Sanitation Commission (ORSANCO) by The Council of State Governments under a grant provided by The John A. Hartford Foundation of New York City. Leo Weaver, Executive Director of ORSANCO, served as the Program Manager to the project and provided invaluable input and direction to the study. A committee of ORSANCO commissioners directed the study. Members include: Richard Armstrong, U.S. Army Corps of Engineers; Warren L. Braun, Virginia Water Control Board; Richard Carlson, Illinois Environmental Protection Agency; Peter Duncan, Pennsylvania Department of Environmental Resources; Paul Emler Jr., Allegheny Power Service Corp.; Ralph C. Pickard, Indiana State Board of Health; David Robinson, West Virginia Department of Natural Resources; and Jackie Swigart, Kentucky Department for Natural Resources and Environmental Protection. Reviews and comments on the substance of the report were also provided by two standing ORSANCO committees—the Power Industry Advisory Committee and the Public Interest Advisory Committee. Throughout the research, state and industry officials and citizens pro-

vided invaluable insights to the siting issues and institutional ways to solve them. This report could not have been completed without their assistance.

The project team for The Council of State Governments was headed by Anne D. Stubbs, Program Manager for Environmental Resources and Development. Russell Barnett was the principal researcher and author of the report. Other team members who provided invaluable assistance are Susan Click, Leslie Cole, Ben Jones, Pam Rehak, and Leonard U. Wilson. Consultation was provided by William McGorum of Baird-Williams Associates, who has extensive experience in energy siting policies, and James McLaughlin of the University of West Virginia, who provided much of the legal research. Karen Pinches and Barbara Turpin provided outstanding support to the study team.

Executive Summary

The selection of sites for major energy facilities affects economies, social structures and environments without respect for state boundaries. Industry and government attempt to minimize adverse impacts, but disagreements occur and conflicts involving two or more states arise. This is particularly true in the Ohio Valley, where existing and proposed facilities are clustered and affect several states.

Determining how best to deal with multistate siting is a challenge. States are reluctant to participate in any institutional arrangements that jeopardize their sovereignty or compromise their self interest in economic competition with other states, and any institutional arrangement must be sensitive to political and legal issues.

Several institutional arrangements—defined as structured patterns of interaction—exist to deal with multistate issues. Some are procedural, some involve primarily the developer or the host state, and others require a multistate organization. Any assessment of institutional arrangements must consider the type of problems to be solved, the activities needed to address them, and their feasibility and effectiveness. Not all are likely to be equally effective (able to resolve the issue) or feasible (capable of being supported by those whose participation is important).

The diversity of multistate problems complicates the task of finding appropriate institutional solutions. Some issues focus on the operation of existing facilities and others on anticipated impacts of proposed facilities. An institutional mechanism concerned with proposed facilities must be prepared to deal with perceived impacts as well as impacts which can reasonably be expected to occur. Some issues revolve around a specific facility, while others—air quality or water resources management—are regional and may not be traced directly to a specific facility. Some issues involve definitive decisions made as part of the site evaluation process while others involve negotiation among state officials, industry representatives, or citizens. A mechanism designed to address facility specific issues is likely to involve different purposes, activities and participants than one designed for regional issues.

Several activities can contribute to instilling a multistate perspective in siting decisions made by the developer or by state officials. Early and open communication between the developer, the host and affected states, and citizens is the single most effective means to identify and resolve multistate issues. Though difficult to achieve, communication early in site selection and site evaluation allows consideration of issues by the developer and the host state at a time when project modifications are still possible. Open communication encourages

identification of all stakeholders and helps establish the conciliatory atmosphere necessary to resolve issues. Communication is also the key to a second activity, conflict management, which anticipates conflict and promotes negotiation of disagreements. A third activity is regional analyses, which provide the information needed by public or private decision-makers to understand the significance of individual siting decisions to the cumulative impacts of energy development and the long-term interests of the states. How each of these activities is conducted will vary, depending upon whether the issue is site specific or regional, when it occurs during the siting process, and whether it involves primarily state, citizen, or industry participants.

Designing effective, feasible institutional arrangements for multistate energy issues in the Ohio Valley states is difficult for a number of reasons. Basic perceptions of what the issues are vary within and among states. There is no widespread awareness of siting impacts and their significance to the immediate and long-term interests of the states. There are differences among state officials on the proper state role in the complex siting process. There is ambivalence among state officials about cooperative approaches to multistate issues. Together, these add up to a noticeable lack of urgency about the consequences of regional energy development on the economic well-being of the states and a reluctance on the part of state officials to consider multistate concerns when making decisions about siting. Unless the economic, energy and environmental ties that bind the Ohio Valley states together, and the importance of energy facilities to these ties are recognized, few institutional arrangements for multistate issues will be both effective and feasible.

State officials are guarded in their attitudes toward new proposals to encourage a multistate perspective in decision-making on energy facility siting, even though existing procedures and organizations are recognized to have major shortcomings. The need for each state to improve its internal capability for siting is generally recognized as a first step in dealing with multistate issues. On the whole, voluntary and advisory mechanisms are considered as having limited usefulness—they have the advantage of being informal, flexible and sensitive to the concerns of each state, but they too easily collapse when major disagreements arise. Voluntary arrangements are also unable to provide definitive solutions to disputes among states. Sensitivity to state sovereignty and self interest appears to preclude strong state support for authoritative intergovernmental institutions outside the federal courts. State officials appear more receptive to procedural approaches which depend largely on unilateral state action rather than on creation of new multistate arrangements. Yet there is some acknowledgement that regional issues may require cooperative actions apart from siting procedures.

The low level of concern, the ambivalence toward multistate institutions, the frustration with existing means to deal with multistate issues—all point to the need for incremental steps to bring a multistate perspective to energy development. Certain guidelines are evident in determining which institutional arrangements are feasible and effective. The arrangements must be flexible—able to accommodate political sensitivities and institutional differences within each

state. It must be informal—not impinging on the states' basic authority or interest. It must provide continuity—the capability to continue in spite of conflicts or indifference. It must encourage communication among all parties—the states, developers and citizens. It must be appropriate to the type of issue and activity. It should assist states in recognizing economic, energy and natural resource interdependencies.

Several institutional arrangements are needed to assist the energy industry and state officials in the Ohio Valley in effectively addressing multistate siting issues. Some may be primarily unilateral and procedural; others may be multistate and involve an organization. Each is intended to encourage a multistate perspective on decisions about energy facility siting through improving the quality of communication among all stakeholders. Most importantly, any institutional effort to address multistate issues requires the interest, commitment and support of top officials in the states and in the industry.

The primary activities and institutional arrangements which appear feasible and effective for multistate siting issues in the Ohio Valley states are:

- Encourage greater public awareness of the significance of energy development for the states and the region through a regional symposium, bringing together key public officials, industry representatives from all economic sectors and citizens to begin a dialogue on energy development and its implications for the economic well-being and environmental health of the valley states.
- Establish a central communication channel, serving as a multistate information clearinghouse for policy concerns and technical issues in order to facilitate early and open communication among affected states, developers and citizens. The central channel would serve as a catalyst, not as a vehicle for direct communication among affected parties.
- Use the National Environmental Policy Act (NEPA) process as an effective procedural vehicle for solving facility specific/multistate problems. Affected states would participate as cooperating agencies and devote adequate resources for early and active participation.
- Establish a regional environmental mediation center to facilitate communication and negotiation among industry, public, and governmental disputants on selected multistate siting and other energy and environmental conflicts.
- Use a multistate forum, such as the ORSANCO Steering Committee on Energy Facility Siting, to encourage identification and continuing discussion of shared regional issues in the valley states that call for individual and cooperative state action.
- Establish a regional association of state air quality officials to identify and assess shared and long-term air quality concerns and to identify opportunities for cooperative action.
- Improve each state's ability to anticipate and address regional issues through development of state policies and goals for energy and natural resource development and through analyses which allow it to identify those broad candidate regions for future energy development and avoidance areas which reflect its particular needs and concerns.

Multistate Siting Issues: Their Importance to the States

The siting of major energy facilities¹ often creates economic, social and environmental impacts that transcend state boundaries. Where these impacts are viewed as unacceptable in the affected states, multistate issues arise. A variety of technological solutions—engineering, economic, operational—are available to ameliorate the undesirable consequences of these impacts; however, experience shows that the major obstacle to resolving multistate problems is not technical but the lack of effective institutional arrangements.

Institutional arrangements are structured patterns of interaction among individuals, organizations and groups. Some are primarily procedural—dealing with the patterned ways in which governmental agencies relate to each other, citizens and private developers. Others are primarily organizational— involving a formal structure and resources committed to multistate concerns.

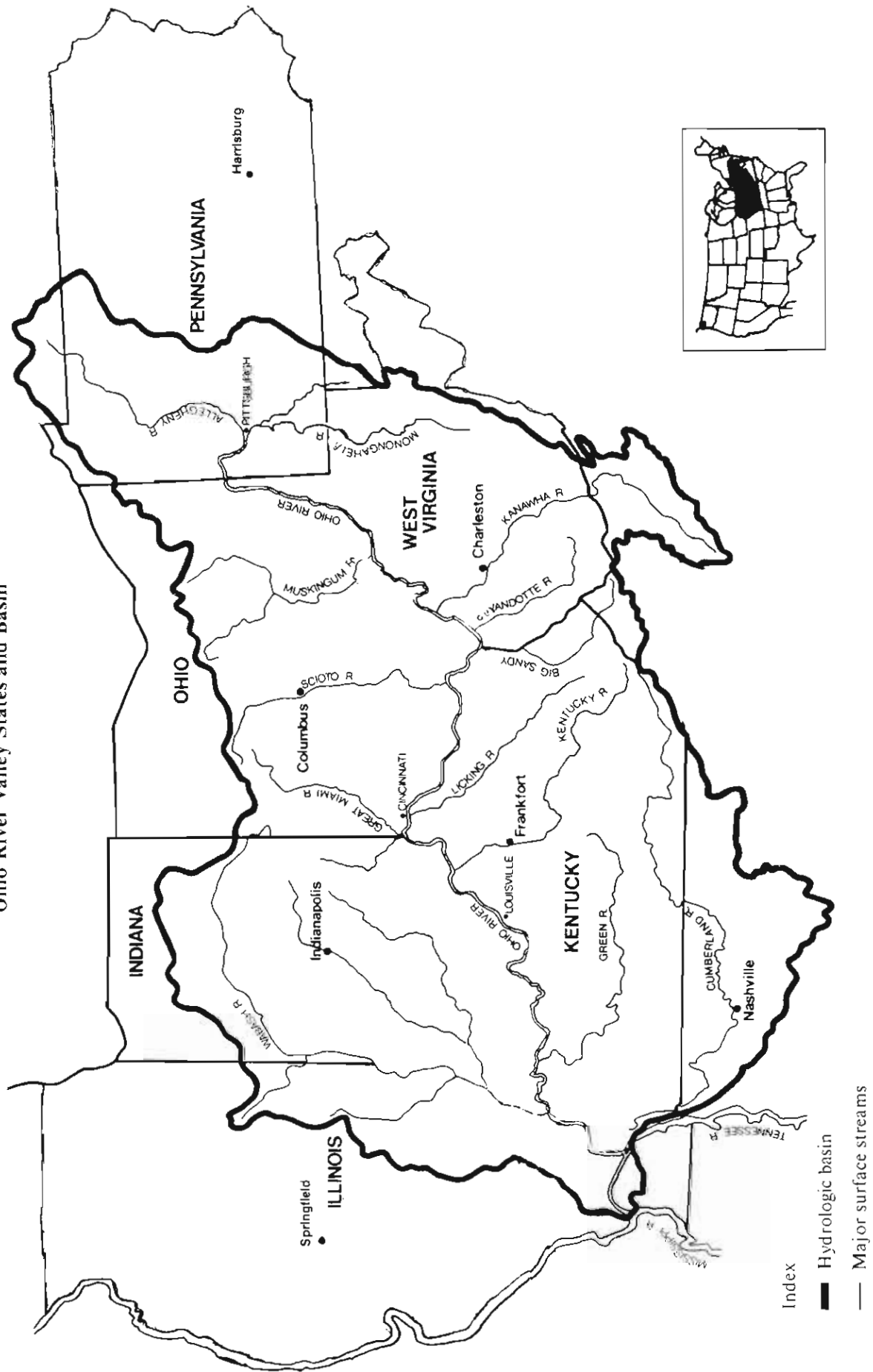
This study is an examination of feasible and effective institutional arrangements by which the states can resolve multistate concerns.² It is designed to assist both public and private sector decision-makers. Although the focus of the study is on energy facility siting in the Ohio Valley (see Fig. 1), the general principles and institutional arrangements can be applied to any number of multistate issues and regional groupings of states.

The analysis and recommendations focus on institutional arrangements within or implemented by state governments. This in no way implies that states are the only or primary actors needed to resolve multistate siting issues. Actions of industry and the general public affect energy siting decisions, but states play central roles in addressing many multistate issues.

Energy facility siting in the Ohio Valley states of Illinois, Indiana, Kentucky, Ohio, Pennsylvania and West Virginia is fertile for examining institutional arrangements for multistate issues. The combination of coal and water resources within these states makes them a major energy development center and the concentration of existing and proposed energy facilities along the Ohio River has created a number of multistate issues. Specific energy or natural resource issues in the valley are examined for the insight they offer to the design of feasible, effective institutional arrangements.

Major energy facilities include electric generating, synthetic fuel and nuclear processing facilities, refineries and coal slurry pipelines.

Figure 1
Ohio River Valley States and Basin



In assessing the effectiveness and feasibility of various institutional arrangements for multistate problems, the nature of the problem and the purposes to be served must be considered and weighed against the type and degree of commitment its intended participants—government, industry, citizens—are willing and able to make. In short, an analysis of alternative institutional arrangements must take into account the problems to be solved, the activities and actions needed to resolve them, the adequacy of existing multistate institutional arrangements and siting processes, and the need for as well as the constraints to multistate approaches to resolving siting issues.

An institutional arrangement for multistate problems is likely to win support only if the problems are clearly recognized as being multistate and if a multistate approach to solving them is viewed as mutually beneficial. Any assessment of feasible institutional arrangements must consider both the interdependencies and mutual interests that bind the states and the constraints to creation of multistate institutions.

The assessment of various institutional arrangements and the political and issue contexts within which they must operate leads to a set of specific recommendations for the Ohio Valley states. The recommendations are not mutually exclusive, but are a set of options which provide the first step in the incremental process of designing and implementing effective, feasible institutions that allow states to improve their ability to solve multistate problems.

In determining how multistate impacts can be addressed, a number of points should be noted:

- First, multistate siting impacts are not synonymous with multistate issues. Siting impacts become multistate issues only when disagreement arises in several states over the acceptability of the impacts.
- Second, the siting of energy facilities creates a number of multistate impacts, with different types of facilities generating different types and degrees of impacts and raising different associated issues. Nuclear generating facilities are likely to produce a different cluster of issues than are coal fired generating or coal conversion facilities. The issues may be socio-economic or environmental; they may involve beneficial or detrimental impacts. Since the types of impacts and issues vary, the most effective means to address them will vary also.
- Third, multistate siting issues are not necessarily limited to actual impacts of proposed facilities. Many issues reflect concerns with existing facilities or perceptions of impacts which might occur. In attempting to resolve these siting issues, the perception of potential impacts is frequently more important than the facts about anticipated impacts. Whether based on fact or perceptions, such concerns are real and, if unattended, may lead to multistate conflict.

A wide range of multistate issues may arise from the siting of major energy facilities. A distinction may be made between those issues related to a specific facility and those associated with energy development in general. A facility that creates concern in more than one state can be described as raising facility-specific/multistate issues. Facility-specific issues may be grouped into two cate-

Multistate siting impacts are not synonymous with multistate issues.

Multistate siting issues may be either facility-specific or regional issues.

gories: environmental and socioeconomic. Major issues include local trans-boundary air pollution, wastewater discharges, water consumption, the disposal of hazardous wastes from synthetic fuel facilities, stress on public infrastructures, and competition for major facilities. These issues can often be traced to the location, operating characteristics and design of a specific facility and are typically addressed through the site selection and permit review processes.

In contrast, problems or activities common to two or more states in a given geographic area, but not necessarily attributable to a specific facility, can be described as *regional issues*. Regional issues may involve a cluster of activities that affect the general welfare of more than one state. Examples include the cumulative impacts of many sources, including energy facilities, that contribute to the degradation and consumption of the region's resources of air and water. Regional issues may also include interests common to several states, such as adequate energy supplies, economic development and a sound transportation system in the region. Regional environmental or socioeconomic issues may create widespread public concern and involvement—particularly in regard to nuclear and synthetic fuel development and health and safety issues. Multistate issues arising from differences in values or perceptions are especially difficult to resolve. The Addendum to this report gives a more detailed description of such issues within the Ohio Valley states.

What Should Happen?

Activities to Address Multistate Issues

Any number of institutional arrangements exist through which these multistate issues can be addressed, but not all arrangements will be equally effective. The goal of any activity and institutional arrangement for multistate energy issues is the incorporation of a multistate perspective in decisions on energy development.

A clear understanding of the purpose and the activities needed to solve multistate issues is the first step in designing a suitable institutional mechanism. A wide range of activities are possible, ranging from simple information exchange to joint decision-making processes. Some activities may be effective in addressing environmental issues, others may be needed to deal with socioeconomic or public concerns. Some are well suited to both facility-specific and regional issues, while others are appropriate only to facility-specific problems. For many multistate issues, more than one activity may be required, either concurrently or sequentially.

Discussions with state officials, public interest and industry representatives in the Ohio Valley point to three major activities needed to address many of the multistate issues facing the region. These include resolution of multistate conflicts; improved communication between the states, project developer and citizens; and regional analyses of current and potential impacts and issues. A look at the characteristics of each activity suggests how they can contribute to resolving multistate energy issues.

The goal of any institutional arrangement is the incorporation of a multistate perspective in decisions on energy development.

Conflict Management

Facility-specific, multistate issues may mask deep-seated differences between states.

The siting of major energy facilities requires decisions on such conflict-producing matters as the allocation of limited resources, environmental protection policies, economic development needs, and the equitable assignment of costs and benefits. Myriad existing regulations establish the framework of standards within which such decisions are made. However, the differences in interpretation, enforcement and the scope of these laws between states do not always result in decisions that are totally satisfactory to all stakeholders (those in government and the private sector affected by or having an interest in a particular activity). When competing priorities, different values and contrasting ideologies are at stake, disputes are certain to arise. Multistate siting issues may have many roots, and efforts to resolve conflicts must be sensitive to the origin and nature of the disputes.

Disputes over a proposed facility may focus on superficial expression of more deep-seated interstate conflicts. While specific impacts of a proposed facility may be the major points of concern, they may also be symptoms of more general and basic differences among states. Such differences—in policies on management of natural resources, in environmental protection standards and enforcement, in policies for economic development—exist quite apart from the siting of a particular facility. Yet these regional differences become part of the facility siting review process and debate. Interstate competition to attract industry or citizen fears over rapid development may be absorbed into disputes over allowable emissions and discharges for a proposed facility.

Conflict in and of itself is not necessarily undesirable, and by arousing interest in particular societal concerns, it can result in positive action. Conflict over the Tellico Dam in Tennessee resulted in clarification and fundamental changes in the way the endangered species program is administered. Harnessing the interest and energy associated with disagreement and conflicts over energy development and operation in the Ohio Valley into positive channels is a major goal of conflict management.

The perception of potential impacts is frequently more important than reality.

Conflict may arise whenever there is disagreement over the acceptability of the multistate impacts of energy development. The disputants may be state officials or citizens in another state. Conflicts between states may arise for any number of reasons. Disagreements over the allocation of common resources and the effects of a project on another state are the most common cause. However, conflicts may arise over questions of equal treatment and perceived impacts on a state's self-interests through misunderstanding and the lack of sensitivity to another side's position.

The point of contention in a conflict may or may not be traced to documented impacts of a proposed facility. The perception of potential impacts is frequently more important than reality. Concerns, even if ill-founded, are real and need to be dealt with. Facts alone may not solve a problem if the concern is based in differing values or in differing interpretation of facts. When a conflict arose over the impacts of Public Service of Indiana's Gallagher power

plant in Kentucky, the fact that the plant emits 60,000 tons per year of SO₂ and may contribute up to 3 percent on some predicated violations of the 24-hour SO₂ standard in Jefferson County was less central to the Kentucky-Indiana dispute than were the differences in evaluating the significance and fairness of that impact. Perceptions that states are being treated differently under federal regulations and administrative practices can raise disputes about equal treatment. Many air quality problems are of this nature. The concern is not that any state is illegally permitting high emissions, but with the inequity and perceived economic consequences of allowing a facility in one state to have higher emission rates than a similar facility located adjacent to it but in another state and federal region. As useful as it is to look for objective facts and documented impacts, it is ultimately the perception of each party that defines the issue.

It is ultimately perceptions that define issues.

A perception that state interests are being adversely affected creates a number of multistate conflicts. Conflicts over nuclear facilities are based to some extent on their impact on coal markets—a major concern to the valley states. Misunderstanding and the lack of sensitivity to other points of view also may contribute to conflicts. When faced with massive studies detailing impacts of proposed facilities, individuals frequently see what they want to see, picking out and focusing on those facts that confirm their prior perceptions and disregarding or misinterpreting those that call their perceptions into question.

A number of conflict management steps are available to the disputants—be they states or private parties—to resolve multistate issues. These include conflict anticipation, conciliation, negotiation and use of neutral third parties. Conflict avoidance activities must occur early in the site selection and evaluation process. Conciliation—establishing an atmosphere that encourages positive interaction among disputants—may occur at any time during the planning process. Negotiation usually does not occur until an impasse is reached between two or more states. Neutral third-parties are usually not called in until after earlier steps have failed.

Conflict Anticipation

The best way to deal with conflict is to anticipate and avoid it to the greatest extent possible. Potential issues can be identified before social and economic impacts occur and opposing viewpoints are fully established. At this early phase, strategies may be developed which allow problems to be resolved on the basis of principle and policy rather than by crisis and confrontation. These strategies can be acted on before or during planning of a facility.

Both the states and the project developer have roles to play in anticipating conflicts over energy development. Quite apart from site evaluation, the states can anticipate possible issues and long-term problems if they identify state and regional interests and concerns and develop policies to address them. Conflicts over the allocation of water could be minimized if the states agreed to policies that minimize project impacts through such techniques as requiring off-stream

The best way to deal with conflict is to anticipate and avoid it to the greatest extent possible.

reservoirs. When a project is begun multistate impacts specific to the facility should be anticipated so that strategies may be developed to address them. During site selection, the developer can attempt to identify the broadest range of interested parties and possible issues and incorporate these into his early decisions. Once the project moves to public evaluation, the host state can make similar efforts to identify and consider multistate concerns during the review of permit applications.

Conciliation

Conciliation is an effort to improve the attitudes stakeholders have toward each other in order to encourage productive discussions. The lack of prior communication, mistrust or lack of credibility tend to increase hostility and allows misconceptions to build into conflict. Conciliation may be accommodated through regional organizations, informal meetings, pre-hearing conferences, and other meetings where stakeholders may have direct interaction. Such interaction, if carefully structured, can sensitize each group to the other's perspectives and build a working relationship and foundation.

Negotiation

Where conflict avoidance and conciliation are unable to resolve multistate conflicts, direct negotiation by the disputants is necessary. Too often, disputants attempt to resolve their differences by going directly to federal agencies, federal courts, or by seeking new or revised federal law. Direct discussion with the project developer or the host state is often overlooked as a vehicle for resolving conflicts.

Effective negotiation requires all parties to be committed to resolving their differences. This is often the first and sometimes most difficult step in resolving multistate conflicts. Conflict resolution is impossible if the cost of settlement appears great, or the gain involved is small. Disputants may simply ignore or avoid the possibility of resolution. Project opponents often employ tactics to delay a project until it is no longer economically feasible to continue. Delay tactics use a "weakest link" strategy of identifying procedural blocks to project completion. Delay often has the unanticipated consequence of encouraging the survival of the most economically hardy, not necessarily the most socially or environmentally desirable projects. Delay tactics often waste time, energy and resources which might be better directed to designing improvements to the facility that would make it more acceptable.

A second requirement is that the disputants are able to agree on the facts, although not necessarily their significance. The third requirement for negotiation is that all stakeholders are represented in the discussions. The exclusion of or disagreement by any one stakeholder can jeopardize the effectiveness of any negotiated agreement. Participants must be able to speak for their constituent

Effective negotiation requires all parties to be committed to resolving their differences.

cies and represent defined points of view. This is difficult for state governments, where authority and responsibility for reviewing energy development are scattered across a number of agencies and program areas. State officials in air quality, transportation, or economic development programs are often unaware of the concerns of sister agencies and unsure of the state's overall interest and position on a particular energy facility. A single agency may therefore be unable to negotiate all issues of concern. In those cases where issues are broad, the governor or the legislature may be the only authoritative spokesmen for the state. Identifying representatives who speak for the general public is even more difficult. Both elected officials and organized interest groups have legitimate claims to speak for the public's interest. Negotiation with representatives of organized groups has certain drawbacks, since accountability procedures and the ability to implement agreement on the broader public are absent.

No formal process exists to initiate negotiation.

The timing of negotiation affects both the appropriateness of the institutional arrangement and the chances of successful negotiation. During site selection and the early stages of site evaluation, more alternatives and flexibility in project sites and design exist, thus allowing greater latitude in negotiation. However, the multistate issues may not be fully defined nor the disputants ready to resolve their differences. On the other hand, if conflict techniques are applied late in the siting process, the range of issues may be narrowed to only those of key concern, but flexibility to address them is reduced. If negotiation is to be successful, the disputants must balance these tradeoffs and initiate the process as early as possible and focus on those items with negotiable elements.

The key is to deal with issues surrounding a proposed facility as early as possible. Delays during facility construction are far more costly to a developer than delays before or during the permit evaluation phase. With the initiation of construction, capital is committed, external financing arranged, equipment purchased, and labor force commitments made. A general rule of thumb is that delay costs equal approximately 1 percent per month of total construction costs. Settling conflicts before construction is a central goal of negotiation.

Although negotiation could settle some multistate conflicts, there is no institutional process currently to initiate such action on a multistate level, short of the federal government. Disputants, in order to establish a basis for negotiation, may attempt to build power by threats of litigation, loss, inconvenience or embarrassment. Such actions are often counter-productive to resolving conflicts.

Third Party Intervention

Third party intervention in negotiations is sometimes useful as a catalyst to initiate discussion. Third parties can provide a neutral perspective and clarify issues where direct communication between disputants is ineffective. Parties to a dispute sometimes need a private and confidential means of communicating without the dominating and distracting effect of the press, public and peripheral parties. In selected cases they may arbitrate the conflict. Federal courts

and agencies with the authority to impose definitive decisions are often used to arbitrate multistate conflicts. Reliance on federal courts to resolve conflicts is both time consuming and costly.

Mediation may have value in resolving conflicts. In contrast to arbitration, which imposes final and binding decisions, mediation is a voluntary process in which the parties to the dispute use a third party in a joint exploration and resolution of their differences. The mediator has no authority to impose a settlement, but bringing in a neutral third party can assist in identifying mutually agreeable solutions. Litigation of disagreements does not rule out the use of mediation. Once the issues are before the court, mediation may lead to a speedier resolution if it allows an out-of-court settlement to be reached.

Public officials generally oppose mediation, seeing it as a challenge to their legal authority and political control and unable to provide definitive, enforceable decisions. The potential for mediation where issues are state-to-state is therefore low. However, when multistate issues are between a potentially affected state or citizens and a project developer, the host state often prefers to detach itself from the debate and allow the disputants to come to some resolution before permits are issued. Since the legal authority and political control of the host state are not affected, the potential for successful mediation is greatly enhanced.

Communication

Communication—the transfer of information—is the most important activity needed in solving multistate energy issues. Without communication among the interested parties in each affected state, there can be no multistate perspective by the project developer and the state agencies evaluating a proposed facility and no basis for negotiations to resolve differences. Conversely, communication alone cannot resolve all of the multistate concerns associated with energy facility siting or operation. Where basic economic or philosophic interests are the source of conflict, additional communication will likely be ineffective and may increase conflict by highlighting differences among the states.

Communication does play a key role where the lack of information, misinformation, or misconceptions about a facility's characteristics or impacts are the basis of a multistate issue. There are currently a variety of communication channels between various states, citizens and industry in the region. These include written and verbal contacts, regional and national organizations, public notices and hearings and the mass media. The most common channels are the many informal and often ad hoc communications between state officials who deal with similar programs. Water quality officials, for example, informally communicate and are in direct contact through such organizations as the regional Ohio River Valley Water Sanitation Commission (ORSANCO). State air officials contact each other about specific permit applications directly and meet periodically through the State and Territorial Air Pollution Program Administrators (STAPPA), a national organization.

Informal communication rarely leads to the ongoing cooperation needed to solve regional problems.

Informal communication is usually opened in order to obtain specific information. Basic data concerning proposed projects—name of project, size, location, type of process—is commonly communicated. A new institutional mechanism to exchange this level of information is not likely to be very beneficial. However, several obstacles limit the amount and effectiveness of informal communication. A lack of prior communication, high personnel turnovers, travel restrictions, and the inability to identify individuals with corresponding responsibilities in another state—all serve to reduce the effectiveness of informal communication channels among states. Although extremely beneficial in identifying data and in negotiating differences concerning a specific project, informal communication rarely leads to the ongoing cooperation necessary to solve regional problems.

Formal communication channels—defined by formal authority and resulting in an authoritative outcome—offer little opportunity for the give and take needed for negotiation and compromise of multistate issues. Formal communication is often limited in its scope, content and procedures by the regulatory framework. In the form of public notices and hearing, it is lengthy, burdensome, inefficient and often allowing presentation of irrelevant and extraneous information. A General Accounting Office study of public involvement in planning public works found that “hearings, although allowing the public to express its opinions, do not provide a good forum for evaluating and discussing alternatives and issues . . . particularly where complex and controversial issues exist.”³ When involved in formal communication, state officials hesitate to negotiate on project impacts, focusing instead on whether the project meets the statutory standards and criteria. Formal communication often occurs late in the siting process when many alternatives have been precluded from serious consideration.

Formal negotiation is not always conducive to the give and take of compromise.

Notable exceptions to the shortcomings of many formal communication channels are the scoping meetings conducted under the National Environmental Policy Act (NEPA). Scoping meetings are held fairly early in the siting process and are designed to facilitate interactive communication among stakeholders. The purpose of the meetings is to identify multistate and other concerns that need to be addressed within the Environmental Impact Statement (EIS).

For multistate concerns, the timing of communication may be as important as its content. Discussions of multistate issues too often are reactive, coming after the site location and evaluation process are well advanced and substantial investments of interest, time and resources in the facility site have been made. Negotiation of new issues at that stage is difficult. For communication of multistate issues to be effective in influencing decisions, discussions need to be initiated as soon as possible for both the selection and evaluation stages of siting. The developer bears the responsibility for any communication with out-of-state interests during the site selection process, and this responsibility is shared with responsible state agencies in the host state during evaluation of a proposed facility. The introduction of new stakeholders and new issues can cause friction and delays when the major decisions on site location have been made.

Communication should be initiated as soon as possible after site selection.

Early communication allows consideration of various interests when sites and facility design plans are still flexible, but it can create another set of problems. Objections to a site location and the project may arise before a developer has sufficient information to respond to many of the expressed concerns. The open discussion of proposed projects, at a time when several sites are under consideration and engineering details still preliminary, is not only logistically difficult but can create concerns among the public and state officials about options which are later dropped from consideration. The educational requirement to explain all options ever considered and objections raised over sites not seriously considered can create interminable delays.

Developers are not alone in their reluctance to discuss projects during the early planning stages. States and local governments competing for industrial development and common natural resources are often reluctant to disclose information that may disrupt plans. Officials seeking a facility for their state often resist discussing the proposed facility and possible impacts with officials in other states until the developer has made some commitment to a site. Major decisions occur at each stage of the site selection process, but full communication with all interested parties may be impractical until a preferred site is identified. Once a site is selected, communication with all parties in potentially affected areas should be initiated as soon as possible to obtain early indications of possible concerns in other states that may affect the successful siting of the facility.

In a limited number of cases, information is viewed as a source of power, used to protect prerogatives and influence decisions. In such cases, open and early communication among affected parties is difficult to establish. A state or project developer may choose to withhold some information, thwarting requests by legitimately concerned parties. Opponents to a project may not make their objections known until late in the process, attempting to delay a project as much as possible. Merely providing the opportunity to communicate concerns and information may be insufficient. Incentives to communicate within the appropriate time period—or disincentives to the delay of communication—may be necessary.

Input from all stakeholders is important in providing a data base on which public and private decision-makers can reach informed decisions, but identifying all of the stakeholders is extremely difficult. Industry and state representatives cannot be expected to be aware of all public groups or governmental agencies, particularly those in another state, that may have interest in a project. If the lack of communication with all parties is viewed as deliberate, affected parties may be inclined to oppose a project and resist any efforts at negotiation of issues. Excluded from the site selection or evaluation process, they are unaware of the extent to which their interests have been considered in decisions. When decisions on energy development are being made for the affected parties rather than with them, the conciliatory spirit of trust will be absent.

Formal notification of proposed projects is no guarantee that multistate communication will occur and that the significance of the proposed facility for various stakeholders is understood. Communication through a formal notice

may be sufficient for projects with few, if any, multistate impacts. For projects with significant impacts, public notice may be an inadequate means for public officials and citizen groups to be aware of the extent of, or recognize, how their interests are affected. When project impacts are not readily apparent, effective interstate communication may not occur until additional information is available. This is usually late in the siting evaluation process, during submission of permit application on the draft EIS, when project modifications are more difficult to implement.

Early notification and effective communication about a proposed project or regional concerns is enhanced by a systematic and continuous communication process. An ongoing as opposed to ad hoc communication process establishes a greater parity of the level of knowledge among stakeholders and assists in building some degree of trust and understanding. It also increases the prospect that future problems are anticipated and solved before they become major stumbling blocks. Multistate organizations offer a flexible and interactive means of ongoing communication.

Direct, face-to-face discussion, with immediate feedback, is the most effective form of communication, but the cost of travel and budget constraints are often obstacles to such communication. Written exchanges of information and concerns may be misunderstood, particularly when no common frame of reference, experience or a base of shared meanings exist. The cost of a project to the developer is measured in dollars, to the local community in missed economic opportunities, and to environmental groups as impacts on the physical environment. Misconception and misunderstandings can result in a breakdown in communication, delays and possible conflict.

A major communication channel for multistate issues often overlooked is direct communication between affected states and the project developer. Communication between a developer and agencies in the host state are frequent and commonplace. Officials in other affected states are more inclined to present concerns to their counterparts in the host state and federal government than directly to the project developer. One reason for this is the lack of any established direct channel between the developer and out-of-state parties, even though the developer is ultimately responsible for addressing any concerns, regardless of source. A direct communication channel with the project developer could effectively minimize misunderstandings and provide a basis for cooperative action. Such a channel should not be misconstrued as a usurpation of a host state's regulatory authority. Final evaluations and regulation of a facility would remain with the host state.

There is a hierarchy of information needs and levels of understanding among the various stakeholders in energy facility decisions. This hierarchy may be profiled from those possessing a broad overview to narrowly focused concerns. Stakeholders with a broad overview are those concerned with the multiple aspects of the complex siting process, and base their actions on this "big picture." Other parties view siting decisions from a narrow perspective. Local residents tend to view the site selection process on a "why here?" basis. Communication between stakeholders at different points along the hierarchy is

Direct communication between affected states and project developers is important.

hindered by the lack of common interest and level of understanding. Concerns expressed by local residents are often misunderstood or given little weight by state officials viewing the same project from a much different perspective. Multiple communication channels may be necessary to accommodate the information needs of all interested parties, and care must be taken to help assure that each stakeholder's concerns may be communicated to both private and public decision-makers.

A major communication problem is the danger of information overload. If receivers are overwhelmed with information, they will eventually "shut off" the number of messages at a workable level and ignore future messages. Experience with the A-95 program in state government demonstrates the problem of information overload. As state agencies became inundated with notices of federal action, the review and attention devoted to the process diminished. Eventually even significant projects are lost in the process. Communication channels and content can be designed to encourage maximum effectiveness so relevant information is both received and understood. Information can be provided sequentially, with increasing levels of detail provided. Stakeholders must determine the extent and type of information needed and available during each phase of the siting process. Since the siting process and the analysis of information is sequential, full information cannot be provided during early stages.

The final and perhaps the most important characteristic of effective communication is the credibility of information provided. Information from sources perceived as biased or unreliable is likely to be ignored or challenged. Since energy siting is highly technical, both opponents and proponents of a project often generate data to "prove" their respective concerns. Even though they may have the complete and detailed information, project developers are usually perceived as biased by project opponents. State agencies are often caught in the middle, subject to the same suspicion as project developers by opponents and often viewed by developers as sympathetic to public opposition groups.

Regional Analyses

Energy development involves a number of decisions on the environmental and economic tradeoffs associated with each facility. The decisions, made in both the private and public sectors and at different levels of government, affect immediate and long-term interests of individuals and groups in a number of states.

These decisions can address multistate issues in two different ways. Decisions made by state officials or a developer on a specific facility can take into account the effects of that decision in another state. An example is considering the projected impacts of a facility in both the host state and adjacent states. Decisions can also consider whether the proposed facility serves the current

and long-term interest of the Ohio Valley as a whole, particularly shared natural resources. Consideration of long-term, regional interests calls for some ability to analyze from a multistate perspective current and future impacts and potential problems created by current siting decisions. Regional, as opposed to state or facility specific analyses, are better able to identify and evaluate long-term and cumulative impacts of individual siting decisions.

Decisions sensitive to the broader regional interests are concerned with efficient use of shared resources—air, water, capital, transportation and labor. They attempt to maximize the benefits which accrue to the states collectively—reasonably priced and sufficient power, clean environment and economic growth. In considering regional interests, the long-term consequences of decisions are often of greater interest than immediate impacts. Impacts which are acceptable to the several states in the near term may be unacceptable if they contribute to long-term inefficient use of a resource. Major water withdrawal from the river mainstem by a facility may be accepted in the near term, but it may be judged unacceptable if that withdrawal, combined with total demands on the water resource, is likely to create problems during periods of low flow.

For the states to adequately assess the significance of multistate impacts, they need some framework within which to base their decisions. How significant is it to withdraw 30 or 3,000 cubic-feet-per-second from the Ohio River? How important is the loss of 1,000 acres of prime farmland? A regional perspective on the optimal use of shared resources is necessary if the many tradeoffs involved in energy decisions are fully evaluated. In the absence of a regional perspective and articulation of goals and policies for the region, energy decisions will continue to be made at a local and state level, reflecting individual state and local interests at the expense of long-term mutual interests of the states.

Regional analysis of shared natural and economic resources and the impact of facility siting on them is particularly important when addressing multistate issues. The region's resource base—land, water, air, minerals, labor and capital—is capable of supporting a finite number of uses, be they energy or non-energy related. As resources are dedicated to specified uses, competition for the remaining resources will increase, raising the prospect of greater conflict among states on how the shared resources in each state are managed and how economic resources are allocated. Existing energy facilities and the prospect of major new facilities along the Ohio River raise the spectre of substantial cumulative and long-term impacts that need to be evaluated.

Current site evaluation processes for major facilities have limited ability to address these cumulative impacts adequately. The permit reviews focus on an individual site and the project's impacts at that particular location. The NEPA process can only partially offset this narrow focus. A project-by-project assessment of the tradeoffs involved with each single project will never allow identification of the threshold at which the region's resource base would be seriously and irretrievably impaired. Project assessments look only at the minimal effect of the project's resource requirement, without regard to future and competing demands on those same resources. Although each facility strives to

A regional perspective is necessary to evaluate tradeoffs.

Most states lack the capability to assess long-term cumulative impacts.

minimize its impacts, there is no meaningful basis to evaluate the significance of those impacts where no mandated standard or policy for cumulative and long-term effects exist. The important question from a multistate point of view is not the impacts of a particular facility or location, but whether or not the effects of a decision and the resolution of any conflicts are consistent with the best use of the regional resources. This question implies the need for a long-term perspective.

Public and private decision-makers often do not have available the data necessary to assess long-term or cumulative impacts. Most states do not have the capability to collect the data necessary to understand the intrastate impacts of a project, much less the interstate impacts. Data is collected by several agencies in each state, but it is often unavailable or unusable by decision-makers in other agencies because of inconsistent formats, crucial gaps, or contradictory analysis. Improving the data management capabilities of the states is a first step to identifying and understanding each state's resource constraints and needs. With a common or equivalent data base among the states, the common interest of the states and management needs for regional resources can be better identified and acted on.

The collection of a large data base will not necessarily provide a sufficient basis for making decisions that are in the best interest of the states, individually or collectively. Some cooperative decisions are desirable to determine the optimal mix of uses that compete for the same resources. There are sufficient water resources in the mainstem of the Ohio River to support a great many more energy facilities. However, is this the best use of the water resources? Is the use of water for energy development in the best long-term interest of the states? How can the tradeoffs involved—the loss of prime agricultural land, wildlife habitat, and the consumption of air, water and mineral resources—be evaluated? Examination of such tradeoffs on a case-by-case basis or resource-by-resource basis is ineffective.

Planning is a management tool through which regional perspectives can be identified in decisions on individual facilities, but comprehensive multistate management plans have had mixed success in the U.S. They have usually provided useful sources of information, but have been less successful in committing the intergovernmental structure to collective policies or in implementing joint plans. Planning processes require substantive commitments of manpower and financial resources that the Ohio Valley states may not be able to provide at the current time.

Planning processes which allow decision-makers to anticipate and analyze issues strengthen the policy, program and resource management capabilities of each state in the region. Since the economies, energy systems and natural resources of the Ohio Valley states are interdependent, an individual state's future opportunities and problems cannot be analyzed without considering economic activities and resource uses in other states. Energy, water, transportation and air by their multistate nature need to be assessed at a multistate level. In assessing their mutual interests, states depend upon one another to collect data which allows consistent, regionwide projections of the use and availability

of these resources. Without the ability to anticipate problems the states can only respond to issues on a crisis basis. Armed with the ability to identify future regional energy issues and resource constraints the states and industry would be better prepared to address such problems.

Once future regional issues have been assessed, the states are better able to identify opportunities for cooperation. Future transportation problems such as the deteriorating condition of the railroads between the coal fields and energy facilities, bottlenecks in the region's navigational system, or the increasing costs of transporting coal are examples of how anticipatory planning could assist the states in initiating cooperative action prior to problems reaching a crisis stage.

Anticipatory planning would also provide the opportunity for early public participation and education. Public awareness of the many tradeoffs in energy siting and development is often low. Often citizen concerns, while recognizing the need for energy, are centered on "but why here?" In order to answer that question there is a need to present a regional perspective that includes future energy needs, alternative sites and types of facilities, and policies that demonstrate that those decisions being made are in the best interest of the region.

Cooperative Action

The Need and The Constraints

Why should individual states faced with other pressing problems be concerned about energy facility development or its impacts in other states? The answer to this question affects the attention given by states, industry and citizens to the multistate issues of energy facility development. If these issues are of little concern to states or can be resolved without multistate cooperation, there is no reason to initiate new or modified institutional arrangements. Any evaluation of feasible and effective institutional arrangements must consider the need for and constraints to multistate arrangements for energy facility development.

The Logic of State Cooperation

There are two basic reasons why the multistate impacts of energy facility siting affect the interest of the individual states: first are the economic, energy and environmental ties which bind together the individual states; second is the inherent difficulty of addressing long-term and multistate issues on an individual state basis.

In the Ohio Valley states, there is limited public awareness or concern with regional energy development and its consequences, in spite of the potential impacts on each state of siting activities and decisions made in other valley states. This limited recognition of multistate impacts is due in part to the absence of a regional identity by the Ohio Valley states, a striking contrast to other groupings of states in the South, Northeast, and Rocky Mountains. In these states, historical ties and recent concerns with economic development, energy availability and energy resource development have brought the states together to act cooperatively or collectively in their mutual interest.

*There is little regional identity
among Ohio Valley States . . .*

The same is not true for the Ohio Valley states. The Ohio River is generally viewed as a border that separates the states into different regional groups. Within each state, the Ohio River Basin is generally viewed as a subregion, containing only a portion of the state's population and economic activity and competing with other areas in the state for the attention of state officials. Activities in the basin including energy facility development are frequently viewed as local issues rather than issues demanding state level and statewide attention in spite of their significance to the region.

Regional Interdependencies

The Ohio Valley states have common interests and problems. Foremost among these is the economic health of the individual state—a top priority with state officials, industry and citizens. A second is the use of and management of the shared natural resources of air, water and energy resources—important ingredients for economic development of each state. The development of energy facilities in the basin triggers a series of economic and environmental forces that link it to the individual states and bind the states to each other. Energy facility development in the basin, far from being a localized issue, can influence economic and natural resource conditions throughout the six-state region. The coal, water, transportation systems and labor required by an energy facility and the energy and water and air impacts create a network that reaches beyond the facility site to extend throughout the states. An individual state's efforts to manage its economic development and natural resources depend in part on its ability to address the multistate impacts associated with energy facility development.

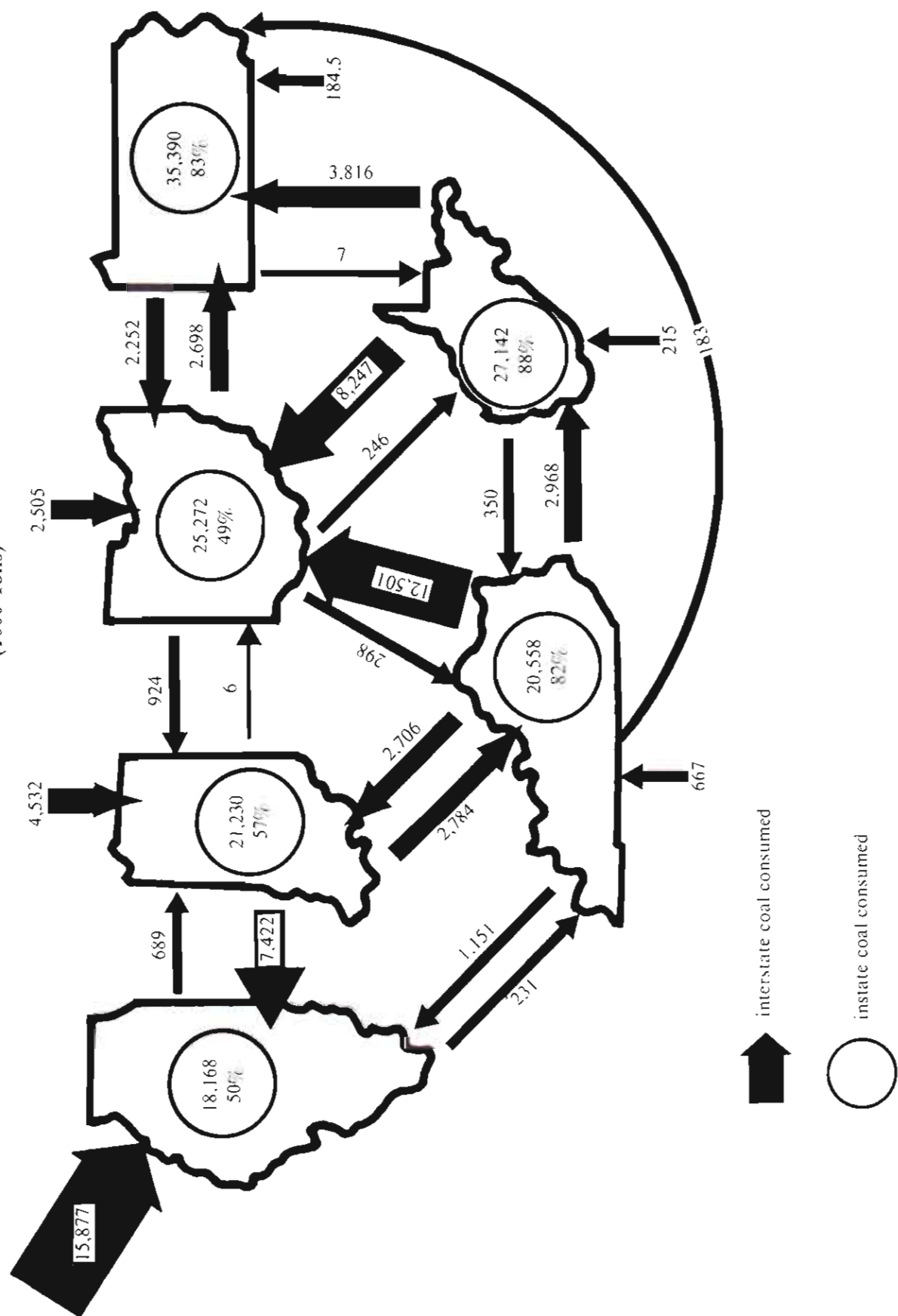
Energy and Economic Development. Each valley state has a stake in maintaining reliable and reasonable sources of energy for its population and economic centers and in developing indigenous energy resources. The energy resources of the basin, in the form of electric generation and coal resources, are important to the economies of each state and the region as a whole.⁴ Just as manufacturing and heavy industry tie the states together through raw materials and product markets, so does energy development create physical and economic links among the valley states. While energy facilities may be clustered in the valley, the impacts—economic and environmental, beneficial and detrimental—reach beyond the facility site and the valley to affect the economic activity throughout the states. These multistate impacts include coal markets, transportation and distribution systems, and industrial activity dependent upon reliable sources of energy.

Energy facilities buy the region's coal—electric generating facilities alone consume approximately 75 percent of the region's coal production.⁵ Regardless of the specific site, coal consumed in existing or proposed facilities generates jobs, income and tax revenues that contribute to the economic health of the states (see Fig. 2). In their competitive jockeying to develop coal markets and energy facilities, states frequently overlook the value of interstate coal markets.

The states have common and shared interests that would be enhanced by multistate cooperation.

Intraregional coal market is of common economic interest.

Figure 2
Intraregional Shipments of Coal for Electric Utilities
(1000 Tons)



Source: Data from U.S. Department of Energy. *Cost and Quality of Fuels for Electric Utility Plants—1980 Annual.*
Compiled by The Council of State Governments.

The energy transportation and distribution systems are other direct links between the Ohio Valley states. The highways, railroad and navigation systems, together with coal hauling companies, are shared by the states. Transmission lines distribute electricity generated by facilities in the valley throughout the various states and across state lines in an integrated grid system, which creates energy and economic interdependencies among the states as the interconnections of the regional system allow reliable delivery of electricity to the various services areas within each state, regardless of the generating capacity of in-state facilities.

Electric generation is also a multistate economic factor. With the exception of Ohio, which imports electricity, the valley states export electricity within and outside the six state region.⁶

The multistate character of the utility industry is even more important than the interconnected distribution system. As a result of environmental and resource constraints and the high costs of capital development, facilities are being located at a distance from their service areas, and utility companies in several states are joining to develop and operate a single facility to serve multistate service areas.⁷

The system is multistate, but the siting and regulation of electric facilities is state-by-state, and states are likely to find it difficult to evaluate how a particular facility relates to an individual state's needs. The utility industry's practice of multistate system management offers an instructive model for states.

Shared Natural Resources. The use and management of natural resources is a second major reason for states to be concerned with energy facility development in the Ohio Valley. Each state looks to the water, land and air resources of the valley to support industry and communities, to support wildlife habitats and recreational activity, and to contribute to the quality of life in each state. The use of these resources in each state has effects that cannot be limited to that state. Activities that significantly affect air and water resources are subject to governmental regulation, yet their impacts on the ecosystem follow the laws of nature, not the authority of political jurisdictions. Since the river serves as a jurisdictional boundary, the use and management of its resources by each state is inherently an intergovernmental and regional concern. Land use on one side of the river for energy development may threaten agricultural or wildlife uses of land in adjacent states. Water consumed to cool energy facilities in one state may limit future downstream community or economic development in other states and its own future development options. The valley's natural resource base is a direct, interactive bond between the states.

The primary resources of water and air are basic to the planning, design, siting and operation of most major energy facilities. In turn, development, particularly of energy facilities, affects current and future use of these resources. Their sound management is essential to assuring the long-term availability of energy supply.

Water. The region's water resources have long been recognized as major assets for the states. The river and its tributaries are used as a transportation artery for commerce; as drinking and process water for communities and

Although the electric system is multistate, it is regulated on state-by-state basis.

industry; as a discharge medium for industrial and domestic effluents; as a source of hydropower; as a habitat for wildlife; and for recreation. When these uses of the common resource intensify in each state, competition and conflicts among the states over management of the river system also intensifies.

The valley states share the water resources, but they are not equally affected by activities that affect the quantity and quality of the river system. Activities changing the mainstem are more likely to affect other states' interests in water management than are activities on the tributaries, except where these tributaries are interstate in nature.⁸ States close to a facility that affects water are more likely to see their interests threatened than are states more removed from the site of impact. Activities affecting the water quality have long been recognized as a multistate concern.

The concern for water quality and the impact of its degradation on economic development, public health and recreational use of the river led to the creation of the Ohio River Valley Water Sanitation Commission, a cooperative state venture to improve water quality in the Ohio basin. The issues surrounding water quantity have attracted less attention and concern by the public and the states. The Title II Ohio River Basin Commission brought together state and federal agencies in an effort to plan and manage on a comprehensive basis the water resources of the entire basin. The river flow is managed on a total system basis through releases from dams. Less emphasis is given to the amount and timing of water withdrawals, in spite of their impact on flow and quality and on competing and future uses of the river's resources.

The states' interest in the region's water resources cannot be divorced from energy facility development in the valley. Water availability in the mainstem and major tributaries is an essential ingredient to development of the valley's energy potential. Electric generation, oil refining, synthetic coal technologies and coal slurry pipelines require substantial quantities of water. The massive water needs of electric facilities focus attention on the water quantity-quality relationship and on the availability of adequate water for future uses in certain areas of the valley. New environmental regulations and control technologies requiring closed cycle systems for power plant cooling will increase substantially the consumption of the region's water resources. Water lost to evaporation cannot be returned to the water course for downstream uses, thus diminishing the flow. Proposals for coal slurry pipelines which remove water permanently from the basin also reduce the water flow. At periods of low flow, such withdrawals affect the quantity and quality of water available for drinking water, effluent discharge, or recreational uses. In summary, energy facility development in the valley uses and changes the region's water resources.

Air. Like water, air pollutants are not confined to political boundaries. Unlike water, with defined and measurable hydrologic boundaries, the geographic boundaries of an air basin cannot be as sharply drawn.

Air quality in the Ohio Valley states has become a major constraint on certain types of economic development and the limiting factor in siting new energy facilities. The ability to control air emissions, in order to protect public health and to allow new and expanded development, is an important and

sensitive economic and political issue in each state. Yet, no state is able to control all the sources of pollutants that affect it. Since air movement is not restricted to defined paths, techniques to manage its quality and use are restricted to controls on the emitting source. Consequently, a number of states are affected by the air quality policies of any single state.

The states with highest levels of SO₂ and NO_x emissions are located in the Ohio Valley. Energy facilities account for the greatest percentage of these emissions. The heavy dependence on coal as a source of fuel contributes to the high level of emissions. Figure 3 illustrates national ambient levels of SO₂ and NO_x. As these figures clearly show, the highest concentrations are centered on the Ohio River.

All facilities emitting pollutants affect air quality in other states, but the relationship between a particular facility and an air quality problem in another state can be difficult to establish. For facilities close to a state boundary, the local transboundary air problems are readily established. More difficult is the relationship between emissions from a particular source or a given state and air quality problems in areas distant from the particular facility or area. The long range transport of pollutants creates an environmental and economic relationship among states and a sensitive regional issue. The chemical and physical transformation of pollutants during long range transport and the effects on the receiving region are largely unknown and beyond current research capability.

While the relationship between air quality in one state and emitting sources in another state cannot be proven, the economic consequences on the downwind states are very tangible. Areas unable to meet ambient air quality standards face a significant economic disadvantage in their efforts to maintain a stable or expanding economic base. In such areas, existing facilities are unable to expand and new facilities unable to locate without imposing costly control measures.

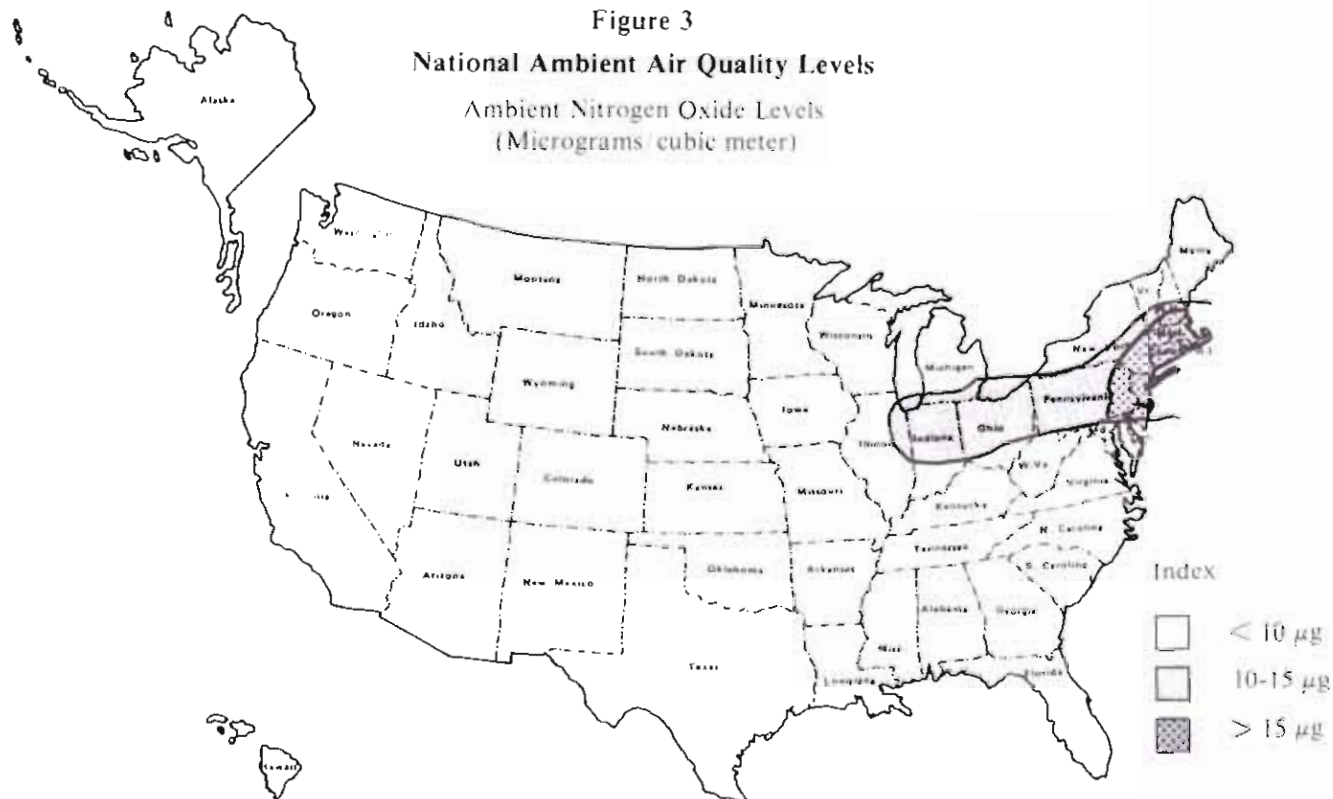
As with water resources, multistate air quality problems create an environmental and economic interdependence which reflects both interstate competition and shared interests. Differences in air quality conditions and in state policies controlling emissions affect the competitive economic position of each state. States cannot be expected to voluntarily and unilaterally act to hurt their competitive economic position. Yet, each state does share a common interest in seeing that air quality conditions do not become a costly barrier to full economic development in each state. How each state manages its remaining air increments can affect its future development potential. How the states collectively address regional air issues affects the health of the economic base that ties them together.

Energy development creates physical and economic links among the states.

Cooperative Action

The interstate energy, economic and natural resource bonds associated with energy facility development in the Ohio Valley belie the notion that individual states acting alone can effectively resolve multistate problems. The interdepen-

Figure 3
National Ambient Air Quality Levels
Ambient Nitrogen Oxide Levels
(Micrograms/cubic meter)



SOURCE: "Air Quality Data for Non-Metallic Inorganic Loss 1971-1974 from the National Air Surveillance Networks," Gerald G. Akland, EPA-600/4-77-003, Research Triangle Park, NC.

Yearly Average Sulfate Concentrations
(Micrograms/cubic meter)



SOURCE: Report on the International Symposium on Sulfates in the Atmosphere in EPA-600/9-78-022, Energy Environment III, U.S. Environmental Protection Agency, Office of Research & Development, October 1978.

dencies also challenge the belief that these activities can be managed and regulated in isolation from each other. Policies on the management of natural resources can constrain or limit economic and energy development, and decisions in the public and private sector on the development of energy facilities can affect the pace of energy resource development and the cost of energy supplies. A specific issue may involve interaction, competition and conflict, and it may involve common concerns. In each instance, effective resolution of the problem is more likely if there is interaction among the interested parties in the states involved.

The inability to effectively resolve multistate conflicts will have both direct and indirect negative results. Conflicts creating delays increase the cost of many socially desirable projects which often benefit all of the states in the region. An important factor often overlooked is inhibition of capital investment caused by conflict. Long-range corporate investment decisions may be negatively influenced if private decision-makers feel that there is a potential for delay, litigation or uncooperative state governments. When East Kentucky Power Cooperative recently sited a 1300 megawatt power plant, they explicitly deleted sites along the Ohio River from consideration to avoid potential delays due to possible multistate controversy.

When the multistate issue does not involve direct impacts in another state, cooperation may still lead to more effective action. The states' common interest in seeing their respective coal and oil shale resources developed may be advanced more effectively through cooperation in research and development of coal gasification and liquefaction and oil shale. Cooperative efforts to research and share information in improved coal technologies and mitigation of environmental impacts of new technologies establishes the viability of the industry. It can reduce duplication in state efforts to obtain current information on these technologies and their impacts. The states' shared interest in developing the energy potential of the states is another argument for cooperative action. Only a limited number of available sites in the valley meet the environmental and market criteria for a large energy facility to serve the region. A little recognized but common interest exists to ensure that these sites, with their water, land access, and air increments, remain available for energy development.

*Individual states, acting alone,
cannot effectively resolve
multistate problems.*

The Challenge of Cooperative Action

Any institutional arrangement to resolve multistate siting issues calls for some level of cooperation between states, yet getting such cooperation is no easy task. Understanding the constraints on multistate approaches to siting is a necessary step in assessing the feasibility of various institutional options. Three types of obstacles exist: first is a lack of clear consensus that energy facility siting creates multistate issues requiring special attention by industry and state government; second is the states' collective caution about any multistate initiative affecting their self interest; and third are administrative problems created by fragmented governmental authority and decision-making.

Lack of a Regional Consensus

Discussions with state officials, citizens and energy industry officials in the Ohio Valley states reveal the absence of any agreement that the multistate impacts of energy facility siting create issues which call for state or industry attention. Philosophic differences, inadequate information about multistate siting impacts, and economic conditions which detract attention from long-range problems all affect the perception, priority and policies devoted to multistate siting issues.

Philosophic Differences. Perceptions of citizens and state officials of appropriate state roles in energy siting, environmental protection and natural resource management differ among the valley states. In Indiana and Ohio, the view is often expressed that the state role in siting should be limited to permit review. In the other valley states, there is more support for state influence on development patterns through identifying potential development sites or examining the long-term consequences of individual facility development and natural resource management. Given these differences, agreements on multistate siting issues and steps to address them are difficult to achieve.

Inadequate Information. This lack of agreement is due in part to inaccurate and incomplete information on the impacts of energy facilities. Popular perceptions are colored by experience with existing facilities, even though proposed facilities, subject to more stringent regulations and incorporating new technologies and procedures, may have substantially less impact. This information is not always readily available to citizens or state and local officials.

State officials responsible for permit review seldom have complete information on the full range of impacts of a proposed facility. Responsibility is scattered across several state agencies and local governments in each state and is limited in scope by statute and regulations. State officials frequently limit their review to the siting and operation impacts of a specific facility that affect

Philosophic differences, inadequate information and economic conditions affect the priority given to multistate siting issues.

the state and their particular policy and program responsibilities. With responsibility fragmented, it is difficult for any single decision-maker to comprehend and respond to the full range of direct and indirect siting impacts. If siting is viewed only as locating an electric generation or coal conversion facility, little attention is given to offsite activities and support facilities, yet these activities and facilities, including transmission lines, land and water transportation systems, and secondary economic and community growth, frequently affect other states. The single facility focus draws attention away from the long-term and cumulative impacts of facility development on the environment and economy.

When information is available it is not necessarily given the same importance or interpretation by various groups or by different states. Such differences make it difficult to agree that an issue should be addressed. In areas where facilities are currently located or proposed, both citizens and state officials are likely to express concern about specific multistate impacts. The same is true for areas currently experiencing the impacts of development.

There are more than geographic differences in awareness and concern. Organizational affiliation and the degree of direct personal involvement with energy facilities and their impacts also color the awareness and perception of multistate issues. Officials in environmental agencies and citizens in environmental interest groups are likely to be informed of and express concern about specific air, water resource and cumulative impacts. State officials with non-environmental affiliations and energy industry officials are aware of general air and water concerns, but they are more likely to focus on the economic development impacts of facility development.

Economic Conditions. Economic conditions within the state are a third factor that accounts for the lower priority given to multistate siting. On the whole, citizens and public officials place primary attention and effort on immediate and pressing problems. Long-term and uncertain events generally are given lower priority in the time and resources devoted to their analysis and resolution. On both accounts, energy facility development in the Ohio Valley states ranks fairly low. Their impacts are often distant in both time and place.

Economic conditions in industry and the public sector add uncertainty to energy facility development. Industry plans for new electric generating and synfuel facilities have been slowed by a reduction in energy consumption, the uncertainty of forecasting future demands and markets, and the high cost of financing major capital investments. The delays in industry plans provide state officials with more time to anticipate impacts and influence siting decisions. As facility plans are delayed, the sense of urgency about their economic and environmental impacts lessens, and these concerns lose place to more immediate problems. The lesser emphasis on energy facility development issues is reinforced by economic conditions in the public sector. The economic downturn which hit hard in the Ohio Valley states has turned state officials' attention to more immediate problems of expenditure and revenue shortfalls.

Suspicion of Regional Initiatives

The reluctance of states to address multistate siting issues goes much deeper than differences in philosophy or perception of the significance of issues. Ohio Valley states have shown a willingness to work together when their mutual self-interests are served, and bilateral agreements exist on bridges, policing the Ohio River, and managing wetlands. The prime example of cooperation is the continued viability of The Ohio River Valley Water Sanitation Commission.

A similar willingness to undertake joint action on the facility-specific and regional issues of energy facility siting is far less evident. The reasons behind this reluctance condition the states' attitudes toward any institutional means to deal with multistate issues. States are sensitive about their sovereign rights and protective of their self-interest. For political and philosophic reasons, state officials tend to dismiss solutions that dilute independent state authority, potentially add to regulatory burdens or require noticeable state funding. Together these add up to a cautious or negative attitude toward initiatives for intergovernmental mechanisms and severely limit the array of feasible, effective institutional mechanisms for multistate siting issues. No multistate institution can accomplish what its member states are unable or unwilling to do on their own.

State Sovereignty. States, sensitive about their sovereign rights, are likely to reject any encroachment. However, state officials acknowledge that any institutional arrangement without some binding authority is likely to be ineffective in solving problems. These contradictory observations illustrate the difficulty in finding effective and feasible institutional arrangements. The argument over binding or nonbinding arrangements overlooks several ways that decisions can be influenced without imposing a binding authority—public opinion, peer group pressure, and identifying alternatives agreeable to all parties.

Sensitivities about sovereignty are a particular stumbling block to cooperative action on the natural resource issues, since under state and many federal laws, states retain the basic authority and responsibility for implementing and enforcing environmental permit programs. No constitutional or statutory incentive exists for states to consider multistate impacts in reviewing environmental permit applications. For legal and political reasons, state officials are unwilling to give up any real authority to another entity. Multistate organizations such as the river basin commissions lack any authority to implement their plans. Organizations such as the Ohio River Valley Water Sanitation Commission or the Delaware River Basin Commission, which do have enforcement authority, use it prudently or else risk their effectiveness and continued legal existence.

One exception exists to states' unwillingness to share sovereign authority. The federal government is generally recognized as sharing with the states authority for natural resources and energy. The federal role in providing a common statutory and regulatory framework within which states administer permit programs is widely accepted, even though individual states may disagree with

No multistate institution can do what its member states are individually unwilling or unable to do.

Infringement on state sovereignty is rejected, however institutions with no authority are perceived as ineffective.

how the federal regulations are administered. More importantly, states look to federal courts as the “referee of last resort” for resolving interstate disagreements. Only within the federal courts is the relinquishing of state authority legally and politically acceptable.

Competition Among States. A state’s rational self-interest reinforces its sensitivities about sovereignty. Since a sound economy is a top priority for each valley state, they compete to attract industry and to provide a tax and regulatory climate conducive to economic growth. In balancing the economic and environmental tradeoffs associated with energy facility development, a state is reluctant to voluntarily take any action that places it at a competitive disadvantage in attracting energy facilities or other industrial development. Competition is especially intense for synfuel facilities, so much so that there is some hesitancy to share even basic information on proposed facilities or available supporting resources in a state. This hesitancy to share information or to adopt regulatory restrictions which might benefit another state’s efforts to attract industry is a major constraint to cooperative approaches to solving multistate siting problems.

Governmental Fragmentation

Decisions on energy facility development are made in a system that fragments authority and responsibility among various governmental levels and administrative agencies. This encourages a narrow, short-term perspective in making decisions and creates administrative problems for any multistate institutional arrangement. This narrow attention to specific facilities has a number of consequences for state officials’ awareness of the full range of impacts and issues associated with facility development. With responsibility scattered across various levels and agencies of government, it is difficult for any single decision-maker to comprehend the full range of impacts and interests associated with siting major energy facilities. As a result many multistate issues are not addressed due in part to a lack of information, or appreciation of available knowledge.

Limited Perceptions. When political boundaries and statutory mandates limit their authority and responsibility, state officials have no requirements and few incentives to consider the multistate or cumulative impacts of a decision. Elected officials are only accountable to a geographically based constituency even when their decisions affect a greater number of people and interests. Administrative officials, drawing their authority from specific statutes and program regulations, must base their decisions on permit applications or legally defensible criteria, even though they may be aware of the long-term cumulative and multistate impacts of proposed facilities. In fact, there may be disincentives to considering these broader questions in setting policy or reviewing permits. Legal challenges and political repercussions face the official who places regional interests above state interest.

The decision-making system encourages a short-term perspective by state officials. Initial costs and immediate benefits—economic, political, or administrative—carry greater weight than do long-term costs and benefits. The

Fragmented, disjointed authority encourages a narrow, short-term perspective and creates administrative problems for any multistate institutional arrangement.

The costs of not resolving multistate issues are not immediate and therefore less visible.

short-term perspective can be detrimental to cooperative efforts dealing with multistate siting issues. The political and administrative costs of accommodating multistate concerns are apparent and immediate to state officials. More stringent environmental standards or measures to alleviate impacts in another state impose immediate costs on the developer. Undertaking comprehensive planning or creating a multistate organization to deal with regional issues places financial and administrative burdens upon any agency.

The costs of not addressing multistate siting issues are not immediate and therefore less visible. Out-of-state concerns with a proposed facility are not readily apparent. The cumulative impacts of multistate energy facilities on future economic development and natural resource uses in each of the states are not easily discerned. They tend to be discounted in the evaluation of a particular facility since the information is neither readily available nor required as a condition for issuance of a permit.

Administrative Coordination. Within each state, identifying interested agencies and coordinating their role in siting is no easy task. At the regional level, such coordination of diverse state agencies and interest is even more difficult. There is no central authority in any of the valley states responsible for making or coordinating all decisions associated with energy facilities. Differences in each Ohio Valley state's organizational structure of air, water, land and energy agencies complicate identification of the appropriate agencies and individuals in each state who should be alerted to proposed facilities. Since responsibilities for energy facility siting are assigned differently among the states, no single institutional arrangement can easily bring together all interested parties on either a state or multistate basis.

State officials have reason to be skeptical of any effort at comprehensive, coordinated management, particularly at a multistate level. The program specific basis of state agencies has a sound management rationale: it provides a reasonable span of accountability and a clear focus for organizing activities. In short, it is manageable. A truly "comprehensive" institutional arrangement, attempting to address all aspects of siting at a multistate level would be an unwieldy management device. However, the unwieldiness of a single, comprehensive mechanism for multistate cooperation does not rule out the need for institutional reform at the multistate level to allow more effective communication and management of regional economic and natural resources.

Despite the constraints listed above, multistate institutional arrangements have been, and can be, developed to address multistate issues, but they cannot be made overnight. The states have worked together to manage shared resources, cooperated in common interests and effectively resolved many multistate conflicts through a wide variety of institutional procedures and organizations. While the institutional, legal and political obstacles cannot be ignored, an incremental approach to resolving multistate siting issues is a realizable goal. The Ohio River Valley Water Sanitation Commission is an example of an evolving multistate cooperation. Created by the eight states over a 13 year period after its original inception in 1935, its current effectiveness and support in the states have only been possible through years of experience and understanding of its role.

The Adequacy of Existing Institutional Arrangements

States, citizens and industry have available a number of existing institutional arrangements that can be employed to solve facility-specific and regional siting issues. Some operate at the state level, others at the multistate and federal levels. Some provide binding decisions while others are strictly advisory and informal.

Foremost among these is the process through which industry and governmental decisions on siting are made. Closely related to this process are more general governmental procedures and organizations that guide governments in their dealings with other governmental units, industry and citizens. State environmental laws and regulations, federal environmental laws and regulations, the National Environmental Policy Act, the judicial system, and various regional associations of states are the major means through which siting impacts and issues may be currently addressed. Each is designed to provide a way to express and protect major public values and to provide a balance among competing values and interests. By looking at the siting process and existing institutions, strengths as well as shortcomings for multistate siting issues can be identified and possible modifications to improve their effectiveness suggested.

The Siting Process

Multistate concerns arise over both the siting and operation of major energy facilities, but it is during the siting process that all potential effects of a new facility are assessed. Selection of a site largely determines a facility's major environmental, social and economic impacts. Any facility creates impacts: land use is changed, different uses are made of water resources, economic activity is generated, physical structures are constructed. The impacts may be viewed as beneficial or detrimental, but they cannot be avoided. How these impacts are

An incremental approach to resolving multistate issues is a realizable goal.

anticipated and mitigated during the siting process can affect the emergence of multistate siting issues.

The siting process has two distinct phases: site selection and site evaluation. Multistate issues may be more readily addressed in one phase than the other. Identification and selection of feasible sites is a task conducted by the project developer, guided by public statutes, known public values, and the specific characteristics of the proposed facility. The analyses and decisions are usually made privately, with little opportunity for independent, third-party expression of multistate concerns. With selection of a proposed site, the evaluation process begins and compatibility of the proposed project and site with public values is determined. This phase is conducted in the public arena with formal opportunities for review and comment by interested governmental, industry and citizen groups. Multistate issues are more likely to be raised and addressed during the public evaluation phase.

Site Selection

The site selection process is highly complex and involves many decisions. Throughout a series of reviews, a number of incremental decisions requiring detailed knowledge of the facility and the site are made. Site selection requires detailed knowledge in a broad array of disciplines—engineering, environmental, economic, social and other concerns. The particular method for determining environmentally suitable and economically feasible sites must take into account physical characteristics of an area as well as the technical and physical characteristics of the facility and its supporting infrastructure needs. As a consequence, the specific siting criteria used by developers to evaluate each site will vary, and the particular criteria and selection process must be devised on a case-by-case basis.

Although the specific criteria and steps vary for each facility, there is a high degree of commonality in the selection technique and guidelines employed. Siting is an interactive screening process, through which progressively detailed criteria are applied to a study area until the proposed site is identified. Regardless of the type of facility, several steps occur:

- *Identification of a candidate region.* Using exclusionary or “knock out” criteria, a reconnaissance level study is conducted to divide the study area into broad geographic regions of interest.
- *Identification of potential sites.* Within the candidate region, sites that could conceivably support the proposed project are identified, including expansion of existing sites, use of previously identified sites, and the identification of new sites. An inventory may include 50 to 100 sites.
- *Selection of candidate sites.* The list of potential sites is narrowed down by using slightly more specific criteria to identify those sites with a higher potential. Applying “fatal flaw” criteria to eliminate unsuitable sites, the number of alternative sites may be narrowed to approximately ten.

Siting is an interactive screening process.

- *Detailed site selection.* In this step, preferred and in some cases alternative sites are studied in detail. Preliminary site layout, engineering and environmental analyses are conducted.

At each stage of site selection, a series of important decisions are made by the project developer, with each decision providing a basis for later decisions. The selection of a preferred site, for example, depends on previous decisions on the physical and economic suitability of each alternative site. Typically, decisions on a preferred site do not consider sites outside the original candidate region or not previously identified as a potential site.

Once a preferred site is selected, it is often difficult for the developer to prove that it differs substantially from alternative sites or that the initial selection of the candidate region is free from bias. The ranking of priorities in selecting a preferred site is often technically difficult to defend. Since proposals are always open to the criticism that an expanded search might have yielded better candidate sites, the credibility of the development team often becomes a central issue in the site selection process.

The state's role is not necessarily to select sites.

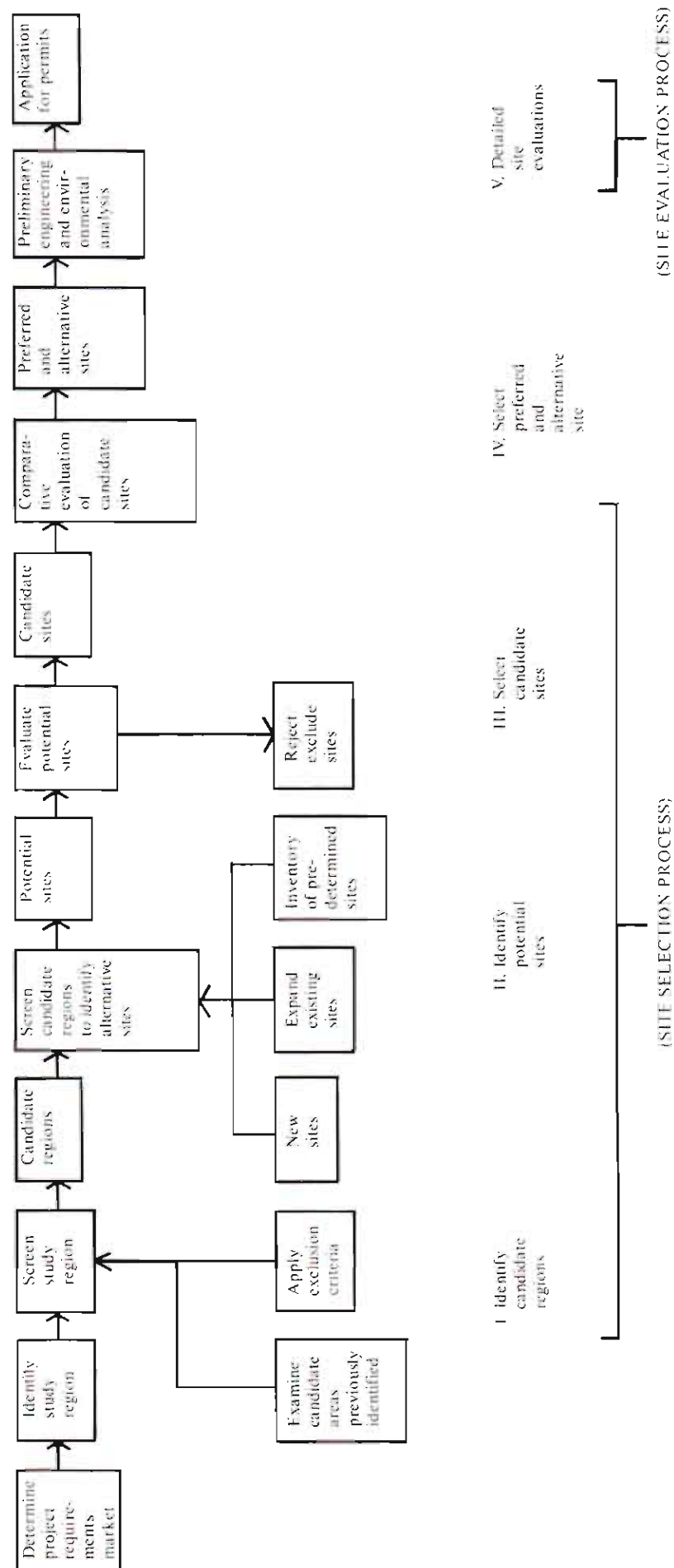
Site Evaluation

Once the developer has selected a preferred site, the decision and the supporting analyses are subject to public review. Federal, state, and local governments and citizens are involved in site evaluation, judging the developer's preference against public concerns and formal regulations. The state's role should *not* necessarily be to select the site, but to assure that public values and interests are incorporated into the evaluation of benefits and tradeoffs.

Typically, the state role in energy facility siting is limited to evaluation. The particular set of regulations and procedures will vary in each state and for different types of facilities. The major reviews include evaluation of environmental, social and economic impacts and compliance with state environmental regulations. Electric utilities are subject to a more complex review and evaluation process which usually includes evaluation of the need for power in a service area and the effect on consumer rates. Although most of the states identify potential industrial sites as part of the effort to attract economic development, seldom do they go through the rigorous and costly process of analyzing the feasibility of individual sites for any specific energy facility. The detailed information on environmental and physical characteristics of alternative sites required as part of the selection process is often beyond the capabilities or responsibility of state government. As the party responsible for development of the facility the developer has the vested interest in and primary responsibility for developing the detailed information needed for site selection and evaluation.

Issues relating to site selection cannot be effectively resolved at this late stage of the process. By the time permit review begins, project developers have already made time and financial commitments to the preferred site. Changing sites or trying to ameliorate impacts integral to the site is difficult. Developers

Figure 4
Facility Energy Siting Process



may have expended years in investigating a specific site, since much of the project engineering and design must be completed in order to submit permit applications.

Multistate input into the siting process should be accommodated at a time and in such a forum to allow meaningful impact upon the decision-making process. This is likely to be after the site selection process is initiated but early in the site evaluation process as possible. Early input allows the project developer to better project and understand potential issues, and have sufficient time to respond to any legitimate concerns. The appropriate forum is the host state's existing permit review process. Input from adjacent states would provide additional information to decision-makers which may be of assistance. The risk of disapproval or delay in permitting would occur at a period that would have the least adverse impact if multistate concerns were solicited and expressed prior to the permit review process.

State environmental laws and regulations, federal environmental laws and regulations, the National Environmental Policy Act, the judicial system, and various regional associations of states are the major means through which siting impacts and issues may be currently addressed. Each is designed to provide a way to express and protect major public values and to provide a balance among competing values and interests.

State Laws and Regulations

State laws and regulations specifying substantive standards and procedural requirements for protecting public health and safety provide a major means for dealing with siting impacts and issues. Regulations may influence the location and design of a facility, the type of fuel used and operational process. Other regulations specify procedures to be used in obtaining information, in soliciting the concerns of those potentially affected by a decision, and in balancing diverse and frequently competing interests. Taken together, each state's laws and regulations are a written and enforceable framework of public values to guide decisions made by private developers and government officials. While each state independently adopts its laws and regulations, commonalities in the scope of requirements imposed by mandated federal legislation provide a consistent regulatory framework.

While individual state laws and regulations do protect many of the values shared by states, they have some drawbacks in attempting to deal with multi-state siting issues. Laws and regulations cannot deal with all siting issues. In the Ohio Valley states, they are far more likely to deal with environmental, public health and safety concerns than with issues associated with socioeconomic

Laws and regulations cannot deal with all siting issues.

impacts. State program requirements do not mandate nor authorize the mitigation of impacts that fall outside the narrow scope of permit reviews. Project review is often limited to specific resource areas and compliance with predetermined standards. More importantly, state adopted and enforced laws and regulations, and state lawmakers and regulators, cannot be expected to give the same weight to out-of-state concerns as they do to in-state interests and constituencies. They are by definition expressions of the public values and priorities of each state, not the region as a whole.

Where state standards are comparable, multistate issues are less likely to occur since impacts, regardless of their location, are subject to similar state review and substantive standards. Although comparable regulations provide some protection for out-of-state interests, there are a number of instances where regulations do not adequately reflect the interests of another state. The scope of regulations varies between states. Kentucky, for example, is the only state in the Ohio Valley which requires state review and permits for large water withdrawals that can affect the quality and quantity of water. The effectiveness of the program is jeopardized by the shared nature of the resource. Even where regulations are compatible, differences in interpretation of the statute and the degree of enforcement by state agencies contribute to multistate issues.

Regulations cannot address all public interests and values, particularly social and economic concerns. There are no specific standards governing socioeconomic impacts. Perceptions of those directly affected determine a project's acceptability. Where impacts are multistate in scope, acceptability is determined by two publics—that in the host state and adjacent states. Standard setting involves technical analysis, assumptions about acceptable levels of risk, and distribution of costs and benefits among various social groups and over time. The decisions, though based on facts, are political not scientific judgments. Even a representative democracy cannot guarantee that the interest of all segments of the public will be reflected in permit decisions. Recognizing that substantive standards are not the full expression of public interest, legislators mandate public participation to ensure that state constituents with the greatest stake in a particular decision are provided an opportunity to express their interests.

Reliance upon state laws and regulations has some major shortcomings when the concerns originate in other states. In multistate issues, there are a number of "publics" to be heard whose interests must be balanced and no single regional decision-making body is accountable to these publics. State lawmakers and regulators accountable to citizens and interests in one state cannot be expected to give equal emphasis to out-of-state interests unless these also affect in some way the interests of their own state. State procedures also do not always easily accommodate the articulation of interests from out of state. For a number of state permits, public participation is not required and no public announcements or evidentiary hearings are conducted. When a number of permits are required, multiple hearings may be held over an extended period. The difficulty of attending a number of hearings in another state for a single project discourages participation. The ability of out-of-state residents or agen-

cies to participate and have standing in another state's hearings cannot be assumed.

Federal Laws and Regulations

The federal government provides a common statutory and regulatory framework within which energy siting decisions are made. Major federal environmental statutes include the Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, and National Environmental Policy Act. Many of these were enacted in part to address multistate environmental impacts that could not be adequately or equitably dealt with by the states acting alone. Without these statutes there would be substantially more multistate issues and conflicts.

Federal authority can potentially address the majority of multistate siting problems. The federal government has preempted the states in the regulation of nuclear power (Atomic Energy Act, 1954), hydroelectric facilities (Federal Power Act, 1920), and the interstate sale of bulk electric power and natural gas. Although federal environmental programs (e.g. PSD, NPDES, RCRA) are being turned over to the states, federal agencies retain oversight and final approval authorities. When disputes between the states arise, the federal court system is used as the referee of last resort.

Theory and practical application do not necessarily coincide. Federal agencies are often hesitant to take authoritative action on multistate problems. Federal agencies often lack sufficient political support to make definitive rulings in disputes involving two or more states. Congress is the basis of financial support and the ultimate source of policy direction for federal agencies, and agency officials are keenly aware that a state is able to marshal support in Congress if a multistate issue is resolved unfavorably to its interests.

The common federal statutory and regulatory framework is weakened by administrative practices through which they are implemented. The use of federal administrative programs as a common framework for multistate siting issues in the Ohio Valley is complicated by the division of the region into multiple federal administrative regions—Regions III (Philadelphia), IV (Atlanta) and V (Chicago), as well as different administrative regions for the Corps of Engineers (Pittsburgh, Huntington, Louisville). As additional authority has been delegated to the regions, they have become more autonomous in their administrative decisions. Conflicting interpretation of federal law, enforcement patterns and administrative policies are commonplace. U.S. Environmental Protection Agency, Region IV, for example, recently classified ethanol production facilities as one of the 28 specified industrial categories

Federal agencies often hesitate to take authoritative action on multistate problems.

under Section 169 of the Clean Air Act, subject to PSD if potential emissions exceed 100 tons per year. In Region III and V such facilities were not classified in the same manner, and potential emissions up to 250 tons per year are allowable before a PSD permit is required. Such differences between regions become major factors in multistate issues when the states or industry perceive that differential treatment of similar activities has inequitable results.

In a few specific instances, regulations are inadequately designed to address multistate issues. Section 110 of the Clean Air Act, for example, clearly places a responsibility on the state and federal governments to prevent interstate pollution. However, Section 126, the enforcement tool for interstate pollution, has proven inadequate. It requires a demonstration of cause and effect on a plant-by-plant basis, a showing of proof which is currently scientifically impossible for long range transport of pollutions. It does not address cumulative effects of multiple emitting sources. The section also limits the scope of concern strictly to criteria pollutants although some evidence suggests equal concern about non-criteria pollutants.

As federal budget reductions and new philosophies on the allocation of responsibility between federal and state authorities are instituted, the federal role in energy siting and environmental protection diminishes, thus weakening a common administrative and enforcement framework which has offset differences in state laws, regulations and enforcement. Budget and personnel cutbacks will likely discourage or prevent federal agencies from taking proactive roles in multistate issues. A policy of delegating to states greater responsibility for implementing and enforcing environmental programs has benefits and drawbacks in the effort to resolve multistate conflicts. As the states are delegated the responsibilities to implement environmental programs, each state will depend on sister states to make decisions that reflect multistate interests and values. Abrogation of this responsibility may lead to a call for a return to a stronger federal role.

National Environmental Policy Act

The National Environmental Policy Act of 1969 (PL 91-190) (NEPA) is an existing institutional process designed to identify and assess impacts of proposed actions, collect data, and identify alternative means of addressing negative impacts. Of existing institutional arrangements, its design as a flexible federal process provides the greatest opportunity for addressing facility-specific multistate issues. With procedural modifications and more consistent state participation, its effectiveness can be greatly increased.

Section 102 (2) (c) of the Act requires all federal agencies to prepare a statement of environmental impact on all major federal action significantly

affecting the quality of the human environment. The EIS is to contain detailed statements by responsible federal agencies on: 1) the environmental impact of the proposed action; 2) any adverse environmental effects that cannot be avoided should the proposal be implemented; 3) alternatives to the proposed action; 4) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

The Council on Environmental Quality (CEQ), which is responsible for overall administration of the requirements concerning EISs, issued regulations in 1978 that must be followed by the over 100 federal agencies mandated to prepare such statements. Although the regulations provide some substantive requirements, NEPA is a process, which does not establish hard standards that federal agencies must meet.⁹

The EIS is a statement of the tradeoffs considered in the federal agencies' decision, not a prescription for a course of action. The flexible process is well suited to identify and assess multistate issues associated with a proposed facility, and to encourage communication and resolution of conflicts among all interested parties. Shortly after a determination that an EIS is required, the federal agency with primary approval/disapproval authority or greatest involvement conducts an initial public meeting to begin preparation of the Plan of Study for the EIS. These meetings, termed "scoping meetings" have four specific objectives: (1) to identify affected public and agency (including those in an adjacent state) concerns; (2) to coordinate the EIS preparation process; (3) to define the issues and alternatives that will be examined in detail while simultaneously devoting less attention and time to issues that cause no concern; and (4) to save time in the overall process by ensuring that draft statements adequately address relevant issues.

The third objective is the key element of scoping meetings, which makes them an excellent opportunity for identifying and addressing multistate issues. State agencies, citizens and private sector interests in any state potentially affected by a proposed facility can participate in the scoping meetings. However, any state potentially affected by a facility must be prepared to commit the time and resources to ongoing participation if their concerns are to be identified and considered throughout the lengthy process. After the early scoping meeting, there is little opportunity for input by groups other than the host state until a draft statement is issued, often a year or more later. In the interim, decisions made by the developer and lead agency on the EIS preparation will influence the eventual location and design of a facility. Agencies and interests in affected states need to remain active during this interim process if their concerns are adequately addressed.

The NEPA process has a number of limitations as a vehicle for solving multistate siting issues. First, NEPA is not applicable to all federal actions. Major exemptions include: all Clean Air Act permits, National Pollutant Discharge Elimination System (NPDES) permits (except for new sources), permits issued by states that have assumed federal primacy, and actions of the U.S.

EISs are not prescriptions for action.

Synthetic Fuel Corporation.

In the Ohio Valley states, these exemptions could potentially mean that some major energy facilities may not require the preparation of an Environmental Impact Statement. State assumption of primacy for environmental permits (Kentucky is the only state that has not assumed NPDES primacy) limits those actions that would trigger the NEPA process. Likely actions that would require EIS preparation include: construction of dredging within navigable waterways (U.S. Army Corps of Engineers), a loan to an electric cooperative (Rural Electrification Administration), construction of a nuclear plant (Nuclear Regulatory Commission), or construction of a large hydroelectric facility (Federal Energy Regulatory Commission). With the initiation of the NEPA process, the lead federal agency is authorized to assess any potential issue including environmental and socioeconomic impacts. The scope of review is dependent on comments received at scoping meetings. Second, the major contribution of NEPA to resolution of multistate issues is weakened by its inability to adequately assess long-term cumulative effects. NEPA is to assess "the relationship between short-term uses of man's environment and the enhancement of long-term productivity" and to identify "any irreversible and irretrievable commitments on resources." Such assessment requires an examination of long-term cumulative effects of energy decisions. However, EISs for projects in the valley are prepared by a number of agencies and consultants each with its own perspective on resource management needs. The ability of any single agency or consultant to adequately assess the tradeoff of existing and future use of the region's resource base is extremely limited. Such a determination depends on a regional data base, policy guidance on the relative value of one resource use against another, and projections of future resource demands. Lacking clear data on state and federal policy guidance, federal agencies generally limit the assessments of short-term use, long-term productivity and irreversible resource commitments. In most instances cumulative effects are examined in the context of interactions of the proposed facility with facilities in the adjacent geographic region. Future facilities or resource needs are usually not addressed due to the difficulty of obtaining any reliable projections.

States look to the federal courts as the "referee of last resort" for resolving interstate disagreements.

The NEPA process has only limited ability to address long-term, cumulative impacts or to identify the most efficient use of the region's resources. These may be better addressed in the public policy and open market sectors. Regardless of these limitations, the process offers the greatest existing opportunity for addressing multistate issues and concerns.

Courts and the Judicial System

States look to the federal courts as the "referees" of last resort, with the necessary authority to resolve multistate conflicts. The acceptability of the

judicial system is due in part to the final, thorough nature of their decisions and to a long tradition of deference to judicial decisions. Litigation is not necessarily the best indicator of the incidence of multistate issues and the role of courts in their resolution. In the last five years only one case in the region involving energy facility questions has been litigated.¹⁰ The prospect of litigation provides an incentive to seek less lengthy means to solve multistate problems.

A number of questions can be raised about the importance and role of the courts in multistate siting issues. Are the courts involved in energy policy and decision-making by design or default? Are they the most effective and efficient means for the states to address multistate issues?

Differences in values, policies and priorities underlie most siting related issues. Courts, with their emphasis upon procedural correctness are not well suited to decide energy or environmental policy issues. They have little expertise in technical energy or environmental issues and are largely incapable of making value judgments on what is best for the region. The courts are better suited to determine questions of law. Review standards used by the court include a series of tests to determine whether administrative decisions were "wrong," and an examination of the process used by state agencies in arriving at the decisions. A reviewing court is not to substitute its judgment for that of an agency; it is only to determine the "reasonableness" of the decision. This often focuses the court's attention on clarification of legislative intent. Since many state laws do not mandate the inclusion of multistate concerns, an affected state bears the burden of showing how a decision adversely affected the interests of citizens in the host state.

Judicial review of administrative procedures focuses on the manner in which agency decisions have been reached—not substantive issues. This review seeks answers to three questions: (1) was the correct statutorily prescribed procedure used; (2) does that procedure satisfy court requirements; and (3) did the agency follow its own self-prescribed procedures. Parties raising objections to a project are often forced to raise procedural arguments in order to obtain judicial review, thus obscuring the real cause of their concern. The courts become bogged down in procedural issues often obscuring substantive issues. Court procedures are also a factor in assessing whether the judicial system is the most appropriate means to resolve multistate siting issues. One measure of efficiency is the time required to reach a decision. The court's thoroughness can be attributed to its deliberateness at the sacrifice of speed. The judicial process to some degree depends on the participants in the litigation to move the process along. The full judicial process includes pleadings, filing of motions, hearings, briefs, perhaps more hearings or interlocutory appeals to high courts all before a decision is reached. And after the decision is rendered, there may be one or two layers of appeal, petitions for rehearing, etc. If either party perceives that it would be to their advantage to delay, they have ample opportunity to do so. In some cases delay may be an effective threat to obtain desired concessions.

The courts themselves may add to the delay problem. A court is accountable only to itself. When a court takes a case "under advisement," especially in administrative appeal, it may take two weeks or two years to render a decision.

Courts are not well suited to decide energy or environmental policy issues.

When major facilities are at issue, the uncertainty of such a process is often a greater concern than the actual time, since the project developer may be forced to suspend plans until a final ruling is rendered.

Federal court procedure involves complicated rules about which court has jurisdiction, rules on invoking judicial review, rules about appeals, and rules about procedures. Since these rules are themselves subject to dispute, another opportunity for conflict and delays on definitive resolution arises. In a recent case involving EPA's withdrawal of SIP approval for two coal-fired plants in West Virginia, the state attempted to appeal the withdrawal in the 4th Circuit Court located in Richmond, Virginia (*Pennsylvania v. Gorsuch*, No 81-1524). However, Pennsylvania and several citizen groups had already petitioned that the case be heard in the 3rd Circuit Court located in Philadelphia and presumably more predisposed to Pennsylvania's viewpoint. The 3rd Circuit denied the appeal and West Virginia is now appealing the case to the Supreme Court. Those type of procedural conflicts must be settled prior to substantive review of the issues, which again are often both time consuming and costly.

Regional State Associations

States have found regional organizations a popular way to band together, with or without federal participation, to address mutual concerns. The forms have been varied: voluntary associations of elected or executive agency state officials; statutorily created state-federal commissions;¹¹ and state-federal compacts. The purposes have been markedly similar—improved coordination among members on those state or federal policies, plans and programs that affect the member states.

Regional organizations are unlikely to be equally effective in addressing the various multistate issues associated with energy facility siting. They provide a flexible and interactive communication forum for members to share specific information or perspectives on issues, but they are less likely to resolve specific interstate disputes among their members, especially if they are an informal, voluntary body. Regional organizations have developed and assessed economic and resource data on a multistate basis, but they have been less successful in having regional plans implemented by member states. Regional associations can play a valuable role in providing a third-party forum for discussion and negotiation of conflicts, but even those with formal authority find it difficult to act without the consensus of their members.

The Ohio Valley states are no exception to this interest in regional organizations. They have joined various associations which, by making interaction easier between states, can encourage cooperative action on mutual problems. Regional interest in water quality, water resources management, coal resources development, energy and economic development has been addressed on a

No single organization has the membership or authority to address all siting issues.

periodic or ongoing basis by various groups of state officials. Both informal, voluntary associations and statutorily created state-federal compacts provide an organizational basis for multistate issues and interest. However, no single organization has the membership or scope of responsibility which allow it to address the various energy facility siting issues. Each of the major energy, natural resource, and general policy organizations operating in the Ohio Valley states are examined below.

Ohio River Basin Commission (ORBC). The Ohio River Basin Commission is a voluntary association of state water officials in the valley states created in 1981 after the abolishment of the Title II Commission created under the Water Resource Planning Act. It includes all of the states in the region with the exception of Ohio. The commission provides a forum for state officials to discuss mutual interests and to take positions on issues of concern to the states as a group.

The commission, by its membership and with its access to state agency staff resources and expertise, is well suited to examine potential water resource impacts of proposed plants and identify and assess long-range water resource problems for the region. The focus of its members and programs on water resource problems restricts its current ability or limited ability or authority to examine the broad range of issues associated with energy development. An expansion of the commission's role to address the broader range of issues would require a change in the purpose, membership, and state agreements of this still-fledgling interstate organization.

Ohio River Valley Water Sanitation Commission (ORSANCO). ORSANCO is an eight-state interstate compact of all states in the Ohio Valley, with a formal statutory mandate to protect and improve water quality in the Ohio River basin. In its 34 year history, it has taken informal and formal actions to assist its member states and their industries and communities to monitor and reduce pollution levels of the Ohio River. Like the ORBC, its focus is much more limited than those issues associated with energy facilities. However, Article III of the compact states that in addition to the powers and duties set forth in the compact, the compact may be authorized to take on "such additional powers as may be conferred upon it by subsequent action of the respective legislatures of the signatory states or by acts of the Congress of the United States." Although the expanded authority could be sought, authority would have to be formally requested and approved by all states in the compact. Additional and different responsibilities would require changes in staff and a possible change in the composition of commissioners. The current low priority given by individual states to regional energy development makes it unlikely that such formal changes in purpose and authority would be sought or approved.

The commission can indirectly play a role in multistate siting issues. Article VIII of the compact authorizes the commission to address other pollution problems, an authority which could be interpreted to allow the commission to consider those land use, water disposal or air pollution problems that affect the quality of the basin's rivers and streams. The composition of the commission

also gives it a range of perspectives not typically found in state associations. Its members, three per state, appointed by the governor, include ex officio, key state environmental policy officials, as well as citizen and private sector representatives.¹² These commissioners, responsible for many of the environmental issues, laws, policies, and regulations affecting energy development, including air, water, solid and hazardous waste disposal within each state, can play a substantive role in identifying, negotiating and resolving environmental issues that arise among the states. The non-state members bring a broader perspective to the deliberations of the commission—a capability which can prove valuable in identifying or addressing multistate concerns. In addition, the established practice of creating technical, industry and citizen subcommittees to advise the commission also ensures that broader than state perspective is provided and that direct communication channels to non-state interests are available.

Interstate Coal Task Force. The Interstate Coal Task Force (ICTF) was organized in 1979 to convey the shared interest of its member states in the use of high sulfur coal. The Task Force is an informal group of 12 states in the midwest including the six Ohio Valley states. Members include state legislators, state energy and transportation officials and representatives of energy and related companies. The Task Force is not intended to address multistate issues, but rather to focus on the states' common interest in coal development. The Task Force therefore offers an opportunity for state officials to come together and identify the long-term interests of the region and potential constraints to energy development. Its broad objectives, diverse membership, informal status and lack of full-time staff hamper its ability to retain the active involvement of the states.

Governors Conferences. Governors have established various regional conferences in the Northeast, South, Midwest and West to provide them an opportunity for informal meetings to consider issues of mutual interest. Governors participate personally in these conferences and rely upon state personnel and full-time conference staff to provide the necessary identification and analysis of issues. Environmental, energy and economic issues are taken up by committees of state officials in each conference. The organization with the personal involvement of top state officials provides an excellent communication vehicle for states to identify and discuss mutual interest on an ongoing and informal basis. As informal, voluntary groups, they are less suited to deal with specific conflicts between their member states.

The Ohio Valley states are split among three conferences—The Southern Governors' Association, The Midwest Governors' Conference, and The Coalition of Northeastern States. This split makes it difficult for these states to communicate and coordinate on regional issues.

Conclusions and Recommendations

Conclusions

Significant multistate energy issues are acknowledged by state and industry officials and citizens in the Ohio Valley states, but there is little sense of urgency that cooperative action among the states is needed. The lack of urgency given to energy development problems by state officials can be attributed to a number of factors, including: the current focus on other priority issues—high unemployment, economic recession, and budget cutbacks; the small number of major energy projects currently being sited; a perception that specific issues can be resolved using existing political and institutional processes; and a low level of awareness of long-term and the broader economic implications of energy development in the Ohio Valley.

The lack of urgency has deeper roots. Both state and industry officials express caution about any changes in current methods of facility siting and dealing with multistate issues. State officials often appear ambivalent about multistate approaches, even as they acknowledge that existing means of dealing with multistate issues have major shortcomings. On the whole, voluntary and advisory mechanisms are considered as having limited usefulness—they have the advantage of being informal, flexible and sensitive to the concerns of each state, but they too easily collapse when major disagreements arise. Voluntary arrangements are also unable to provide definite solutions to disputes among states. Yet, sensitivity to state sovereignty and self interest appears to preclude strong state support for authoritative intergovernmental institutions outside the federal courts. State officials appear more receptive to procedural approaches.

which depend largely on unilateral state action, rather than on creation of new multistate arrangements. Yet, the need for each state to improve its internal capability to deal with siting is generally recognized.

The receptivity toward multistate approaches appears conditioned upon whether the multistate issues are specific to a proposed facility or more general to a region. In both types of multistate issues, the need for improved communication among affected parties is acknowledged. In fact, improved communication, whether on mutual concerns or specific disagreements, is the single "need" most frequently expressed by state officials. States appear to favor procedural approaches, limited to the primary parties, as a means to improve communication on site specific, multistate issues. Informal, multistate arrangements are acknowledged as more appropriate for the regional issues, which are common to a number of states.

What does this mean for an assessment of institutional arrangements appropriate for the multistate issues of energy development in the Ohio Valley? First, any arrangement must be both feasible and effective. It must be able to address the issue, carry out the necessary activities and, most important, be acceptable to and supported by the state, industry, and citizen groups whose participation is central to resolving the problem. Clearly, these criteria are often contradictory. Many of the institutional arrangements capable of resolving the various multistate issues are not viewed as politically, institutionally or financially feasible at this time. However, frequently expressed frustration with existing ways of solving multistate problems suggests that initial and incremental steps are warranted. The most feasible approaches are those which involve tinkering with existing mechanisms to improve their effectiveness for multistate issues.

A review of existing and new institutional arrangements, an assessment of possible activities for addressing the issues, and discussions with state officials suggest certain guidelines for assessing institutional arrangements which, on balance, are both feasible and effective. First, the arrangement must be flexible and able to accommodate political sensitivities and institutional differences within each state. Second, it must be informal—not impinging on the basic authority and interest of each state to administer state laws and regulations and to protect its self interest. Third, it must provide some continuity in interaction among all parties, whether the issue is facility specific or regional in nature. Fourth, it must be able to facilitate communication among all stakeholders in an atmosphere that can transcend specific disagreements. The key to communication is the ability to instill a multistate perspective in each decision-maker—public or private—that can affect the process and ultimate outcome of decisions made within each state. Fifth, the arrangement must be appropriate to the type of issue and activity. A site specific issue involving a limited number of states need not be handled by a mechanism involving states with marginal interest in the issue. Similarly, issues that call for binding decisions cannot be effectively resolved by multistate institutions having no formal authority. Issues involving a formal permit may be best addressed by the host state or the courts, but an institutional arrangement can encourage a multistate perspective or provide information on a multistate basis. Issues of self interest that involve

negotiation might be addressed through improved communication channels or participation of some third party group. Sixth, the arrangement should be able to assist states in recognizing their economic, energy, and natural resource interdependencies and their common interests.

These guidelines point to several institutional arrangements to be considered by the Ohio Valley states, industry and citizens as first steps in incorporating a multistate perspective in decisions about energy facility siting. Some may be primarily procedural; others require an organizational base. Some are designed for facility-specific issues while others are directed to regional issues. No single arrangement will be completely effective, yet each is intended to move the states, the energy industry, and citizens toward a multistate perspective by improving the amount and quality of communication on energy development in the Ohio Valley States. Taken together, these institutional arrangements are designed to deal with the low visibility and priority of siting related issues, state sovereignty and self interest, facility-specific and regional issues. Most importantly, they are offered to state officials and the energy industry as feasible "first steps" in the incremental process of encouraging states and industry to adopt a multistate perspective on energy facility siting. While designed for energy facility siting in the Ohio Valley, these types of institutional arrangements are by no means limited in their application to energy facilities, siting or to this geographic region. In fact, the feasibility and effectiveness of these arrangements depends upon their being viewed as widely useful to the states in dealing with multistate issues.

Recommendations

Expanding Public Awareness

An initial obstacle to any new or modified institutional arrangement for multistate energy issues is the low level of concern and lack of public or private sector pressure that these issues be resolved more effectively. States are unlikely to take steps to significantly improve their ability to deal with these facility-specific and regional issues until there is broader public awareness of and interest in the impacts and significance of regional energy development. Private sector interest and support of state endeavors to cooperate on multistate energy issues will be important to the initiation and success of any effort.

Specific knowledge and major concern with energy development impacts is primarily limited to state environmental officials and citizen environmental groups. Top policy officials are concerned with the economic wellbeing of their state, particularly with the development of their substantial coal resources. The concern for economic and energy development translates into interstate competition. Less apparent is awareness of the regional economic, energy and

natural resource interdependencies which link self interest to regional interest. Unless these interdependencies and their relationship to energy facility development are recognized across a broad spectrum of state and industry officials and citizens, a multistate perspective is unlikely to influence decisions made in each state. Without a broad-based concern for states' mutual interest, there is likely to be little incentive for more effective resolution of multistate energy issues.

RECOMMENDATION: AS A FIRST STEP, A REGIONAL SYMPOSIUM SHOULD BE HELD TO ENCOURAGE WIDE-SPREAD PUBLIC AWARENESS OF THE IMPORTANCE OF REGIONAL ENERGY DEVELOPMENT IN THE OHIO VALLEY STATES.

The symposium should bring together state officials, industry representatives from all economic sectors, and citizens to begin a discussion of energy development and its implications to the valley states. Major objectives are to expand awareness of these issues among key groups, begin building a conciliatory atmosphere that encourages communication and trust, and to identify what actions are needed to address multistate issues. The symposium should be designed to identify specific steps which governmental, industry and citizen sectors in each state can take to deal with common concerns.

The Ohio River Valley Water Sanitation Commission, with its core of top state environmental officials and its networks with industry and citizens in the valley states, is a logical focal point for the symposium. However, the active support and participation of industry is critical to the success of the symposium. The symposium should examine economic, energy and natural resource issues at the state and regional level and avoid limiting its focus to the Ohio River basin.

Central Communication Channel

The difficulty of communicating with officials or private groups in other states is the most frequently voiced complaint about the existing siting process. It is difficult to determine who in another state might be interested in a proposed facility and it is difficult to know where to go for information in another state. When issues arise between states, it is hard to keep ad hoc communication channels open. Without effective communication, conflict is difficult to anticipate and manage. A number of institutional arrangements can encourage more effective communication and management of conflicts associated with specific facility development.

For both facility-specific and regional issues, early and open communication is a major factor in the ability of state officials, industry and citizens to anticipate and solve potential problems that may create conflicts. In the siting process, early and open communication prior to formal permit applications and hearings provides the greatest opportunity for identifying and resolving poten-

tial multistate issues. Early communication during the selection and evaluation stages increases the prospect that concerns can be negotiated; open communication among all parties can facilitate the trust and mutual respect needed for productive negotiation. Both types of activities reduce uncertainty, the prospect of delays and their associated costs in time and dollars. Each developer will adopt a communication process to meet its particular need. The goal of a multistate channel is to provide the opportunity for industry to easily contact all stakeholders in each potentially affected state. For regional issues, a central communication channel allows states, industry, and citizens to identify common interest and potential issues, and to become more aware of the perspectives of concerns and each stakeholders. A central forum offers relatively neutral ground in which to explore specific problems and develop common or cooperative actions to address them.

Early and open communication is not easy to establish, especially across state lines. The channels must be flexible and appropriate to the type of information, technical or policy, to be relayed. The complexity of major facility development, the large number of stakeholders, and the diverse types of relevant information point to the usefulness of a central communication channel.

RECOMMENDATION: A MULTISTATE FORUM SHOULD BE ESTABLISHED TO ENCOURAGE COMMUNICATION AMONG STATES, INDUSTRY AND CITIZENS ON BOTH FACILITY-SPECIFIC AND REGIONAL ISSUES. AN ORSANCO COMMITTEE, PATTERNED AFTER THE ENERGY FACILITY SITING COMMITTEE, CAN SERVE AS THE NUCLEUS OF THE FORUM.

FOR FACILITY-SPECIFIC ISSUES, A CENTRAL COMMUNICATION CHANNEL, SERVING AS A MULTISTATE INFORMATION CLEARINGHOUSE FOR POLICY CONCERNS AND TECHNICAL ISSUES SHOULD BE ESTABLISHED TO FACILITATE OPEN AND EARLY COMMUNICATION AMONG AFFECTED GROUPS DURING THE SITING PROCESS.

For facility-specific issues, a central communication channel should have the capability to identify for a developer or the host state the major stakeholders and issues in each potentially affected state. It should be able to facilitate communication on both policy and technical issues.

The communication channel should be able to serve as a sounding board for industry to use voluntarily to obtain siting related information and to provide early identification of potential issues. To be used by industry, it must be capable of receiving and respecting confidential information. The central channel may not serve as the actual vehicle for communication among state officials, or state and industry officials, or state-industry-citizen groups. By identifying all potential stakeholders in each state, it could serve as the catalyst to initiate direct communication between these stakeholders both within states and between states. To have this capability, a communication channel should be built around policy level officials who can identify key groups and issues

within each state and who have the authority to see that appropriate communication channels are established. Communication through the central channel should be established upon request of the affected states or industry as soon as possible after site selection activities are initiated by industry.

The ex officio members of the temporary ORSANCO Energy Facility Siting Committee are well suited to serve as an informal communication forum for facility-specific issues. The group has access to state and organizational staff resources and is able to deal informally with state level issues. As top state environmental officials, they are most likely to be aware of state, local and public concerns with siting and to have the appropriate authority, access, and resources to address policy and technical issues within their respective states. Through ORSANCO these state officials have the established ties with the major energy industry groups in the valley states who can provide early information about proposed facilities and who can benefit from early indication of possible multistate issues. They also have established ties with citizen groups in the valley who provide a sounding board and non-governmental perspective on potential issues. For most states, the committee's ex officio members direct the agency with primary responsibility for issuing the major siting permits and for participating in environmental assessments. Within each state, its members have the ability to tie into or encourage streamlining of state permitting process and the coordination of permit reviews among state agencies. Improved intra-state procedures for siting are an important first step to effective multistate communication.

An ORSANCO committee can operate informally, alerting other states and the project developer to possible issues as soon as industry provides it with information about its plans during site selection. The Committee would in no way infringe upon states' legal prerogatives or jeopardize their self interests. While ORSANCO's primary authority is for water quality concerns in the Ohio River basin, its enabling authority infers a responsibility to address other pollution problems.¹¹ To perform effectively as a central clearinghouse on specific projects, the Committee would need a modest level of central staff support. The ORSANCO staff, working with state and industry staff, would provide continuity and substantive support to the Committee.

The Committee would serve not as a conflict resolution mechanism but as a means to anticipate conflict and establish a conciliatory atmosphere among affected states. As an informal but established group it provides an on-going channel for communication among top state officials about potential multistate concerns. The Power Industry Advisory and Public Interest Advisory Committees provide established ties to the energy industry and major citizen groups in the valley, as well as providing institutional accountability.

The communication function could be facilitated by the development and periodic update of a regional directory of key state agencies and private groups, both industry and citizen, likely to have a formal role or interest in energy facility siting. It would encompass a broader and deeper listing of interests than do existing permit directories.

FOR REGIONAL ISSUES, A MULTISTATE FORUM SUCH AS

THE ORSANCO STEERING COMMITTEE ON ENERGY FACILITY SITING SHOULD BE ESTABLISHED TO ENCOURAGE IDENTIFICATION AND CONTINUING DISCUSSION OF SHARED REGIONAL ISSUES IN THE VALLEY STATES THAT CALL FOR INDIVIDUAL AND COOPERATIVE ACTION.

Long-term regional issues of energy and natural resource management are often overlooked or ignored in the pressure to deal with current problems. A forum to provide ongoing, informal, non-adversarial communication among state officials, industry officials, and citizens to identify and assess shared interest and the long-term impacts of regional energy development is one step to a greater sensitivity to regional issues by decision-makers in each state.

Reflecting the difference in facility-specific and regional issues, a central forum for regional issues needs a different composition than one specifically designed for facility issues. The collaborative input of government officials, industry and citizens is essential to the ability to anticipate the range of continually changing issues. Members should be familiar with or have access to technical information about potential issues, but they must be able to provide a region-wide policy and public perspective. Flexibility, informality and continuity, backed by a membership able to implement proposed initiatives within their respective states, industry or citizen groups, are key to the effectiveness of the regional forum.

Again, the ORSANCO Energy Facility Siting Committee is well suited to serve as the nucleus of a forum on regional issues affecting energy development in the Ohio Valley states. As an informal, but established group, it provides an ongoing channel for communication among key stakeholders about potential regional concerns. The Power Industry Advisory and Public Interest Advisory Committees provide established ties to the energy industry and major citizen groups in the valley, as well as providing institutional accountability. The Committee would serve not as a conflict resolution mechanism, but as a means to anticipate conflict and establish a conciliatory atmosphere among affected states.

National Environmental Policy Act

The NEPA process is an existing mechanism which, if properly used by states, can facilitate multistate communication, regional analysis and conflict management. It is accessible to all stakeholders—governmental, industry and citizen—and flexible enough to accommodate environmental, social and economic issues. Scoping meetings for the Environmental Impact Statements allow early and direct communication among all parties on issues and methods of analyzing impacts. The data and analysis conducted on a multistate basis and the identification of alternatives provide a common informational base for separate negotiation among disputants.

The effectiveness of NEPA in addressing multistate issues depends upon the active participation of all stakeholders. Too often states—both host states and impacted states—have not taken advantage of this vehicle, limiting their role to

review and comment on the draft EIS, rather than participating fully in the scoping meetings and subsequent analyses. Such late and limited input is not given the same consideration by the federal agency as it would if raised during the scoping meetings.¹⁴

RECOMMENDATION: WHEN PRELIMINARY ENVIRONMENTAL ASSESSMENTS INDICATE POTENTIALLY SIGNIFICANT MULTISTATE IMPACTS OF PROPOSED FACILITIES, AFFECTED STATES SHOULD REQUEST STATUS AS A COOPERATING AGENCY IN THE NEPA PROCESS AND DEVOTE ADEQUATE RESOURCES FOR EARLY AND ACTIVE PARTICIPATION.

An agency in a state affected by a major facility can become a cooperating agency upon agreement with the lead federal agency without affecting the permitting authority of the host state. This action increases the likelihood that an EIS will include a multistate perspective, since a cooperating agency can participate in scoping meetings, develop upon request information and analysis, review and approve the plan of study for the EIS, and make staff available to the process. It also increases the prospect that these multistate concerns will be considered by the federal agency, since omission of significant issues or failure to incorporate the advice and expertise of a cooperating agency is basis for finding an EIS to be inadequate.¹⁵

States have adequate authority to use NEPA as a means of addressing multistate concerns, but their active participation requires that resources be devoted to this effort. Each state has already designated staff for EIS coordination. Active participation is likely to affect the timing as much as the level of involvement, since early participation may reduce future review time and resources spent in formal objections, hearings, appeals or litigation. For the host state, participation in NEPA studies and analyses may complement and support analyses for state environmental permits. A state's commitment to participation in NEPA can be identified in the State-EPA Agreements which define annual agency priorities and resource commitments.

Mediation of Conflicts

For certain types of facility-specific issues, negotiation among disputants can lead to resolution of conflict. When no formal state authority is involved or the issue is primarily between the developer and a governmental or private party in another state, negotiation may be effective. Negotiation of multistate issues is difficult, however, since identification of all stakeholders and specific negotiation issues and effective communication are hard to establish. State officials, sensitive to the legal and political concerns with sovereignty and self interest and limited in their scope of authority, are unlikely to step in to facilitate negotiation at a multistate level.

A mediation process may facilitate negotiations which involve parties in more than one state. The strength of mediation for multistate issues lies in its

voluntary, informal and flexible approach to resolving issues. It can encourage on-going communication in a conciliatory atmosphere through the neutral third party whose task is to assist in clarifying the issues and facts, keep the disputants in ongoing contact, and help to develop mutually agreeable alternatives. It can occur prior to or as part of litigation of disputes. The success of any mediation effort depends upon the ability to identify all potential stakeholders and their willingness to negotiate. Agreements can be as binding as the parties entering them wish them to be. This may be accomplished through signed contracts, security bonds, or other mutually agreeable means. Mediation is often overlooked as a vehicle for solving multistate siting issues.

RECOMMENDATION: ESTABLISH A REGIONAL ENVIRONMENTAL MEDIATION CENTER TO FACILITATE COMMUNICATION AND NEGOTIATION AMONG INDUSTRY, PUBLIC AND GOVERNMENTAL PARTIES TO MULTISTATE SITING AND OTHER ENERGY AND ENVIRONMENTAL CONFLICTS.

The primary objectives for establishing a formal mediation center are to increase awareness of mediation as a conflict management option and encourage its use where appropriate. The center, funded privately, would monitor potential energy and environmental disputes, offer its services where appropriate, and provide skilled mediators upon request. While it has certain advantages for multistate siting issues, it need not be limited to them. If the OR-SANCO Steering Committee for Energy Facility Siting serves as a central communication channel for multistate issues, it could provide a communication link between the states and the center.

Regional Air Quality Issues

Air quality is the issue most frequently mentioned as a source of interstate conflict and as a shared regional concern. Specific facilities and differences in State Implementation Plans have generated prolonged disputes between valley states, Canadian provinces and Northeast states, but concerns with long range transport and acid rain affect all the valley states. Since each state contributes to and is affected by air quality problems, there is an individual and collective reason to deal with the air quality problems. Air officials in the valley states are in contact on an ad hoc basis and through the national association, State and Territorial Air Pollution Program Administrators. Neither of these vehicles provides an ongoing basis to address the region's problems and their relation to air quality problems in other regions of the country.

RECOMMENDATION: A REGIONAL ASSOCIATION OF STATE AIR QUALITY OFFICIALS SHOULD BE ESTABLISHED AS AN ON-GOING VEHICLE TO IDENTIFY AND ASSESS

SHARED AND LONG-TERM AIR QUALITY CONCERNS AND TO IDENTIFY OPPORTUNITIES FOR COOPERATIVE ACTION.

The purpose of the Association would be to provide informal, direct, ongoing communication on shared concerns, not to address specific conflicts among its members. As a regional communication vehicle, the Association could facilitate a multistate perspective on specific air quality problems, identify shared problems such as the inequities and problems associated with dealing with the three EPA regions, and identify opportunities for cooperative action on technical or policy issues. The Association should be created with support of the governors. Participation should increase the policy, program, and resource management capacity of member agencies to meet their responsibilities in the region. It could be established as an independent, voluntary state association, or in loose affiliation with STAPPA or an established regional group.¹⁶ Its membership could be centered on the Ohio Valley states, but links with states to the west and east, and with Canada will be important if it is to address the long range transport and acid rain problems.

Regional Analyses

If states are to appreciate the significance of energy development on the region's resources, they must have some capability to assess the implications of facility development on the individual states and the region as a whole. State specific and facility-specific analyses frequently fail to assess regionwide, long-term and cumulative impacts. Factual analyses which look to multistate and long-term impacts are a first step. To be effective, such analyses must be accompanied by state policies that articulate state goals for energy, economic development and resource management. Without state policies, regional studies provide facts, but no appreciation of their significance.

Regional analyses have typically been conducted as regional planning studies and regional goal statements. Such efforts, while generating valuable information, seldom influence state decisions. With the demise of federally supported river basin commissions and regional economic development commissions, little analysis is being conducted at a multistate level. Planning which considers regional concerns is not a high priority in the Ohio Valley states, but it can provide useful information in determining a state's long term self interest.

Individual states can take steps which improve their capability to evaluate the significance of major developments on their long-term interests and to communicate this information to other states and the private sector.

RECOMMENDATION: EACH STATE SHOULD DEVELOP STATE POLICIES AND GOALS FOR ENERGY AND NATURAL RESOURCE MANAGEMENT AND THE APPROPRIATE STUD-

IES IN ORDER TO ALLOW IT TO IDENTIFY THOSE BROAD
CANDIDATE REGIONS FOR FUTURE ENERGY DEVELOP-
MENT AND AVOIDANCE AREAS THAT REFLECT ITS PAR-
TICULAR NEEDS AND CONCERNS.

States have much of the data, as well as the formal or tacit policies that allow them to determine those general areas most suited or inappropriate for major energy development. By bringing this information together, officials responsible for evaluating proposed facilities can better determine how a particular facility affects the overall state interests and what tradeoffs—current and future—are entailed. The informal determination of such areas can provide useful informational clues to both project developers and other states. It provides early location guidance to project developers.¹⁷ Identification of avoidance areas signals both developers and other states of those sensitive areas which, if impacted by out of state development, would likely create multistate issues.

Addendum

Multistate Siting Issues In The Ohio River Valley

Facility-Specific/Multistate Issues

Facility-specific multistate issues may be grouped into two broad categories: environmental and social. Many of the issues identified through discussions with governmental officials, industry representatives and residents in the Ohio Valley were not strictly siting problems, but concerned with operational impacts.

Environmental—

- **Air Quality**—Local transboundary air pollution problems are multistate issues, with major concerns focused on older facilities with higher emission standards. Problems with the siting of new facilities included emissions that interact with nearby facilities, or alternative energy sources for which new source performance standards have not been promulgated (synfuel facilities).
- **Water Quality**—Wastewater discharges from energy facilities are perceived as a major issue. This conclusion is not entirely supported by existing studies. The siting of new facilities in the region may create some multistate concerns, however, studies point to sources of potential water quality problems other than the facility itself. These include groundwater contamination from waste disposal sites, impacts of increased mineral extraction on hydrologic regimes, reduced stream assimilation due to increased water consumption, and potential impacts from transporting additional fuel and final products.
- **Water Quantity**—Consumption by major facilities of interstate water may create local conflicts over water use and availability (one example was water consumption by the proposed SRC II coal liquefaction facility on the Monongahela River). Water use conflicts and protection of critical low flows are of greater concern with new facilities due to their higher water consumption rates.
- **Hazardous Waste**—Hazardous wastes generated by synthetic fuel plants were of limited concern (usually identified as a potential water quality problem).

Socioeconomic Issues—

- **Economic Development**—The economic benefits associated with major energy facilities (jobs, tax revenues, induced growth, expanded coal markets, provision of reliable energy sources) frequently create interstate competition. This competition may generate multistate issues and hampers multistate cooperation.
- **Population Growth and Public Infrastructure**—Population growth and expanded employment are generally viewed as benefits of energy facility siting. However, growth that radically changes the social and economic nature of a community or exceeds its capability to provide support services may lead to opposition to facility siting. The timing, nature and magnitude of local impacts depend on the characteristics of the host community and the technology involved. Major energy facilities are increasingly locating in rural areas, where local governments often do not have sufficient public infrastructure or the ability to provide that infrastructure necessary to support such development. That infrastructure most severely affected includes schools, sewer and water, police, fire, roads, hospitals and housing. The provision of a public infrastructure to support the temporary or permanent growth associated with an energy facility may require cooperation between the states. *

Regional Issues

While many of the facility-specific multistate issues may be addressed in state and federal regulatory processes, regional issues are generally handled outside the permit process. Actions on regional issues provide the policy and program framework for solutions to facility-specific problems. Regional issues may be grouped into three broad categories: environmental, socioeconomic and public.

Environmental—

- **Air Quality**—Air quality degradation is the most commonly recognized regional issue. More than one-third of the counties along the mainstem of the Ohio River do not meet air quality standards for sulfur dioxide or particulates. Though major emission sources are existing energy facilities, the regional air quality problem is a source of concern among citizens, industry, and state officials that affects the siting of new facilities. Electric utilities alone produce 80 percent of the SO₂, 47 percent of the NO_x and 22 percent of the total suspended particles in the basin.¹⁸ In those localities where air quality standards are not met, or available air increments are minimal, future economic growth may be restricted. A basis for the problem lies with the Clean Air Act which focuses on ground-level air quality concentration near the source, and gives minimal considerations to emissions dispersed over great distances (100-600 miles). Each of the states contributes to and is affected by pollutants transported long distances. (The long-range

Effective resolution of facility-specific issues is often predicated upon addressing regional issues.

dispersion of sulfates and nitrates contributes to particulate loadings, visibility impairment and acid deposition.) Since regional air problems cannot always be traced to a specific facility, site location has little bearing on the problem. Insufficient data is available to fully understand the transport characteristics, physical and chemical transformation of pollutants, although several studies indicate plausible links between emissions from energy sources and regional air issues. Regional models constructed by the National Commission on Air Quality suggest that up to 70 to 90 percent of annual sulfate concentrations in eastern U.S. states may originate outside that state.¹⁹ If so, efforts to improve air quality by a single state will be severely hindered by transboundary pollutants.

- **Water Quantity**—In those river segments capable of supporting major energy facilities, total water resources may be inadequate to meet long-term water needs. Existing energy facilities account for 22 percent of water consumption in the region and that consumption is expected to increase five-fold by 2005 (to 49 percent of all projected water consumption).²⁰ Other in-stream and off-stream water users—transportation, municipal, agriculture and industrial users, fish and wildlife, recreation, water quality—compete for these same resources. With a finite resource, additional water consumed by energy facilities may be at the expense of these other users. Water availability during drought events and in selected reaches of the basin may create problems. Riparian water laws offer few management tools to manage the region's water resources.
- **Cumulative Impacts**—A few respondents and studies identified cumulative impacts of energy facility siting as a future concern. The sum of all demands made by energy facilities on the Ohio Valley's natural resources has long-term consequences for both the resource base and future economic development. As the resources of air, water and land are consumed by energy facilities and other development, the remaining resources take on added importance. Without careful examination of the valley's total capacity to support future development, the nature and cause of conflicts over energy development and between energy and other uses of the resources are unknown.

Socioeconomic —

- **Economic Development**—States' interest in promoting the use of their in-state fuels is recognized as a potential area of disagreement which may hamper cooperative efforts to site a particular facility. The availability, reliability and price of energy to fuel each state's economy is a concern shared by state officials. With the exception of Kentucky and West Virginia, all Ohio Valley states are net importers of fossil fuel energy. Adequate energy suppliers in each state depend upon a regional energy network.
- **Public Infrastructure**—A transportation system adequate to serve energy facilities and related economic growth is likely to raise multistate and regional issues. Increased coal production, construction of major energy facilities and the transport of waste products will put increased demands on the

region's rail, highway and navigational systems which serve the Ohio Valley states.

Public—

- Public issues often are based on environmental and socioeconomic concerns, but are differentiated by their widespread citizen involvement. They may involve both broad categories of energy facilities (nuclear, synfuels) and generic issues (public health and safety, the need for energy). Public issues, arising from differences in values or perception and often receiving news coverage, are viewed as extremely difficult to resolve.
- Nuclear energy facilities typically are the target of public debate and controversy, arising from concerns over transport and disposal of waste products and public health and safety of the surrounding populace.
- The uncertainties associated with coal conversion and oil shale projects generate public concern about environmental and health effects.

Notes

1. For the purposes of this report, "major energy facilities" are defined as oil, gas, coal, nuclear or municipal resource recovery facilities with a generating capacity in excess of 50 megawatts (MW); any hydroelectric generating capacity in excess of 5 MW; any coal gasification or liquefaction facilities with a feedstock greater than 25 tons of coal per day; any retort or *in situ* oil shale processing facilities producing over 10,000 gallons per year of ethanol or methanol; and any coal slurry pipeline, refinery, or nuclear processing facility.

2. See Appendix E for a discussion of the research design.

3. General Accounting Office, "Public Involvement in Planning Public Works Projects Should be Increased." Washington, D.C. 1974. B-153449, p. 1.

4. With the exception of Illinois, the valley portions of each state contain the major coal resources. Sixty percent of the electricity generated in the six states originates within the Ohio River Basin. Market conditions, including the demand for energy, the price of competing fuels, and the availability of governmental financial assistance will affect the number and pace of facilities brought to construction, but the existence of land and water resources continue to make the area attractive for energy development.

5. By state, the percentage of coal production used by utilities is: Kentucky 90%, Illinois 87%, West Virginia 84%, Ohio 75%, Indiana 67%, and Pennsylvania 64%. This market is multistate, with in-state coal representing from 50 to 88 percent of the coal purchased by utilities within the same state. While coal is imported from Western states, intraregional coal markets do exist. New generating facilities equipped with scrubbers and synfuel would expand the regional market for the high sulfur coal of Western Kentucky, Illinois, Indiana, Ohio and West Virginia.

6. Indiana and Pennsylvania are substantial exporters of electricity, with a generation to consumption ratio of 1:30. West Virginia with a ratio of 3:34 is unique among the six states, serving as the location for facilities of regional electricity producers which export power to service areas in other states.

7. In the Ohio Valley, the Stuart, Conesville and East Bend facilities are joint ventures of utility companies in Kentucky and Ohio.

8. Wabash, Big Sandy and Monongahela Rivers are interstate tributaries.

9. In *Klepp v. Sierra Club*, 427 U.S. 390, 410 n. 21 (1976), it was noted that "the only role for a court is to insure that the agency has taken a 'hard look' at environmental consequences, it cannot interject itself within the area of discretion . . ."

10. *Indiana Power and Light v. U.S. EPA Region V* (Patriot Power Plant).

11. The Title II river basin commissions, created under the Water Resources Act of 1965 (PL 89-80), were disbanded as of September 30, 1981. The Title II Ohio River Basin Commission was re-established as a state association of state environmental and water resource officials.

12. The ex officio members to the commission include the directors secretaries of: Illinois Environmental Protection Agency, Indiana Board of Health, Kentucky Department for Natural Resources and Environmental Protection, Ohio Environmental Protection Agency, Pennsylvania Department of Environmental Resources, and West Virginia Director of Natural Resources.

13. "The Commission shall conduct a survey of the territory included within the District, shall study the pollution problems of the District, and shall make a comprehensive report for the prevention or reduction of stream pollution therein. . . . The commission shall draft and recommend to the governors of the various signatory States uniform legislation dealing with the pollution of rivers, streams, and waters and other pollution problems within the District." Article VIII, Ohio River Valley Water Sanitation Compact, June 30, 1948.

14. Memorandum from the General Counsel, Council on Environmental Quality, April 30, 1981.

15. 46 *Federal Register*, 18036, March 23, 1981.

16. ORSANCO is the only established regional group which has all the valley states as members and which includes top state environmental officials. Its statutory mandate for water quality limits its role in air quality concerns without a change in the compact. ORSANCO has established informal advisory groups to the Commission and could conceivably serve as an assembly point for periodic meetings of an air quality association.

17. Independent state identification of sites will be of little use to developers who have already identified candidate regions and/or landbanked preferred sites.

18. U.S. Environmental Protection Agency, *Ohio River Basin Energy Study (ORBES): Main Report*, November, 1980.

19. National Commission on Air Quality. *To Breathe Clean Air*. U.S. Government Printing Office, March, 1981.
20. Ohio River Basin Commission. *The Ohio Mainstem: The Water and Land Resources Study Report and Environmental Impact Statement*, October, 1978.

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The States and Energy Siting:

Cooperation in the Ohio River Valley

**Volume II
Appendices**

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**The Council of State Governments
Lexington, Kentucky**

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THE STATES AND ENERGY SITING:
Cooperation in the Ohio River Valley

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Appendix A

COMMENTS OF THE STUDY RECOMMENDATIONS BY ELECTRIC UTILITY
REPRESENTATIVES IN THE VALLEY

KENTUCKY UTILITIES COMPANY

ONE QUALITY STREET
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40507

April 29, 1982

Ms. Anne D. Stubbs
Mr. Russell Barnett
The Council of State Governments
P. O. Box 11910
Lexington, KY 40578

Dear Anne and Russ:

ORSANCO's Power Industry Advisory Committee is pleased to submit the following comments on the conclusions and recommendations contained in The Council of State Governments' working draft of the final report entitled "Institutional Mechanisms and the Siting of Major Energy Facilities Along the Ohio River", dated March, 1982. It is our understanding that our comments will be incorporated into the final version of the report as an attachment.

Section III of the working draft lists seven recommendations which could be used by the states to address multistate issues, whether they be site-specific or regional in nature. Most of these are informal or procedural because The CSG found an "...absence of any agreement that multistate impacts of energy facility siting create issues which call for state or industry attention. When these issues are acknowledged, states differ on the priority given to them and the importance of the states acting to resolve them."

The majority of The CSG's recommendations focus on the need for improved communications by the states on shared regional concerns and/or specific disagreements. PIAC supports the intent to improve the amount and quality of communications between states and among affected parties. PIAC sees a regional symposium as having merit in increasing awareness of the larger regional issues. The "key groups" to be involved in the symposium should be given an opportunity to participate in the development of the objectives/goals of the symposium so as to be of benefit to all interested parties. PIAC also endorses the concept of a communications scheme to involve the ORSANCO states in energy facility siting; perhaps some combination of The CSG's recommendations for a central communications channel, a communications forum, and a regional council.

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Ms. Anne D. Stubbs
Mr. Russell Barnett
April 29, 1982

PIAC understands the need to promote an open and effective communications network--within each state, between the states, and between states and industry--if such information exchanges are not already occurring. PIAC sees potential benefits to all interested parties through a communications mechanism which fosters open dialogue between the various stakeholders involved in energy facility siting.

Another of The CSG's recommendations dealt with the states more effectively utilizing the NEPA process. Given the general low level of interest encountered by The CSG for establishing new procedures; the NEPA process effectively provides the avenue, in an existing mechanism, for interested stakeholders to participate in the siting process and resolve siting issues. If a certain entity believes a more active role is necessary in the siting process, then the NEPA process is a readily available tool for this purpose. Federal regulations encourage federal, state, and local government participation as well as public participation. NEPA provides government and citizens with the opportunity to come inside the process without imposing additional costs on states by establishing redundant activities and without causing delays in the siting process. PIAC endorses the NEPA process; we see early, good faith, involvement by interested parties as being of benefit to all who cooperate in the process. Early involvement in the process can shape the environmental impact assessment so that it addresses the common concerns of the interested parties and aids in the resolution of any siting issues which arise between the stakeholders.

An environmental mediation center was recommended by The CSG for use by disputants in negotiating selected siting conflicts. The facts developed during this study do not support the need for such an organization. As The CSG indicates, only one multistate siting issue has been litigated in the last five years. This is strong evidence to demonstrate that a regional mediation center is not warranted as another step in the siting process.


The CSG's final recommendation to have the states attempt to establish "broad candidate regions for future energy development and avoidance areas" should be approached with caution. Siting of energy facilities is very specific and dependent upon facility characteristics. Criteria will vary substantially depending on the type of facility, its size, fuel utilized, etc. This will effectively determine the potential for an area's development or its exclusion. Identification of broad areas for potential development may result in adverse impacts. Such a designation could

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April 29, 1982

cause land speculation, unnecessary concern by landowners, etc., without any apparent benefit to industry or the states. The utility industry, for example, will still be required to conduct its own siting review process to ensure that its obligations to ratepayers and stockholders are met.

PIAC would like to thank The CSG for the opportunities afforded to us to provide input into this study. If you have any questions, please feel free to contact me at (606) 255-1461.

Very truly yours,



Caryl M. Pfeiffer
Chairman, PIAC

CMP/dmh

cc: PIAC members
Leo Weaver, ORSANCO
Owen Lentz, ECAR
Fred Sener, PPSC

Appendix B

ENERGY FACILITIES IN THE OHIO RIVER BASIN:
EXISTING AND PROPOSED

Appendix B: Proposed Energy Facilities

A. Scope of Proposed Energy Projects

The Ohio River Valley is a prime site for energy development. With its water resources, fossil fuel reserves, transportation systems, and large population, the Valley states will attract energy projects. Already, 500 tons of coal are being mined annually within the river basin, and 52% of the nation's bituminous coal reserves remain to be mined. Fifty-five electric generating plants with a combined capacity of 51,584 MW are now located along the main stem of the Ohio. In addition, 21 units with a total capacity of 23,352 MW were planned or under construction as of 1981.

Within the entire basin, feasibility studies have been completed for 114 projects. These projects, which are awaiting construction, fall within the following areas:

PROJECTS PUBLICLY ANNOUNCED FOR DEVELOPMENT IN THE OHIO RIVER BASIN

electric generators -- coal fired	11
electric generators -- nuclear	3
electric generators -- hydroelectric	25
coal liquefaction	11
coal gasification	12
coal slurry pipelines	2
oil shale	3
alcohol production	44
tar sands	3
<hr/>	
Total number of projects	114

The actual number of projects that will pass the feasibility study stage to construction is unknown. Federal funds for a number of the coal conversion, oil shale and alcohol plants have been restricted recently. The impact of these cutbacks in available Federal funds will differ by the type of facility, past reliance on Federal assistance, the financial status of the company proposing the project, and the availability of alternative sources of loans. Coal conversion, tar sand, and oil shale projects may obtain assistance from the U.S. Synthetic Fuels Corporation in the form of guaranteed loans, price support or direct grants. Federal funding for alcohol plants is doubtful at this time although several projects have received federal assistance commitments. Other facilities will be forced to turn to traditional markets for financial assistance.

Future energy demands are difficult to project. Generally, the number of proposed projects in the valley region can be expected to increase in response to population growth and increased demand for coal based energy sources.

A review of projected energy siting patterns which explores the degree of siting activity in each state provides some insight into potential future multistate issues:

Illinois: The majority of the energy facilities are and will continue to be located along the Illinois River. The main electric load center for the state is Chicago (60% of demand). The central portion of the state with its access to the coal field and proximity to population centers and corn producing centers is where most future growth will occur. The Ohio River basin in Illinois is in the southeastern corner of the state. This area has some siting restrictions including sparse population, limited transportation, a national forest, and susceptibility to seismic activity (New Madrid Fault). Little development is projected to occur there through the year 2020.

Indiana: Indiana's major energy load centers are in the central and northern portion of the state. Additional sites along Indiana's 45 mile Lake Michigan shoreline are unlikely to be available for energy siting. Limited water resources in the central portion of the state have required the electric utilities to construct plants along the Ohio and Wabash Rivers, transporting energy long distances to load centers. Future growth will center along these two rivers.

Kentucky: The major load centers and desirable sites in Kentucky are along the Ohio River. A limited number of sites also are available along major tributaries (e.g., Green, Kentucky Cumberland). Future growth is expected to continue along the Ohio River.

Ohio: The state's major load center is in northeastern Ohio. Air quality restrictions along the Ohio River and Lake Erie will limit the availability of future sites. New plants will probably be built along major tributaries, in adjacent states where practicable, or at existing stations (which require off-sets in non-attainment areas).

Pennsylvania: Pittsburgh is the major load center for the western half of the state. Air quality problems and the concentration of existing developments within the 40 mile section of the Ohio River within Pennsylvania will limit the additional siting of energy facilities. Water demands on the Monongahela River may restrict the additional siting of any major water user.

West Virginia: West Virginia's load center is located in the northern and central portions of the state. A number of sites along the Ohio and Kanawha River could accommodate future growth.

B. Concluding Observations

In half of the Ohio Valley states, proposed energy facilities are integrally dependent on the Ohio River as a source of water. Future development of energy facilities along the Ohio and Pennsylvania portions of the river is limited by air quality restrictions. However, operation of existing energy facilities in these states will continue to generate interstate concerns with air and water quality. Although, the Illinois portion of the Ohio River Basin is not projected to grow substantially, projects within other portions of the state will have environmental (e.g., air) and socio-economic (e.g., labor market) impacts on the Ohio Valley. Energy projects proposed in other states in the Ohio Valley, particularly along the Wabash River, could have severe impacts in Illinois, e.g., water quality and quantity.

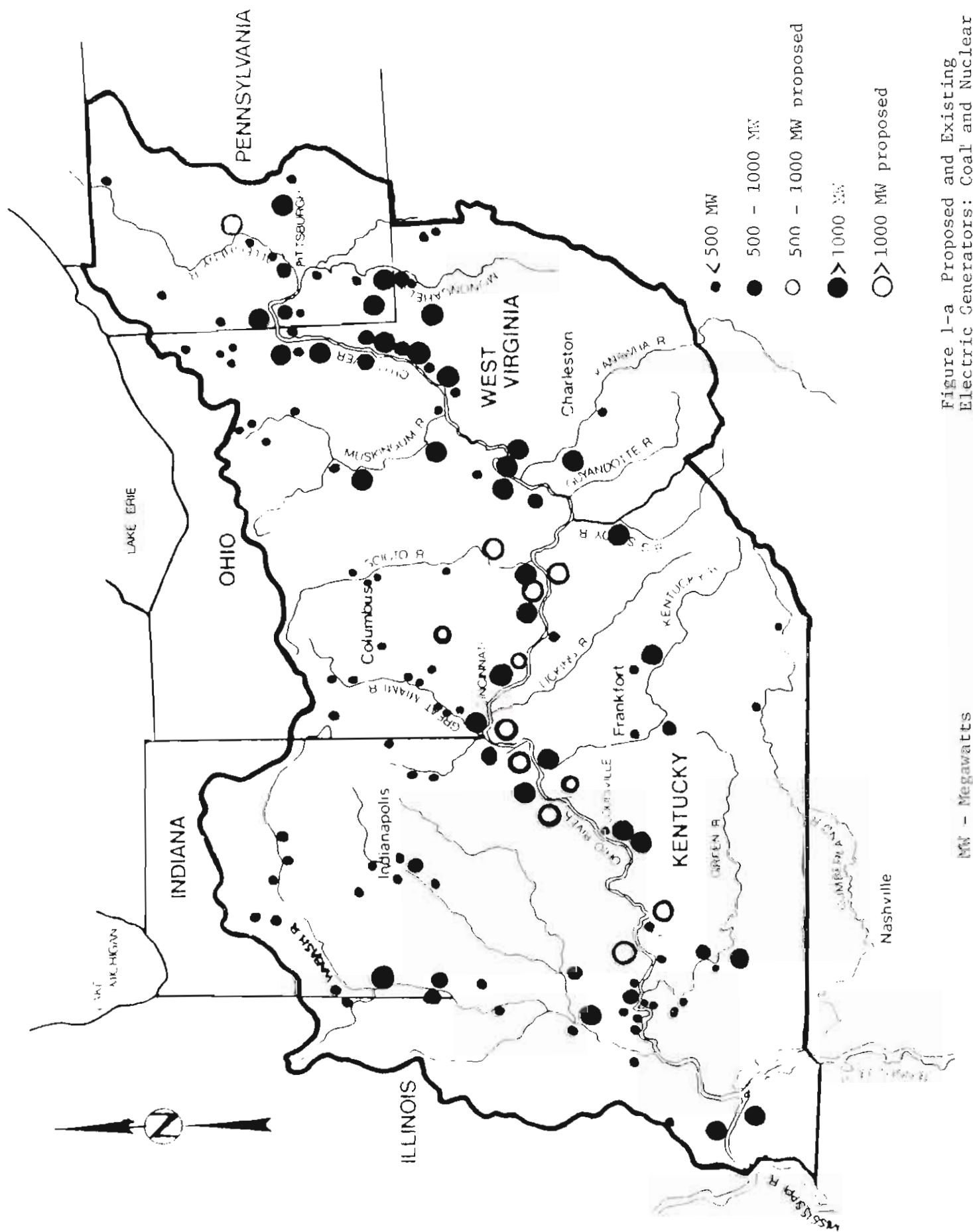


Figure 1-a Proposed and Existing Electric Generators: Coal and Nuclear

MW - Megawatts

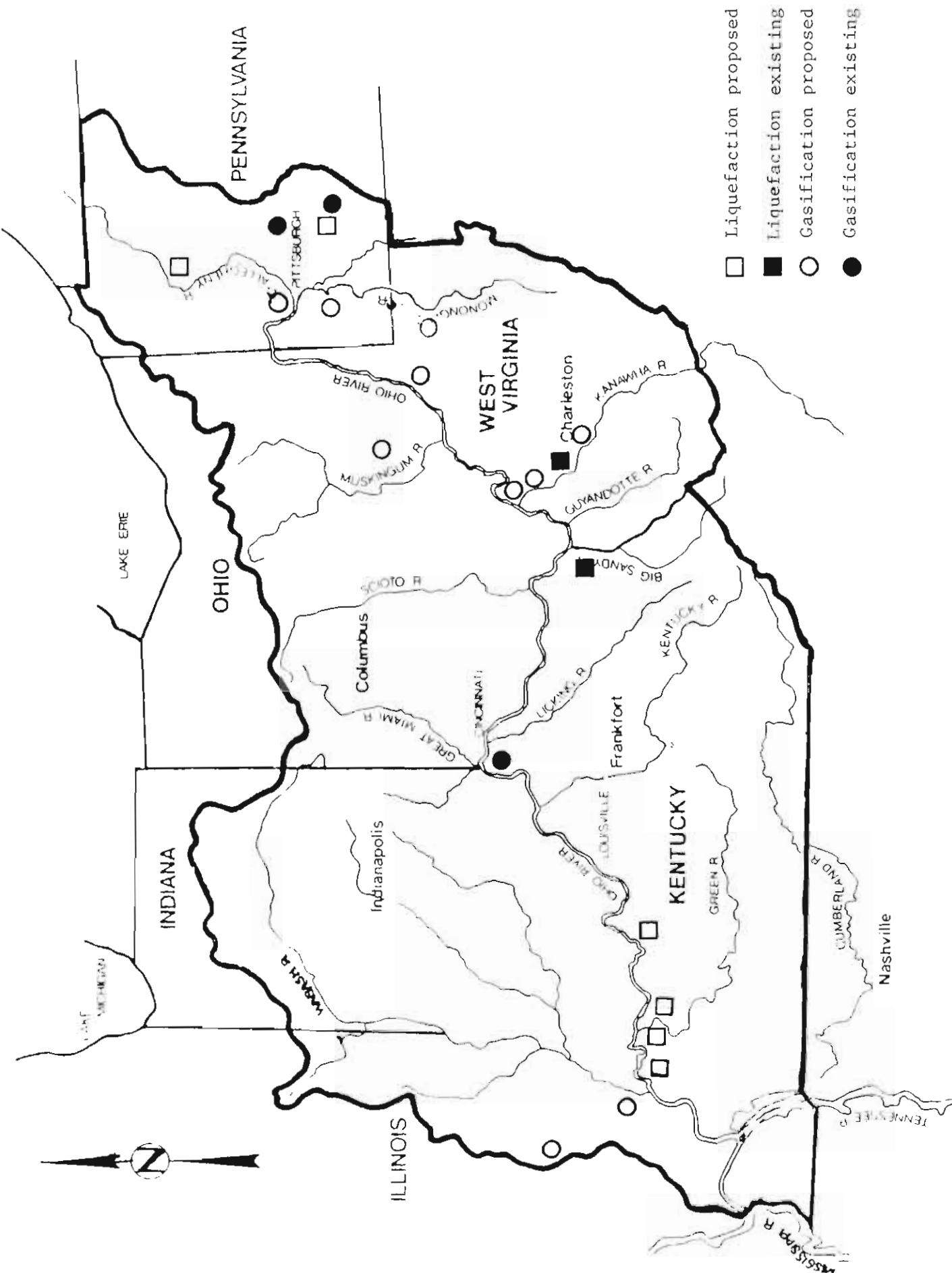
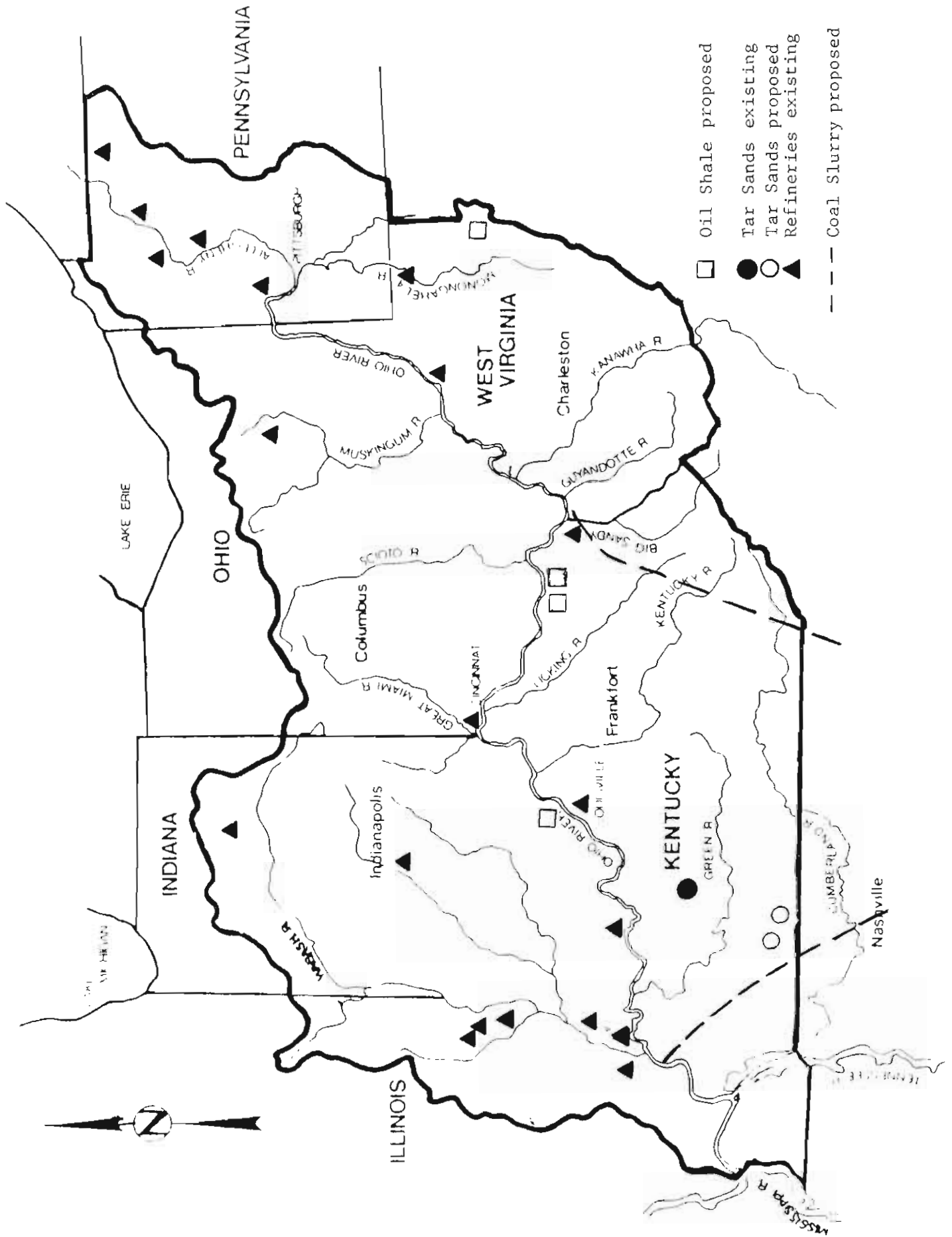


Figure 1-b Synthetic Coal
Conversion Plants:
Planned and Existing



Appendix C

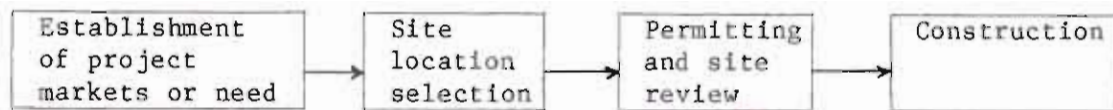
WORKING PAPERS

- C.1 Energy Facility Siting Process and Interstate Cooperation
- C.2 Regional Organizations: Their Roles in Communication, Planning and Conflict Management
- C.3 Central Communication Channel
- C.4 National Environmental Policy Act
- C.5 Mediation
- C.6 Association of State Air Quality Officials
- C.7 Analysis of Legal Institutional Arrangements
- C.8 A Multistate Perspective of the Ohio River Valley

C.1 ENERGY FACILITY SITING PROCESS AND INTERSTATE COOPERATION

Any institutional arrangement for multistate siting issues must be compatible with the existing siting process. A close look at siting procedure reveals the roles of public and private sector groups, possible roadblocks to interstate coordination and alternative mechanisms for multistate cooperation.

The siting process is often defined as those project development steps taken leading to facility construction. A general flow chart of the major steps includes:



The state role is largely confined to the third step--site evaluation. The function of state agencies in the Ohio Valley is not to select sites but to approve or reject the site proposed by the developer using explicit criteria defined by administrative and/or regulatory acts. The establishment of the project market or need and the site location are the responsibility of the project developer. Decisions made at each step are influenced by state, federal and local regulations. (Appendix D includes a partial listing of state and federal regulations.) Failure to meet the requirements of any one of these regulations may block project construction. During the site evaluation step, proposed projects are reviewed to ensure their compatibility with the public's interest.

Establishment of Project Market and Need

The initial decision for any energy facility is determining the need for the project, a process which varies by energy facility. The need for synthetic fuel facilities or refineries is determined by national markets, while energy facilities such as electric generating and coal slurry pipelines respond to regional needs and demands. With the exception of electric generating and nuclear processing facilities, the open market determines a project's feasibility--a process with minimal public review.

The electric utility industry operates within a highly regulated environment. Project feasibility hinges on the need for power within each utility's service area--geographic areas specified by legal boundaries. Utilities routinely forecast 10 to 20 year energy demands within their service areas. Existing facilities are evaluated against this demand to determine the need for additional facilities. Projections of investor-owned utilities are submitted annually to the Economic Regulatory Administration, U.S. Department of Energy through the area reliability councils. The report (ERA-411) must include the following information:

- Peak load and energy requirement forecasts for each of the next nine years.
- A tabulation of generating units for the next ten years, including their status, name, location, capacity, and primary and alternate fuels.
- A map of the existing bulk power transmission network of the region and projected additions over the next ten years.
- A description of the adequacy of the bulk power transmission system under the most recent summer and winter peak load conditions.
- Summary of regional operating policies and practices intended to assure the integrity and reliability of the bulk power supply system.
- Description for each year over the next 11 to 20 year period, the estimated peak demands and the resources which appear necessary to serve that demand.
- Description of the capacity to be added and the percent of the capacity additions expected by hydro, nuclear and fossil-fueled.

These annual reports represent a disclosure of projections--they are not plans or a commitment to develop or acquire additional generating capacity. The reports are filed with the public utility commissions of each state and provide a base of information which states can use to anticipate potential multistate problems.

Utility decisions to construct new facilities are reviewed and certified by each state's public service commission to ensure that an adequate supply of reasonably priced electrical energy will be available to the citizens of the state. Certification, usually in the form of a "Certificate of Convenience and Necessity" or "Public Need," is required in Illinois, Kentucky, Ohio, and West Virginia prior to the commencement of construction. In Indiana and Pennsylvania, project approval is needed before project costs are included in the utility's rate base. This may occur either before or after construction begins.

Project need is often determined on a multistate basis. Service areas can include two or more states and utilities from one or more states can enter into joint ventures to share the cost of building generating facilities. In the Ohio River basin, nine of the thirty electric utilities (excluding municipally owned utilities) serving the region have plants in more than one state. A number of facilities, including Stuart, Conesville, East Bend, Joppa and Clifty Creek, are jointly owned by utilities in one or more states. Ten of the valley's utilities are owned by holding companies (Allegheny Power System and American Electric Power) whose decisions are made at a multistate level.

Since the creation in 1968 of the North American Electric Reliability Council (NERC), utilities have increasingly interconnected under contract and pooled generating capacities. This allows them to augment the reliability and adequacy of bulk power supply and to affect capital cost and operating cost reduction benefits by obtaining peak load electricity from intertied systems with differing peak load periods. The Ohio River valley states are located in three regional reliability councils--East Central, Mid-Atlantic, and Mid-America Reliability

Councils.

These electrical interties bind the states together. State agencies make decisions that impact citizens in their respective states and in adjacent states, but little attention is given to these interties by state agencies or legislators. As a result, state officials lack information about the relationship of a particular generating facility to the entire system. The laws and regulations under which public review is conducted often leads to parochial decisions. The Kentucky Public Service Commission recently denied certification for a state utility (Kentucky Power) to participate in the construction of a plant in Indiana. This decision was later reversed by the commission, but the reversal is currently being challenged by the state Attorney General.

Site Selection

The selection of a site establishes the major environmental, social and economic impacts of a facility. The social, economic and environmental tradeoffs are determined by the interaction of these impacts on the unique characteristics of a the site. For example, an energy facility requires a certain amount of land, and the impacts associated with converting that land to a facility site depend in part on the the current use of the site.

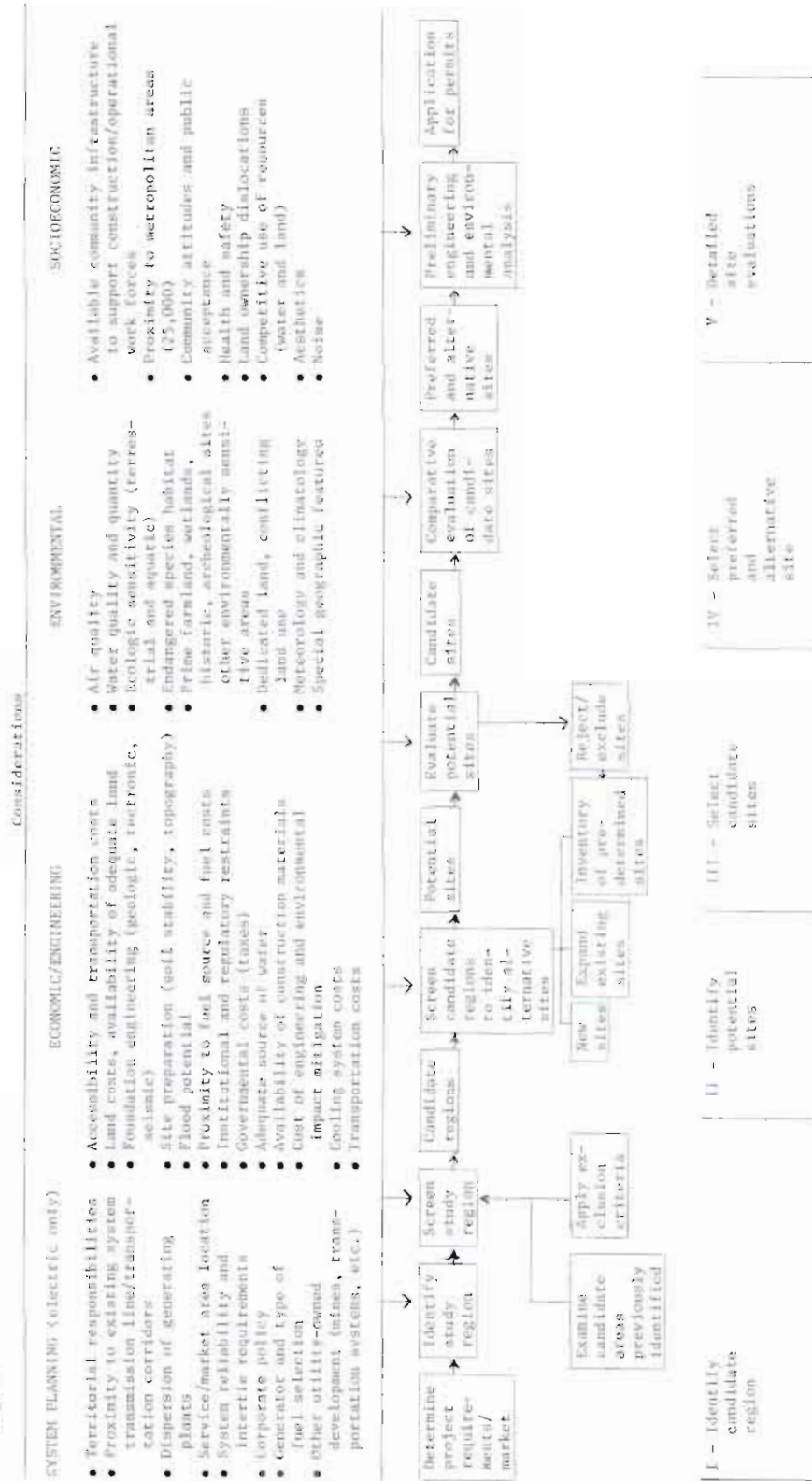
In determining environmentally suitable and economically feasible sites, regional and local physical characteristics as well as the type of facility must be considered. No single methodology is satisfactory for all types of sites or facilities. The site selection process is developed by the project developer on a case-by-case basis but a high degree of commonality in the techniques and parameters used exists.

Siting is an interactive screening procedure through which progressively detailed criteria are applied until the proposed sites are identified. At each step, the project developer makes a series of important decisions, with many of the early decisions forming the framework for later decisions. The site selection process generally occurs in five phases which can be defined as follows (see Figure 1):

- Identify candidate region. Using exclusionary or "knock-out" criteria, conduct reconnaissance level study to divide region of interest into general candidate areas.
- Identify potential sites. Develop list of potential sites. Consider expansion at existing sites existing inventories of developable sites, and identify potential new sites. (May yield 50 to 100 sites.)
- Select candidate sites. Narrow the number of potential sites down by using general criteria and "fatal flaw" criteria.
- Select preferred and alternative site. Use detailed criteria and site investigation to pare down candidate sites to a preferred site and one to three alternatives.
- Detailed site selection. Study sites in detail and conduct preliminary site layout, engineering and environmental analysis.

ENERGY SITING PROCESS

FIG. 1



A detailed description of the generic site selection process is provided below, followed by specific modifications necessary for each of the various energy facilities:

Identify Candidate Regions: The project developer identifies a broad study area within which a facility might be built. It may be an electric utility's service area, state boundaries or a coal basin. Using a "rough pass" screen, candidate regions within the study area potentially capable of supporting a facility are identified. For a major energy facility these candidate regions may range from 50 to 100 square miles each. Typical criteria include proximity to load centers or markets, proximity to fuel supplies, accessibility to multiple transportation networks, availability of sufficient water supply, population density levels, general environmental quality and corporate policies. Constraint mapping is a widely used technique for this initial screening. Limiting factors which eliminate a region from further consideration are identified. For example, a state park is quickly eliminated as a candidate region. Once the candidate region is identified, little further effort is spent in examining sites outside these regions.

Identify Potential Sites: Within each candidate region, specific sites capable of supporting the proposed energy facility are identified through a reconnaissance level screening. Site requirements, determined through conceptual engineering studies, are typically compared to existing inventories of developable sites. These include paper inventories of sites identified from published reports, public records, individuals knowledgeable about the area, state commerce departments and inventories of land controlled by the project developer or a developer may identify additional sites for consideration. Typically 50 to 100 sites may be identified.

Reconnaissance level criteria include sufficient acreage, applicable state, federal and local regulations, water availability and quality, mix of transportation modes, topography, seismic risks, compatible adjacent land use, air quality maintenance areas and acceptable air diffusion and avoidance of areas of cultural, social or ecological importance. Criteria vary in importance depending on the type of facility and the project developer. Air quality, for example, is less critical for a nuclear power plant than a coal-fired plant. Much of the information in this screening is readily available from data collected by public agencies or data previously collected by the utility.

Select Candidate Sites: Sites which survive the reconnaissance analysis are subject to more detailed analysis which includes an examination of "fatal flaws"-- characteristics such as air quality nonattainment that can prevent project development. Through a structured review and decision-making process, a manageable number of potential sites are selected for indepth study. Site visits and limited field studies are often conducted during this phase.

Select Preferred and Alternative Sites: Using indepth site-level studies based on field studies and literature surveys, a preferred and usually one to three alternative sites are selected. Tradeoffs among the alternatives are measured through a rank ordering of parameters which combines empirical measures and impressionistic values. The ranking scheme varies with each project, with explicit criteria for judging the adequacy of the ranking process not always available.

With the evaluation of alternative sites comes the first opportunity for public input. Under the regulations promulgated by the Council on Environmental Quality (CEQ) public meetings are held for projects involving a major federal action. Scoping meetings allow the general public and public officials to express concerns. A Plan of Study (POS) is then developed, incorporating comments made during the public participation period.

Detailed Site Investigation: Once a site is selected, a detailed baseline study of the site area is conducted, preliminary engineering design and estimates of potential environmental impacts of the project are made and the EIS study is conducted. Detailed investigations and evaluations focus on the primary site, with investigation of alternative sites typically limited to analysis of key data. (An exception is in Ohio where alternative sites must be studied extensively.) The 12-24 month on-site investigations focus on regulatory and engineering requirements for plant construction outlined in the plan of study.

Once detailed site investigations begin, the developer makes a substantial investment in the siting process and commitment to particular sites. Companies must often purchase directly, lease or obtain options for the primary and alternative sites. Detailed engineering is begun and selected pieces of equipment are ordered. Project developers also begin to put together sufficient risk capital to finance the project.

Variations in the Site Selection Process

The site selection process described above is the basic process for electric generation, synfuels, refineries and slurry pipelines. Specific modifications occur for each type of facility.

- **Electric generating facility:** A utility's service area traditionally defines the study area, limiting the scope of candidate regions and the number of feasible sites. The interconnected nature of electric utilities coupled with technological advances in transmission capabilities does allow the study area to be expanded beyond the service area. Where physical or economic factors prevent additional construction or generating capacity in the service area, the utility may seek to locate outside its service area. Companies joining together to construct a facility may include their collective service areas as the study area. Utilities often have knowledge of potential sites within their respective service area developed during previous siting studies. In some instances, they may take an option on potential sites to reserve these sites for future development.
- **Synthetic coal conversion:** The study region for coal conversion plants, often defined by a coal basin, is much larger than that of other types of energy facilities. In the Ohio Valley area, this includes the seven state Appalachian basin (Alabama, Tennessee, Kentucky, Virginia, West Virginia, Ohio, Pennsylvania), the three state Illinois basin (Illinois, Indiana, Kentucky), as well as the western and other coal fields of the valley. Proximity to a sufficient supply of economically priced coal is a major criterion. These large areas allow greater flexibility in locating a facility and create competition between the states seeking to attract a project.

- Oil Shale: The low yielding oil shales in the Ohio Valley and the cost of transporting large amounts of rock restrict the size of the candidate regions. Preliminary studies by the Buffalo Trace Area Development District in Kentucky indicates that five miles is the economic limit for transporting shale.
- Alcohol Fuel: Siting requirements for alcohol fuel facilities are less restrictive than those of other energy facilities, with availability of the raw material or proximity to an industrial location being the major criteria. Approximately one-third of the existing and proposed alcohol fuel facilities are tied to existing distilleries.
- Coal Slurry Pipeline: The termini of a coal slurry pipeline are determined by the market area and the source of mined coal. The routing of the pipeline right-of-way is selected after identifying the origin and terminal points. Siting criteria include economic costs, current land use, topography, and avoidance of sensitive areas. Construction of a coal slurry pipeline is likely to raise a number of institutional questions involving a multistate assessment. These include the interbasin transfer of water and the granting of the power of eminent domain to a project developer in one or more states.
- Petroleum Refining: Site selection for petroleum refining is market oriented due to the higher cost of transporting finished products. Refiners are most likely to locate along major transmission lines near major metropolitan markets. Siting was once dependent upon water supply and wastewater disposal considerations, but this dependence is lessened with greater use of water recycling. Major national pipelines serving the Ohio Valley are not located adjacent to the Ohio River. New refineries are unlikely to be located on the Ohio River, thereby reducing the prospect of multistate concerns:

Site Evaluation

With the selection of a site, the formal permitting process begins.* This is the most visible part of the siting process and the point at which multistate issues usually are raised. Since formal interstate communication prior to permit application is often non-existent or limited multistate conflicts seldom arise until a permit application or a draft EIS is publicly released.

Problems attributed to site selection cannot be effectively resolved at this late stage of the siting process. By the time permit review begins, project developers have already made time and financial commitments to the preferred site. Changing sites or trying to ameliorate those impacts integral to the site is difficult. Developers may have expended years in investigating a specific site. Much of the project engineering and design must be completed in order to submit

*Permits requested for major energy facilities are described in a background paper prepared by the Task Force on Major Energy Facility Siting, State and Federal Regulations Affecting the Siting of Major Energy Related Facilities. (Cincinnati, Ohio: Ohio River Valley Water Sanitation Commission, 1979).

permit applications. Project developers cannot hold in suspension all of their decisions up to this point. Decisions were made recognizing some degree of risk; however, substantive multistate concerns requiring additional conditions to be imposed on a project, if raised during the permit review phase, often create an atmosphere antagonistic to negotiation or reconciliation.

Multistate concerns with a proposed facility must be accommodated at a time and in a forum which allows meaningful impact upon the decision-making process. This is likely to be after the site has been selected, but as early as possible in the site evaluation process. With early input, the project developer can better project and understand potential issues with sufficient time to respond to legitimate concerns. The appropriate forum is the host state's permit review process. Input from adjacent states can provide important information to decision-makers. The risk of disapproval or delay in permitting can be reduced if multistate concerns are sought and considered by the project developer prior to the permit review process.

Observations of the permitting phase and its implications for multistate issues are discussed below:

Interstate Coordination

In the Ohio Valley states, most statutes establishing the regulatory framework for siting refer to interstate cooperation. Typical is Ohio's Water Pollution Control Act, Section 6111.03 (b) which states that the Department of Natural Resources shall "advise, consult, cooperate with other agencies of the state, federal government, other states and interstate agencies" in permitting water discharges into state waters. Implementation of this authority has been sporadic since state agencies have little incentive to systematically consider other states' concerns.

Some cooperation does occur. Permit application data are exchanged through interstate agreements mandated under the State Implementation Plan (SIP) of the Clean Air Act and the National Pollutant Discharge Elimination System (NPDES) of the Clean Water Act. The effectiveness of these exchanges is hampered by limited staff and monetary resources to review another state's permits adequately, uneven participation by the states, reviews limited to air and water data and insufficient information to evaluate regional issues.

A comprehensive data exchange system between the states would not solve the problem of limited staff and budgets or the tendency for state officials to be preoccupied with their own programs. Typical of these pressures is the comment that "we have enough to do without getting involved in projects located in another state or trying to evaluate what impacts a facility in our state would have on another state."

Without interstate agreements on exchange of permit data, project information is usually exchanged through informal and ad hoc informational requests, public notices and evidentiary hearings for permit applications. Most state permitting procedures provide for public notice and public hearings upon requests. Another state could participate in this process but the scope of state reviews are limited. Impacts in other states may or may not play a significant role in the permit decision-making process. Differences in state roles in energy siting also hinder multistate cooperation. States with minimal involvement in siting may lack

sufficient information or in-house expertise to respond to inquiries or share information requested by other states. Administrative Procedure Acts also differ among the states, with public notices or public hearings not required for some key permits. For example, Pennsylvania does not require a public hearing for the Public Utility Commission's certification of a power plant nor does Kentucky require any public notice prior to issuing water withdrawal permits. When hearings are held, their location at state capitols and the use of multiple hearings for a single project can discourage input by another state. Administrative rules requiring participants to be formal intervenors also limit the opportunity for affected states to offer comments which might pinpoint future problems. Such informal and permit review contacts seldom lead to ongoing cooperation.

Intrastate Coordination

No single state agency is responsible for analyzing all aspects of energy siting and development. The Ohio Power Siting Board is responsible for approving proposed electric generating facilities. With this notable exception, Ohio Valley state governments are organized by functional areas. With specific statutory authority granted to each agency, its reviews and decisions are usually limited to a specific functional area. (Table 1 is a partial list of state agencies responsible for some aspect of energy facility siting.) Consequently, the Valley's resources are reviewed from different and often contradictory mandates. Energy or development agencies mandated to assure economic growth and sufficient sources of affordable energy may promote policies contradictory to those of environmental agencies charged with attaining and maintaining clean air and water. This fragmentation often leads to conflict, duplication and delay in permit reviews.

In-state coordination of agencies with contradictory mandates is difficult especially if no consensus exists on the state's energy or natural resource policies or the significance of a proposed project's impacts. Agency officials, unsure of their state's position, may be reluctant to coordinate their activities with agencies in other states.

States attempt to resolve internal coordination problems through organizational reform and improved procedures. In Ohio, all responsibility for electric power plant site reviews is delegated to the Power Siting Board which is composed of the heads of the Public Utility Commission, the Environmental Protection Agency, the Department of Health, the Department of Development and a member from the general public. In other states, consolidated departments bring together the administration of various environmental programs. In Indiana, the Environmental Management Board is responsible for formulating statewide pollution control and development policies.

TABLE 1
STATE AGENCIES AND COMMISSIONS TYPICALLY
INVOLVED IN ENERGY SITING PROCESS

Environmental Protection Agency

Board of Health

Department of Environmental Resources

Air Quality

Water Quality/Water Resources

Solid Waste/Land/ Pollution Control

Department of Natural Resources

Water Resources/Dam Safety

Soil Conservation

Department of Transportation

Highways

Aviation

Water Resources

Department of Nuclear Safety

Department of Energy

Public Utility Commission

Power Plant Siting Board

Department of Commerce

Labor and Industry

Development

Housing, Building and Construction

Fire Marshall

Procedural mechanisms are also used to coordinate state activities in siting. Illinois and Kentucky have created coordinating task forces of key state policymakers to develop comprehensive programs for addressing issues associated with coal conversion industries in those states. Illinois employs a joint review process to coordinate state reviews of major energy facilities. Appendix D.5 lists coordinative techniques being implemented in the Ohio Valley states.

Diverse decision-making processes between the states hamper interstate cooperation and coordination efforts. Successful interstate cooperation is likely to require improved intrastate coordination. Differences among states' organization of environmental programs result in the absence of corresponding agencies among states. The Ohio Power Siting Board has no corresponding single contact in the other states. Similarly, coordinating states' water resource interests can require contact with one to three agencies in each state.

Federal Role

Federal agencies have basic responsibilities for energy siting decisions. The federal government has preemptive regulatory authority for nuclear power plants under the Atomic Energy Act of 1954, hydroelectric facilities under the Federal Water Power Act of 1920 and the interstate sale of electricity and natural gas. Permits may be required from several agencies for other energy facilities.

A number of federal environmental laws set minimum environmental criteria which are enforced by the states with federal oversight. These include the Clean Air Act, Clean Water Act, Surface Mining, Safe Drinking Water Act and the Resource Conservation and Recovery Act. Minimum standards provide a degree of uniformity among the states but major differences occur when these standards are not uniformly administered. Compounding the coordination of federal roles is the division of the valley states among three federal administrative regions (Region III - Philadelphia, Region IV - Atlanta, and Region V - Chicago) and three Corps of Engineer Districts. Differences in interpretation of federal statutes and regulations by the federal regions are not uncommon. Region IV of EPA classifies alcohol plants as a major stationary source (chemical process plant) subject to PSD review, but Regions III and V do not. State officials argue that greater consistency between these regions is an essential step for effective interstate cooperative efforts.

Like the states, the federal government organizes programs on a functional basis, with no single spokesman to speak for the federal position or to resolve interagency conflicts. An exception is the Environmental Impact Statement (EIS) process promulgated under the National Environmental Policy Act (NEPA). New NEPA regulations require early scoping meetings to identify issues of concern, alternative site analysis, an examination of cumulative impacts and an assessment of the long-term impacts of the proposed project. The lead federal agency responsible for writing the EIS differs by the specific project, with the lead responsibility frequently assigned to the U.S. Environmental Protection Agency, Corps of Engineers, Rural Electric Association, Nuclear Regulatory Commission, Farmers Home Administration, or Department of Energy.

Despite NEPA's broad authority and potential for identifying conflicts and facilitating coordination, most states place little emphasis on the EIS for state decision-making. This is due in part to the voluminous paper exercises conducted in the past, minimal state involvement in document preparation, irrelevance to

state information needs, and timing difficulties between EIS completion and state permit decisions. In spite of these problems, the NEPA process as an institutional mechanism is a potentially powerful means of addressing multistate issues of concern.

Local Government Framework

In the six valley states, thousands of local governmental units are involved in the siting decision process. All of the valley states are strong home rule states, granting local governments land use powers that affect the basic decision on plant location. Infringement on local authority is politically difficult.

Local governmental units also have a lead role in solving the many socioeconomic and environmental problems associated with energy siting. In some cases, issues which transcend state lines may not result in problems between the two states but do create interstate local concerns and conflicts not shared in the state capitols. Such problems will likely require local governmental action. Any interstate mechanism should include some local governmental participation.

C.2 REGIONAL ORGANIZATIONS: THEIR ROLES IN COMMUNICATION, PLANNING, AND CONFLICT MANAGEMENT

Regional organizations are popular vehicles for states to band together to address mutual concerns. The forms have varied: voluntary associations of elected or executive state officials, statutorily created state-federal commissions and state-federal compacts populate the multistate regional arena. Their purposes are markedly similar--to improve coordination among members on state and/or federal policies, plans, and programs which affect the member states.

The effectiveness of these various regional organizations remains open to question. The recent demise of Title II river basin commissions and Title V economic development commissions, the unsettled future of the Appalachian Regional Commission, current tensions in the Delaware River Basin Commission, and reassessments of various governors' associations suggests that regional organizations are not the sole answer to the goal of multistate and intergovernmental coordination.

In her examination of state-federal and federal-regional organizations, Martha Derthick offers general observations about the formation of regional organizations. She argues that regional organizations are best suited to respond to particular problems or needs which can be isolated on a regional scale or which are peculiar to an economic, social, or natural unit. In and of themselves, regional organizations do not address problems of coordination and centralization.* The experience of the past decade, when regional efforts flourished and federal and state organizations proliferated, seem to support this conclusion.

While regional organizations may not be the institutional arrangement most suitable to problems of multijurisdictional coordination, their experiences offer insights into the conditions and characteristics conducive to effective interstate and/or state-federal interaction. Specifically, certain structural and procedural characteristics may contribute to or constrain the effort to address multistate issues. While a particular structural or procedural arrangement may be associated with a particular organizational form, it is possible to examine these structural and procedural characteristics separate from the organizational form. Through such an examination, it is possible to identify those structural and procedural attributes which may contribute to the three activities of concern to this study--namely communication, regional analysis, and conflict management.

What follows is a summary of the structural and procedural characteristics of selected regional organizations which contribute to or constrain the objectives of communication, planning, and conflict management on a multistate level. These observations are drawn from an informal examination of several regional organizations. The assessment is not a complete analysis nor an evaluation of these organizations. The objective is to identify those internal characteristics which contribute to or constrain the members' ability to achieve multistate or

*Martha Derthick, Between State and Nation: Regional Organizations of the United States. (Washington, D.C.: The Brookings Institute, 1974), pp. 224-230.

state-federal coordination. The goal is to develop insights into those key attributes which, regardless of a particular organizational form, are critical to any multistate initiative.

The observations are drawn from information compiled from literature reviews and personal interviews with staff and principals of regional organizations. A core set of questions were designed to obtain information about the following:

- events leading to creation of a multistate organization
- primary purpose and changes over time
- membership: jurisdictional and functional representation
- basis of authority
- major substantive issues and changes over time
- organizational structure, staff capacity, decision-making procedures
- funding sources

The organizations surveyed were selected to provide a cross section of organizational types, formal authorities and purposes. Particular effort was made to include informal, voluntary, and statutorily created organizations to allow consideration of the importance of formal structure and authority to the activities and methods of the organization. The organization contacted include:

- Interstate Coal Task Force (ICTF)
- Governors' Conferences: - New England, Midwest, Southern, Western
- New England States Coordinating Air Use Management (NESCAUM)
- Western States Water Council (WSWC)
- Coalition of Northeastern Governors (CONEG)
- Western Governors' Policy Office (WESTPO)
- Southern Growth Policies Board (SGPB)
- Title II River Basin Commissions (New England River Basins Commission, Ohio River Basin Commission)
- Southern States Energy Board (SSEB)
- Western Interstate Energy Board (WIEB)
- Ohio River Valley Water Sanitation Commission (ORSANCO)
- Delaware River Basin Commission
- Susquehanna River Basin Commission

Communication and Regional Organizations

Effective communication on public issues and problems is a highly complex and frequently cumbersome process. When communication involves parties in more than one state, the design of effective channels is even more difficult. The creation of regional organizations or networks is one possible approach to facilitating routine communication among state officials.

Direct and continuous communication among state officials on issues of mutual interest is the most frequently stated objective and activity of regional organizations, regardless of the issue or officials involved. Both elected officials and program officials have banded together to share broad ranging or narrowly specific concerns. Gubernatorial associations are typically created and structured to provide a forum for mutual discussions and joint decisions on general and specific issues. Organizations of program officials focus on specific substantive areas of concern.

Several observations can be made about the manner in which regional organizations relate to the source, receiver, channel and message aspects of communication:

- Regional forums provide a flexible and interactive channel conducive to immediate feedback. They are valued for the opportunity for direct contact and exchange of views on general as well as specific topics. The Western States Water Council provides an opportunity for state water resource officials to discuss water allocation issues, Section 404 and construction grants. They contribute to information sharing and education of the members on national issues at the national level as well as specific concerns of individual state members. The sharing of concerns and perspectives is recognized as valuable even if no formal decision or action on a specific issue is undertaken. The lack of action either due to lack of authority or lack of consensus is not the sole measure of effectiveness in communication.
- Regional organizations are typically composed of individuals of similar perspectives, concerns, and responsibilities. With few exceptions, elected officials and state program officials have separate organizations. State-federal commissions and compacts such as the Delaware and Susquehanna River Basin Commissions and Ohio River Valley Water Sanitation Commission provide for communication with federal agencies. State created policy organizations such as the Coalition of Northeastern Governors and the Southern Growth Policies Board include representatives of the private sector.
- Routine, face-to-face contact associated with regional organizations encourages ongoing communication among principals such as governors and agency directors and those reporting to them. The organization provides a catalyst for routine, noncrisis oriented interaction.
- Regional organizations emerge from shared interests as well as conflicts. Economic development was the catalyst for CONEG and the Southern Growth Policies Board; energy concerns led to creation of SSEB and WIEB; common interests in water management, planning and allocation disputes lie behind the emergence of the Delaware River Basin Commission and the Western States Water Council. Specific interstate disputes are seldom discussed formally by the organization. However informal, direct interaction among individual members is recognized as a valuable spinoff of the regional forum.
- Depending on the membership, communication may be primarily policy oriented (governors' associations) or program and regulatory in focus (WSWC, NESCAUM). Program officials' forum are more likely to combine the two categories of interests.
- Organizations such as the Ohio River Valley Water Sanitation Commission and the former Title II and Title V Commissions whose primary purpose goes beyond coordination or information sharing benefit from the regular contact provided by the organization.

Regional organizations are frequently confused as consisting of a permanent staff rather than the key principals. This misconception frequently results in antipathy to staffed organizations, but it is important to assess how well states

benefit from interstate, ongoing communication without third party staff support.

Several observations can be made based on the experience of existing multistate organizations.

1. Communication and coordination can be carried out with a small core administrative staff to handle meetings, agendas and logistics of interim communication. An example is the Southern Governors' Association. When a substantive focus or analytic capability is added to the communication and coordination function, a small core staff, but with slightly more "capability" than one serving a strictly administrative role, can suffice. The capability to promote, facilitate, or undertake substantive analyses can often be initiated by a core staff working closely with state expertise.

Even when state staff provide substantive expertise, a regional staff is better able to synthesize and pull the regional commonalities from individual state data and perspectives. States are expected to act in their own self interest, with regional commonalities pulled together through a forum and third-party staff. The Coalition of Northeastern Governors, Western Interstate Energy Board, Southern States Energy Board, Western Governors' Conference, Western States Water Council and WESTPO have regional staff to complement individual state expertise. Overall, separate core staff capability appears to be an important component of effective policy and program coordination and communication. While it may be too soon to judge the Interstate Coal Task Force, its informal approach relying, upon loaned staff from the state agency chairing the task force, suffers from an inability to sustain members' interest and participation.

2. Where coordination and communication occur among state officials with detail knowledge of programs and issues, the core staff must have sufficient knowledge to serve as effective and credible facilitators. When the information communicated is primarily technical or project specific, procedures to notify members and to exchange information may be adequate. When the objective is coordination of regulations, policies or programs, a forum for direct interaction to encourage, initiate, and sustain coordinative activities may be needed. A small staff may lack the capability to undertake analysis or propose options but it can facilitate direct interaction among interested parties.

3. Communication and coordination can occur on an ad hoc, informal and direct basis without benefit of a third party arrangement, yet some drawbacks exist. Ad hoc, informal communication is usually reactive to problems or crises; it is likely to occur late in the resolution process when agreement is difficult. Direct meetings among disputants lack the neutrality which a third party organization offers, both in terms of who calls the meeting and initiates the interaction. Informal communication is less likely to continue once a specific problem is resolved.

Planning and Regional Organizations

Regional analysis draw upon state and federal data and plans. Its effectiveness in developing a multistate perspective requires a distinct "regional" capability with sufficient autonomy and regional perspective in analyzing individual state priorities and plans. Regional analysis may be carried out by staff of a "third party" regional organization. It may also be contracted out or undertaken as a joint, collaborative effort among states and federal

agencies. Some capability is needed to define the regional research scope and agenda and to monitor the progress of the planning effort.

The frustrating legacy of "planning without implementation" points to the value of integrating planning with decision-making. It also points out the difficulty of carrying out regional planning and management when the process is too closely controlled by members of the regional organization. When an organization limits its regional analyses to a review of state plans or simply incorporates state or federal plans as its comprehensive planning, it fails to identify or focus attention on interests of the region as a whole.

The size and type of staff needed for regional analyses or regional action varies. When specific plans or project applications are being reviewed, a significant staff effort is required to review, digest and analyze the greater magnitude and detail of information provided. For example, river basin commissions with planning responsibilities had a more substantive, detailed review function placed upon them than have regional organizations concerned with policy analysis. The greater level of effort in planning and regional review is required regardless of whether it is carried out by a third party staff or by staff within an affected state.

Conflict Management and Regional Organization

The history of regional organizations' role in conflict management is mixed. No particular organizational form is precluded; yet no organizational form is guaranteed successful in resolving conflicts, even if it has formal authority. The desire for accountability--a strong ingredient in a democratic system--makes it difficult for a intergovernmental organization to act in the absence of consensus.

While regional organizations do not have a successful track record in resolving major policy, program or planning conflicts, they do contribute to conflict management. Organizations have grown out of interstate conflict and interstate commonalities. The Western States Water Council and WESTPO grew out of differences among states which perceived their mutual interests and interdependence in spite of differences. The Southern Growth Policies Board and CONEG grew out of strongly perceived regional interests vis-a-vis other regions and federal actions. Common to both origins is the perceived need for a forum, backed by substantive information, where the common interests and divisive issues can be discussed in a rational matter.

A regional organization provides a third party neutral forum where ideas and interests can be aired, discussed, and debated. Education through informal contact or through substantive analysis is a valuable part of the interaction. A forum for exchange of views and information is a valuable contribution to both voluntary and statutory organizations.

Voluntary organizations tend to include only states with a primary focus on policy issues. At times, policy concerns involve specific program and technical issues such as cost sharing for water projects and air quality program regulations and standards. Whether they represent governors, legislators or executive agency personnel, a keen appreciation exists of how far regional action or initiatives can be pushed. This sensitivity to differences among members is accommodated in

several ways:

- a decision is made not to place an issue on the agenda;
- procedures are developed to protect individual member's interests on sensitive issues;
- agreements evolve to allow the forum to be used to accommodate subregional concerns;
- the focus remains on shared regional policy issues, with strong state differences handled at another level and through other channels (e.g., technical or program level and the Congressional arena).

Members are aware that such associations are coalitions based upon common interests. Since decisions are not binding, efforts to force a consensus would be fruitless and detrimental to the educational value of the forum.

Statutorily based organizations have broader authority to act with varying degrees of binding authority. The river basin commissions have weakly enforced consistency provisions; the Ohio River Valley Water Sanitation Commission has enforcement authority for water quality. However they share many of the difficulties of the voluntary associations when faced with disagreements among the membership. Title II river basin commissions used the consensus rule. Immobilized if members sharply disagree, they still served a valuable education and informational forum which most states have seen fit to continue on a trial basis. Regional organizations created by a compact are not immune from conflict which undermines the formal planning and management programs. The Delaware River Basin Commission was unable to carry out its Tock's Island Management Plan. Such conflict threatens the continued viability of the organization if member states refuse to contribute required financial support or recognize the multistate concerns when deciding on in-state activities. In spite of the presence and active role of the Delaware River Basin Commission, litigation between members is not ruled out. Conflict is most apparent and difficult in those compacts whose responsibilities involve management authority and specific project reviews or development.

In summary, both voluntary and statutory regional organizations face the dilemma of structuring a consensus-forcing procedure within an organizational structure designed to ensure accountability to the member parties. Formal authority to act is no substitute for the capability and will to act. The fact that the states continue to participate in these organizations suggest that they do have some utility for communication and coordination; namely as an informational forum for direct interaction and for development of regional analysis. The value of the forum is direct to the states. By participating in regional organizations, states are not relinquishing any right to act in their self-interest or to seek other avenues such as the courts or Congress for dealing with disagreements. A separate forum is used for resolving conflicts, with the regional forum directly or indirectly providing opportunities for disputants to meet and discuss differences. Through such informal contact or through substantive analyses, the state's perception of what constitutes its "self-interest" may change.

C.3 CENTRAL COMMUNICATION CHANNEL

Early and Open Communications

Communication among states and project developers is an important step to resolving concerns raised by the siting of major energy facilities. Efforts to communicate before a preferred site is identified are fraught with obstacles. Competition between the states as well as industry's understandable reluctance to raise controversy over alternative sites that may never be selected work against open communication during this phase. The timing of communication is important. Communication during early site evaluation allows all stakeholders--the host state, affected states, industry and citizen groups--to identify, understand and act on their differences while facility plans are still flexible.

Open communication, requiring a high degree of trust and respect, is essential. A recent study by the General Accounting Office,* identified a number of potential benefits to early and open communication. These include:

- reductions in uncertainty regarding the acceptability of proposed projects;
- savings in time and money spent on revising unacceptable environmental studies;
- smoother, more efficient regulatory reviews due to early participation of regulators;
- improvement of credibility and understanding among stakeholders;
- minimization of costly and lengthy regulatory and judicial proceedings when issues are raised later in the evaluation process.

Though many federal and state regulations provide opportunities for open communication, only a few energy project developers in the Ohio River Valley have used early communication techniques for state and local concerns. The major limitations to any such process include identification of all stakeholders, lack of state participation prior to permit application, state reluctance to incorporate out-of-state input into the final decisions and costs and potential delays associated with communication processes.

The task of identifying all stakeholders is particularly difficult when several states are involved. A project developer may lack established contacts and communication channels in adjacent states. State officials usually know their counterparts in adjacent states but may be unaware of other potentially interested state officials. A roster of state officials and contacts potentially concerned with energy facilities would be useful. Given the complexity of siting issues, it

*General Accounting Office, The Federal Government Should Encourage Early Public, Regulatory and Industry Cooperation in Siting Energy Facilities (Washington, D.C.: U.S. Government Printing Office, EMD-82-18, November 13, 1981), pp. 2-3.

could include every state agency and still not include other potential stakeholders such as local governments, citizen groups, and other public interest groups. In short, a central communication channel capable of identifying for any project the potential stakeholders in other states is a valuable aid to smoothing the siting process on an interstate basis.

State regulatory agencies often react to proposals rather than participate in private sector planning processes, but the complexity of major energy siting issues has led a number of states to participate early in the planning process through preapplication meetings, informal conferences and scoping meetings. With multistate concerns, the need for early participation by affected states is even greater.

Direct communication between the affected states and the project developer on an informal basis can often eliminate many misunderstandings that raise multistate concerns. However, industry's attempts to communicate with state regulators prior to the permit application stage have often been discouraged, with participation often delegated to junior staff who cannot credibly interpret agency policy or commit the state to action.

Central Communication Channel

Communicating with officials in other states can be simplified and cost effective if access is available through a central point. Multistate effects of energy facilities are not limited to environmental concerns, but their regulatory role gives state environmental officials an awareness and direct role in addressing many of these concerns. Policy level environmental officials are a central point at which potential multistate issues can be identified and communication channels initiated between the project developer and appropriate stakeholders in the affected states.

The Ohio River Valley Water Sanitation Commission (ORSANCO) is an existing states' organization with the ability to to serve in a central communication role. The ORSANCO Committee on Energy Facility Siting is a nucleus for an informal channel to identify potential stakeholders in affected states, to identify and discuss multistate effects of proposed projects and to initiate appropriate action to address states' concerns. The key to its effectiveness is its membership, its authority and legitimacy among states, its flexibility in acting on individual projects; and its orientation toward regional problems.

Although water pollution is the chief concern of the Commission, Article VIII of the compact states that the Commission address related concerns affecting water quality, including land and energy resource use, solid waste management and population shifts. The authority of the Commission to address these other concerns directly may be limited by Article III of the Compact which requires legislative approval for additional powers. The use of an ORSANCO committee to facilitate interstate communication is consistent with the intent of the compact, particularly since major energy facilities may generate significant water resource concerns.

The primary purpose of the committee would be as a two-way communication channel between the project developer and stakeholders in other states and between the host state and these stakeholders, thus encouraging a multistate perspective to project development plans and evaluation. When the multistate effects are

minor or strictly environmental, individual committee members can indicate many multistate concerns and initiate cooperative actions to address them. When the effects are more far reaching, committee members from the affected states can identify potential stakeholders in each state or provide information useful to final project evaluation. Such information can include data on resources in other states, or pollution control technologies employed at similar facilities in the region.

The ORSANCO committee would not act as a formal conflict resolution mechanism but would encourage a conciliatory atmosphere through anticipating conflicts. Its status as an established organization with regular interaction is an advantage in initiating action to resolve emerging conflicts. The committee can play a limited mediation role through peer group review. The committee membership should include state policy officials with authority to speak for the state environmental concerns and to initiate state actions. In Illinois, Indiana, Ohio, Pennsylvania, and Kentucky, the lead environmental agencies are headed by the ex-officio Commission members. In West Virginia, where environmental program responsibilities are distributed among several state agencies, representation might come from the Governors' Office on Economic and Community Development, the lead coordinating office for energy facilities. The committee can be chaired on an annual rotating basis. The costs of the committee would be minimal (likely under \$10,000 per year) and as a standing committee, it would be funded through Commission dues.

Scenarios for Committee Operations

The committee can meet at the call of the chairman upon request of a project developer or any member to discuss any proposed energy facility in the Ohio River Basin. Commission staff can periodically contact members of the ORSANCO power industry and public interest advisory committees and other sources to determine the status of proposed facilities. When possible, meetings can coincide with ORSANCO Commission meetings.

Consistent with its central communication purpose, the committee can operate informally, with the objective of any meeting being to provide all members a common base of information about proposed projects. It would have no formal review authority or role. Prior to any committee meeting, the chairman is responsible for having a brief synopsis of the proposed project prepared and circulated among committee members. The project developer should be invited and encouraged to participate in any committee meetings.

For a thorough understanding of basin-wide environmental problems, the committee needs access to information on existing and long-range plans for energy developments. This includes the ERA-411 plans submitted annually by electric utilities to the Federal Energy Regulatory Commission, natural resource data, population projections and other pertinent data. The committee can consider mutual environmental or administrative problems. Joint meetings with the Power Industry Advisory Committee, East Central Reliability Council (ECAR), or other regional groups representing energy developers can aid the committee in identifying long-term problems and establish communication channels with industry. Similar meetings with representatives of local governments and public interest groups can uncover potential multistate concerns and stakeholders.

Committee action on proposed projects can be flexible. Where multistate

concerns are minor or specific to a single area, the committee members can suggest mitigative actions or refer the concern to the appropriate agency in the host state. Potential stakeholders in each state can be identified with the information made available to the project developer. Committee members are responsible for working with potential stakeholders in their individual states in a manner appropriate to that state's policies, laws and regulations.

If multistate concerns are significant, the committee can encourage the individual states to form an informal task force to resolve their respective concerns. Such a task force, with the project developer as a member, can meet as part of the NEPA scoping process. The task force should define its purpose, the concerns it is addressing, time frames and type of expected output. Where possible, its discussions and informal negotiations should be completed prior to permit hearings. Informal negotiation among stakeholders during the early siting phases offers some legal protection to the host state or developer should litigation occur. Late entry into the negotiating process when an opportunity for earlier involvement is available is grounds to request dismissal of a complaint for laches--an equitable doctrine stating that a suit be dismissed if the suiter so delays in bringing the action that the action is unfair to the other side.

The Committee can also encourage informal arrangements for affected states to participate directly in the host state's permit evaluation process. Ohio is the only state in the Ohio Valley with specific authorization to "make joint investigations, hold joint meetings within or without the state" for electric power plants (Ohio Revised Code Sec. 4906.14). The legal right of states to enter into informal agreements can be inferred from the enactment of a version of the Commission on Interstate Cooperation Act in each state. This Act states in part that the Commission is "to endeavor to advance cooperation between this state and other units of government whenever it seems advisable to do so."

Participation in another state's permitting process involves several problems, including the lack of incentive for the host state to place much weight on the concerns of another state and the manpower commitments required for multiple permit hearings. These problems can be minimized if the permit process is streamlined and maximum interaction occurs prior to formal permit application. Individual states, acting through the committee can provide data on multistate impacts and can request a state's permit coordinator to make joint investigations. If informal agency efforts are insufficient to provide access to another state's evaluation process, committee members can request the assistance of their governors in initiating cooperation in the evaluation phase of siting.

State permit processes can facilitate the participation of affected states in project evaluation. Kentucky, Illinois and Pennsylvania have intra-departmental permit coordination processes that can accommodate input from other states. For major energy projects, the secretary or director of the Kentucky Department for Natural Resources and Environmental Protection and the Illinois Environmental Protection Agency can establish an intra-departmental task force to expedite and coordinate permit review. Pennsylvania coordinates its reviews through substate regional offices. Upon request, West Virginia's Economic and Community Development Office assists energy applicants in obtaining permits and where necessary can intervene to resolve conflicts between an agency and developer. In Illinois, Governor Thompson established by Executive Order in April 1981, a joint review process for major non-nuclear energy facilities. This voluntary activity streamlines the permitting process by encouraging local, state and federal

agencies to plan a coordinated review schedule early in the siting process. The Department of Energy and Natural Resources is the lead agency responsible for developing a coordinated review plan, with information and scoping meetings held prior to agency reviews. Multistate concerns presented by affected states at this stage allow Illinois officials and the project developer time to address them.

C.4 NATIONAL ENVIRONMENTAL POLICY ACT

The National Environmental Policy Act (NEPA) is an existing federal mechanism capable of serving as an effective communication forum for identifying multistate siting issues, for incorporating a multistate perspective in siting decisions, and, to a limited extent, for resolving multistate conflicts. Section 102(2)(C) of the Act requires that federal agencies prepare Environmental Impact Statements (EIS) on major federal actions significantly affecting the environment. Access to the process is available to all stakeholders--federal, state and local governments, citizens and industry. The process is flexible enough to address a wide range of topical areas--environmental, social and economic issues. States can indirectly influence siting decisions in other states by presenting evidence to federal agencies on the multistate impacts and issues of a proposed facility. Where the effects are unknown, states may request a study to determine the nature and scope of potential effects. On the basis of the evidence collected, federal agencies make their decisions on the compatibility of the proposed project with its surrounding environment.

Communication and coordination occur during the preparation of the Environmental Impact Statement. The lead federal agency often acts as the link for communication among the affected states. Through early public meetings called scoping meetings, the scope of issues to be addressed and significant issues related to the proposed action including multistate issues are identified. These meetings, required under Council on Environmental Quality (CEQ) regulations, are often the initial means of bringing the various stakeholders together.

Data collected during the NEPA process provides a common data base upon which the affected states may communicate and resolve any conflicts by agreeing early in the process on the scope of and the methodologies upon which data is to be collected. The shared information helps avoid polarization among the states and identifies possible courses of action that could mitigate multistate impacts.

NEPA does not require that bargaining or negotiation opportunities be provided. The process can bring stakeholders together to identify and evaluate alternative site designs based on a mutually agreed upon data base. The agreement on facts is the first step in dispute settlement. The generation of a sufficient number of alternatives or options may assist in resolving disputes if opposing sides are able to identify a mutually acceptable alternative, even though differences occur in their basic values.

The effectiveness of the NEPA process in carrying out these activities is dependent in part on the degree of participation of all stakeholders. The analysis of significant multistate issues is only possible if affected states identify potential issues early in the process. The states have not taken full advantage of this opportunity. Voluminous documentations, the perception that NEPA is a federal process, timing difficulties between EIS completion and state permit decisions, manpower limitations and budgeting constraints have limited the states' full participation in the NEPA process. State participation is often confined to review and comment. If the NEPA process is to be used as an effective means of communicating multistate concerns, analyzing multistate impacts and resolving interstate conflicts, states must actively participate in the process.

The earlier participation in the EIS is initiated the more effective it becomes. Concerns raised when the draft EIS is issued will not merit the same

consideration as those raised during the scoping meeting (memorandum from the General Counsel of CEQ, April 30, 1981). In addition, federal budget cuts which reduce available manpower will reduce the capacity of federal agencies to anticipate potential multistate problems with a project.

Cooperating agencies in the NEPA process are federal, state or local agencies which have jurisdiction over the proposed project or special expertise with respect to any environmental impact involved. Although cooperating status is usually limited to agencies with permit authority, the intent of the regulations is to provide an opportunity for participation by many agencies directly affected or with specific knowledge useful to EIS preparation. This may include agencies in adjacent states with no direct regulatory responsibilities. A state agency may become a cooperating agency upon agreement with the lead federal agency.

Cooperating agencies have several responsibilities: participating in the scoping meetings, developing information and preparing portions of the environmental analysis upon request of the lead agency, reviewing and approving the Plan of Study (POS) for the impact statement and making staff support available to the EIS process. The benefits of the states' participation includes assuring that the EIS addresses significant multistate issues, assuring that its comments are incorporated into final documentation and establishing regular communication channels with the lead federal agency. If the lead federal agency leaves out a significant issue or ignores the advice and expertise of a cooperating agency, the EIS may be found to be inadequate (46 Federal Register 18036, March 23, 1981). The identification and analysis of multistate issues sufficient to satisfy the states' concerns will only be as good as the degree to which the states participate. The states cannot rely totally on a federal agency to address their concerns. Whenever possible, cooperating agencies can identify existing data to support the EIS analysis to avoid duplicative and unnecessary data collection. This is particularly important in assessing regional impacts where data collected in other states may not be known to the lead agency.

Authority for these changes in states' participation in the EIS process exists under CEQ regulations (43 Federal Register 55978-56007, November 29, 1978). The level of participation by potentially affected states is related to the significance of the project or its degree of impacts to those states. Each state has some staff dedicated to coordinating EIS review; their workload for participation in EIS's in other states need not increase significantly. Earlier participation can reduce the time required for subsequent reviews. In some cases where significant multistate impacts are anticipated, early participation may avoid lengthy review of an unacceptable EIS, submission of formal objections, review of subsequent supplements, hearings, appeals and potential litigative actions.

State environmental permit requirements encompass all or substantive parts of the analysis required under NEPA. This duplication of effort and time could be minimized if the host state and the federal lead agency coordinated studies, analysis and hearings to the fullest extent possible. Such coordination is encouraged under CEQ regulations (Section 1506.2).

The states, through an informal agreement, can collectively notify the major federal agencies likely to be lead agencies on future projects of their desire to participate actively in the NEPA process. To formalize their commitments, annual individual agreements between state environmental protection agencies and the U.S.

Environmental Protection Agency (EPA) can include a section on the state's role in the preparation of multistate impact statements. Assistance and funds to support this activity can be solicited from U.S. EPA.

C.5 MEDIATION

Even with early communication and consideration of multistate concerns, disputes over siting energy facilities will occur. Opponents of a project may remain aloof from any negotiation in the hope of scuttling a project through extended litigation and administrative appeal. Proponents of a project may meet the standards imposed by statutes and have no incentive to negotiate regardless of issues raised. In these cases litigation is probably inevitable. In other instances, a negotiated settlement of multistate disputes may be possible.

Direct negotiation is considered an optimal means of dispute settlement, but there are a number of major obstacles which can severely limit the prospects of settlement. These include:

- the lack of commitment to negotiate, when one side believes sufficient support and legal authority preclude the need to negotiate or when disagreement and delay is considered to be in the best interest of one party;
- the inability to communicate effectively or to agree on facts due to widely divergent perspectives;
- the need to identify all stakeholders and to secure their agreement to negotiate;
- the inability to identify a specific list of clear negotiable issues hidden in political rhetoric;
- the willingness to overcome the risks involved in negotiating (e.g. jeopardizing future legal options).

These are formidable obstacles and negotiation is unlikely to occur unless an impasse appears inevitable.

State officials can attempt to resolve multistate energy issues but they may not for a number of reasons. First, the political costs associated with attempting and failing to settle a multistate issue, involving basic economic or environmental interests, are substantial. Second, since no outcome will please everyone, any action requiring an official to compromise will likely displease some group. As a consequence, state officials have sound reasons not to go beyond issuing an interpretation of the relevant statutes or regulations. Third, the fragmentation of planning and decision-making authority make it difficult for any single official to negotiate a problem from a state wide perspective. Negotiation may only be possible at the level of the governor or legislature who may lack the time, interest or knowledge to undertake the task. As a consequence, efforts to settle disputes are often delayed until the issue reaches a crisis dimension.

Disputants who develop entrenched positions may be unable to identify new alternatives or to continue effective communication. When they reside in different states, the physical distance further hinders effective communication and negotiation.

A mediation process can be used to overcome some obstacles to negotiation.

Environmental negotiation has been successfully used in a number of instances. Mediation is defined as:

"a voluntary process in which those involved in a dispute jointly explore and reconcile their differences. The mediator has no authority to impose a settlement. His or her strength lies in their ability to assist parties in resolving their own differences. The mediated dispute is settled when the parties reach what they consider to be a workable solution." *

A mediator is merely a helper, a sounding board and a catalyst to assist the parties in reaching an agreeable settlement. In contrast, an arbitrator is a decision-maker with authority to impose a settlement.

A mediator's role is to assist the disputants to reach a settlement. The constraints that hinder active participation by state officials in resolving disputes are not applicable to a mediator. The mediator provides a neutral perspective, assists in clarifying issues and facts, investigates communication and identifies mutually agreeable alternatives. Disputants may try out alternative approaches to settlement through the mediator without committing themselves to a change in position. Parties to a dispute often find the need for a private and confidential means of communicating without the distracting effects that the press, third parties or the public may create. Occasionally the mediator may act as a scapegoat to help one or both parties save face as they move from initial positions.

Mediation is not a panacea. Mediation is only possible if all parties to a dispute voluntarily agree to participate and commit themselves to settling the dispute. The number of stakeholders involved in energy issues hinders multilateral agreements. The exclusion of any stakeholder may foil a negotiated settlement. Issues are sometimes framed as "all-or-nothing," leaving little middle ground for negotiation. Politically powerless groups may be unwilling and unable to participate until they have acquired substantial power through public or political support, threats of litigation or other means.

The final product of the mediation process is the mutual agreement by the disputants. Agreement is only possible if each party exchanges something of value. Opponents may agree to relinquish their rights to litigate if a negotiated settlement can be hammered out. Agreements in violation of any standard or regulation of the host state would clearly not be permitted.

Agreement alone does not ensure compliance by parties. If mediation is to be successful, each side must be confident that the other will live up to its commitments. The most common form of assurance is a legally enforceable contract that spells out the agreement. Other forms of assurance are performance bonds, indemnity agreements to pay specified amounts for categories of non-compliance or judicial supervision.

Mediation to resolve energy facility issues has not been implemented in the

*Gerald W. Cormick, "Intervention and Self-determination in Environmental Disputes: A Mediator's Perspective," Resolve, The Conservation Foundation, Winter 1982, p. 3.

Ohio River Valley Water to date primarily because it is seldom recognized as an option. In a number of other states and regions, including Virginia, Wisconsin, Washington, New England, and the Rocky Mountain states, established mediation centers make available skilled environmental mediators.

The establishment of a major non-profit mediation center can increase the visibility and assist in institutionalizing mediation as a means of settling disputes. A center can monitor potential energy and environmental disputes in the region, offer its services where applicable and provide mediation services upon request.

Mediation requires unique skills. Mediators must be conversant with the technical issues at stake to assure their credibility. At the same time, the mediator must possess the skills necessary to structure a bargaining process which maintains the confidence of the participants and allows them to share responsibility for problem solving. Initial demand for mediation may be inadequate to support full-time mediation staff. When the mediation policy center in Virginia was inaugurated, it participated in five conflicts in its first year. A part-time staff of one to three individuals can provide a basic mediation capacity, with additional mediators identified on an as-needed basis. Affiliation with a university in the region would enable the center to attract highly qualified professionals with backgrounds in law, economics, environmental protection, natural resource management and social science. The Virginia Institute of Environmental Negotiation can provide mediation services to the Ohio Valley states, but its distance from the Ohio River lowers its public visibility and its ability to identify conflicts suitable for mediation. A more feasible role for that Institute is to lend its expertise to assist the Ohio Valley states in establishing a mediation center. Technical assistance and joint activities between the Virginia Institute and any Ohio Valley center can be mutually beneficial in providing training and educational programs. The Energy Facility Siting Committee of the Ohio River Valley Water Sanitation Commission can provide a communication link between state environmental agencies and the center.

C.6 ASSOCIATION OF STATE AIR QUALITY OFFICIALS

The effects of energy facilities on air quality are widely acknowledged as the issue of greatest concern to the Ohio Valley States. Each state contributes to and is affected by the problem. Energy facility siting decisions are heavily influenced by the availability of air quality increments, and poor air quality may limit energy development in portions of the valley.

Unilateral state approaches to addressing air quality issues have proven ineffective since pollutants transported beyond state boundaries often escape regulation. Federal efforts to control interstate pollution have also been ineffective. Section 126 of the Clean Air Act which addresses multistate air quality problems has been invoked five times in the region by Kentucky, Pennsylvania, West Virginia, New York and Maine; but Federal response to these problems has been slow and largely inconclusive.

This inability to address multistate air quality problems suggests the need for a regional cooperative approach. Current state laws and the federal Clean Air Act are not an adequate basis for resolving regional air quality issues. Several states in the region have legislative mandates that environmental regulations may not be more stringent than Federal regulations. Federal and state requirements are based on local ambient concentrations which do not consider cumulative effects of transported pollutants. Continued reliance on existing air quality regulations is inadequate to address regional air quality problems and to resolve multistate conflicts over specific energy facilities.

Ongoing communication about air quality and related problems among the Ohio valley states can contribute to more effective action to solve these common problems. Such communication can increase the level of understanding of mutual problems and encourage states individually or collectively to initiate actions to resolve regional air quality issues. Such communication is likely to be most effective if it occurs on an ongoing structured basis.

A regional association of state air quality officials can provide a means for states to identify and assess shared and long-term air quality problems and to identify opportunities for cooperative action. Proposals for regional strategies for long range transport which are incorporated into proposals for renewal of the Clean Air Act indicate the growing significance of and differences among regional air quality interests.

A regional association can provide member agencies with an opportunity for informal communication, discussion of regional problems and exchange of air quality data. Such interaction on a multistate ongoing, nonadversarial basis can sensitize each state to concerns of other states, thus serving a conciliatory purpose in managing specific conflicts which arise.

The member states can determine the association's work program but possible objectives and activities include:

- providing liaison with the federal government (Congress and executive agencies) and other regional organizations of state officials,
- coordinating state efforts to work with the U.S. Environmental Protection Agency (EPA) to minimize differences in the administration of air quality

regulations by EPA Regions III, IV, and V,

- conducting a regionwide exchange of technical data (monitoring, BACT determinations, synfuel emissions),
- identifying opportunities for joint research on technical and policy problems shared by the states in the region (long range transport of air pollutants, health implications of synfuel facilities, coal washing),
- entering into agreement on uniform air quality modeling techniques,
- projecting likely ranges of allowable expansion of energy and other development in the region and identifying constraints,
- entering into agreement on uniform air quality modeling techniques,
- coordinating efforts to develop compatible regulations.

The association must have sufficient resources of members, expertise, funds and authority. Membership should include the directors of each state air pollution control agency. As program heads, these officials have the needed expertise and knowledge to act on air problems. Each possesses sufficient state authority to implement most of the proposed activities so that no additional authority for the association would be necessary. Members can include the major emitting states in the valley--Illinois, Indiana, Kentucky, Ohio, Pennsylvania, and West Virginia, although membership should be open to other states.

The federal government has a key role in air quality regulation and the Regional Administrators of U.S. Environmental Protection Agency Regions III, IV, and V should cooperate with the association. Air quality issues in the Ohio Valley are aggravated by differences between EPA regions on administrative policies, enforcement and interpretation of the Clean Air Act. States are often affected directly and indirectly by decisions made in another EPA region. The association can provide the opportunity for direct communication between each state's air quality official and each of the other regional administrators. To avoid federal dominance and potential conflicts where action taken by the states is directed at the Federal government, federal representatives should not be full members. They should be authorized to participate in any studies, data collection and analysis or other activities undertaken by the association.

The association can maintain contact with industry and the general public. The exact means of input depends in part on the objectives of the association. If the association focuses primarily on energy facilities, advisory committees might include representatives of the East Central Reliability Council, universities, environmental and energy consumer groups. Since energy facilities are only one activity affecting air quality, the association might not restrict its attention to energy facilities. If it deals with a broad range of emitting sources, selection of advisory groups will be more difficult since no single group speaks for the plural interests in the region. State chambers of commerce, universities, environmental groups, and other citizen groups can be considered for inclusion in any advisory group.

The association can be organized as an independent association or as an affiliate of an existing organizations such as State and Territorial Air Pollution Program Administrators (STAPPA) and the Ohio River Valley Water Sanitation Commission (ORSANCO). Table 1 lists the major activities and disadvantages of each organizational approach.

Article III of the Ohio River Valley Water Sanitation Compact provides that ORSANCO shall " have additional powers as may be conferred upon it by subsequent action of the respective legislatures of the signatory states or by acts of the Congress of the United States." Although the commission can serve as an assembly point for periodic discussion meetings, it may be unable to provide staff support, travel expenses or pay operating expenses for an air quality group without the approval of the state legislatures. This requirement may limit the Commission's role, but the association may wish to coordinate closely with ORSANCO. Access to the state environmental policy leaders who are members of ORSANCO and ORSANCO's Power, Industry, Advisory & Public Interest Advisory Committees would be mutually beneficial to both organizations.

Affiliation with STAPPA will require a reorganization of this national association to allow regional affiliates of states with closely related problems and interests. Communication at a regional level can encourage the development of consensus and cooperation on specific issues on which there may be no agreement or interest at the national level. This communication and coordination can occur in several ways: through regional caucuses held in conjunction with STAPPA's semiannual meetings, through establishment of regional offices or by STAPPA staff providing part-time secretariat services to regional affiliates. A system of regional affiliates should not jeopardize STAPPA's national role.

An independent organization may be the most effective organizational structure but it is also the least feasible. A new regional organization with budgetary requirements is unlikely to win the support and participation of all states in the valley. Federal program funds are important to each state's air program and these funding levels are being reduced, with the EPA request for fiscal year 1983 being \$17 million less than FY 82. Participation by each of the six main stem states is important but not essential.

The internal organizational structure of the association should be as flexible as possible with the chairmanship rotating on an annual basis. Meetings should be scheduled on a regular basis with the chairman having the flexibility to call additional meetings as needed.

An association can be created in a variety of ways including memorandum of agreement (MOA), uniform laws, or interstate compact. Although the latter two may be most effective and permanent, an MOA is more feasible. A MOA does not have the force of law since it is not an official act of the state. It is simply an agreement between executive officials to take some specified action. It may unilaterally be broken by any member at any time. As the weakest form of an interstate agreement, its legal weakness is its strength since it is flexible and more readily executed. Assuming it is entered into with some expectation of mutual advantage, it will likely be upheld as long as political, economic and environmental conditions remain similar.

Table I

Comparison of Alternative Organizational Form for Association of
Air Quality Officials--Ohio River Valley States

Organizational Structure	Advantages	Disadvantages
Independent	<ul style="list-style-type: none"> * exclusive focus on air quality would give it greatest chance to address problems in the region * membership would be key air quality officials in region * small & flexible 	<ul style="list-style-type: none"> * new organization * need to identify new funding source * compounds problem of examining regional issues on a fragmented resource-specific basis
STAPPA	<ul style="list-style-type: none"> * air quality program directors already belong * existing staff * provides states in region a national constituency in those cases where nationwide action is preferred 	<ul style="list-style-type: none"> * positions taken by region may conflict with national perspective * national organization has limited staff and knowledge of regional problems * headquartered in Washington, D.C.
ORSANCO	<ul style="list-style-type: none"> * existing interstate compact * has existing industry & public advisory committees * existing funding source 	<ul style="list-style-type: none"> * may require legislative approval to initiate air association. * no staff available to support association * may decrease focus needed to address water quality problems

Staff support to the association is not essential but can contribute to its effectiveness. Staff may be limited to one individual responsible for preparing meeting agendas, distributing news releases, tracking and preparing digests of federal and state legislation, assisting in the preparation of research reports, and tracking proposed projects of potential multistate concern. A staff provides continuity and helps assure that the organization is an ongoing rather than a crisis oriented effort. States are expected to act in their own self interest but a regional staff can identify and pull together the regional commonalities from individual state positions and data. The identification of common interests can assist in containing political conflicts and in identifying opportunities for mutually beneficial action. Since staff would work with program directors, knowledge of pollution control programs will increase its capability and credibility.

Funding for the conference will depend on the organizational structure. Estimated costs are shown in Table 2.

Table 2

<u>Structure</u>	<u>Budget items</u> ((\$1000)			Total
	Staff	Travel	Expenses	
STAPPA	\$ 5-30	\$12	\$ 5	\$22-47
ORSANCO	\$25-30	\$10	\$ 5	\$40-45
Independent	\$40-45	\$10	\$10-15	\$60-70

Staff costs are greatest for an independent association since part-time secretarial service would be required. This cost can be reduced if the state chairing the organization provides secretarial service. Affiliation with ORSANCO or STAPPA can keep costs at a minimum, with funding provided by each participating state on a pro-rated basis. If STAPPA uses existing national staff on a part-time basis, costs are minimized. The estimated cost is higher if additional staff are hired either in the region or in Washington, D.C. Some funding may be available from the US Environmental Protection Agency through Section 105 state grants, turn-back monies and/or the State-EPA Agreement. Grants may be available to a limited extent, but should not be relied on for administrative purposes.

C.7 ANALYSIS OF LEGAL INSTITUTIONAL ARRANGEMENTS*

I. INTRODUCTION

The purpose of this working paper is to enable the Council of State Governments' study team to identify and analyze the various legal arrangements available to bring a multistate perspective to the siting of major energy-related facilities in the Ohio River Valley including some means of resolving concomitant interstate disputes. To facilitate understanding of the analysis of the "various legal arrangements" various crucial terms and concepts integral to the analysis are defined and discussed.

The most general statement of the function of any activity that would be appropriately proposed as a solution to the study problem is "the incorporation of a multistate perspective into the siting process." Three functional activities--communication, planning, and conflict management--help further this overarching function. Communication is a first and necessary step to creating the multistate perspective, multistate planning is a further step, conflict resolution a final step. But even though these three "functions" are steps to the overall goal they seem not to be all the steps. Thus the category "incorporation of a multistate perspective" will serve as catchall for those activities that are more than interstate communication and less than planning. Multistate perspective is the overall goal; communication, planning and dispute resolution are ways of achieving various degrees of that perspective but not all the ways.

In this working paper, communication can mean a myriad of types and media, from the unilateral furnishing of data or notice of pending action; to bilateral and multilateral furnishing of data or notice; to reaction to data and notice; to conversation, oral or written (as in a forum); and finally to mutual research where a constant exchange of ideas, etc., takes place. In fact, planning together is a further form of communication. It is treated differently here, however, because a further element of making mutually agreeable choices is involved.

Incorporation of a multistate perspective refers to any activity that requires a siting decision-maker to account for out-of-state impacts. In this regard the "decision maker" may be anyone from a private utility planner to a state official issuing permits.

*The working paper was prepared by James A. McLaughlin, College of Law, University of West Virginia under contract to The Council of State Governments.

Incorporation of a multistate perspective is more than mere communication but less than mutual planning that implies mutual choice making.* The phrase, "requires a decisionmaker to account" could mean merely "to make note of" in reporting the decision or it could mean something much stronger such as a judicially reviewable full incorporation of out-of-state impacts in the decision.

Planning on a regional basis means constant communication, mutual research and most essentially, mutually agreeable choices as to future courses of action whether the choices are binding** on the state choosing or not.

Conflict resolution among states means a process of decision-making where the decision maker is other than (1) a person acting as an agent for one state or (2) a group of persons each acting as agent for one state. It comes into play when mutual agreement fails. It can be a judicial or judicial-like decision maker or an administrative or other agency (ORSANCO for instance). It could be composed of representatives of each state so long as the role of each member while acting collectively was clearly to decide for the common good and not to decide based on his perception of the narrower interest of the state by which they were appointed. Some measure of independence from immediate recall must be given such state appointed members or their collective judgment will lack credibility. (Compare the U.S. Senate with the House.)

Finally, conflict resolution can be on a climatic basis (like the American judicial process), on an episodic basis (like the Civil Law system of Europe and some American administrative practice) or on a rolling basis (like some American regulatory practice).*** The nature of

*"Mutual choice making" is implied in mutual planning because planning is mapping out a scheme of choices about future conduct. The plan itself may or may not be binding on the participant states. If it is advisory only, then the mutual choices made by the planners will likewise only be advisory.

**More will be said about "bindingness" in other parts of this paper. It is an oversimplified term, especially in this intersovereign context. Things are not either binding or not.

***The American judicial system settles disputes by procedures that focus on one climatic trial and its subsequent review by higher courts. Nothing definitive is decided until the trial and everything decided subsequent to the trial refers back to the central focus or climax, the "Trial." The European judicial system involves a series of little "trials" or hearings at which evidence is taken on particular aspects of a dispute. Finally, when all the facts have been gathered through this process--in which, by the way, the judge is a much more active participant than in the American system--the judge makes a decision. What I call a "rolling system" is a series of intermediate definitive decision perhaps not unlike the referee in a football game.

the conflicts and the parties will determine which basis is most appropriate for each situation or context of decision making.

A. Legal Means

Legal "means" refers to the type of sovereign act used to establish an ongoing process called here a legal mechanism which in turn is designed to perform some "functional activity." For example, by means of an interstate compact, a mechanism called ORSANCO was established to perform the function of promoting pollution abatement within the Ohio River Valley which "function" is performed by the performance of several authorized lesser functions, e.g. research, rule-making.

Contracts or agreements among states or state officials are much different in legal effect than private contracts. Informal agreements that have no sanctions attached to their breach (i.e., are not "binding") are not "contracts" in the usual legal sense of that word. On the other hand, contracts between states that are "legally binding," are legally binding in a different way. Unless a state waives sovereign immunity, it cannot be sued in its own courts. The Eleventh Amendment to the United States Constitution prevents suit in a federal court. Therefore, unless the United States Supreme Court exercises its jurisdiction to settle disputes between states, a contract may be "binding" but with no court in which to enforce it. (San Jose State University of California recently found itself in that situation when it sued West Virginia because West Virginia University had breached a contract to play two football games. The Supreme Court refused to hear the case.)

Reciprocal or uniform laws are a concept well understood. Most states have passed more than twenty of such laws proposed by the Commission on Uniform State Laws.

Compacts as used here mean a congressionally concurred in agreement between states or an amendment to an existing congressionally concurred in compact whether or not further Congressional action on the amendment is deemed necessary.*

*See James A. McLaughlin. Legal and Institutional Aspects of Interstate Power Plant Development in the Ohio River Basin Energy Study Region. Prepared for the Ohio River Basin Energy Study (ORBES). (Washington, D.C.: U.S. Environmental Protection Agency, November 1980), pp. 94-137.

Unilateral state action is self explanatory.

B. Legal Mechanisms mean some kind of ongoing process authorized by law whether that process is carried on by regular state officials, private citizens, a special agency or set of people or a combination of the above. Some mechanisms for interstate cooperation are the interstate forum, a "talking place" for state officials; the interstate agency, a group of people acting for the interests of the states collectively not individually; interstate arbitration, a dispute settling process outside the judicial process; special or ad hoc courts, a judicial dispute settling mechanism; state administrative process creating new duties and procedures for existing state agencies; interstate/federal forum, a "talking place" for state and federal officials; and private initiative, some inducement or mandate to private parties, such as the private utilities to carry out procedures facilitating interstate cooperation and sensitivity to multistate issues.

The plan of this working paper is to begin with a general discussion of regulatory efficiency. Organized under the "functional activities" discussed above, the legal means to bring into existence mechanisms to carry out those activities will be discussed.

II. REGULATORY EFFICIENCY IN THE SITING PROCESS

One primary goal of this project is to find laws and legal institutions and the arrangement that might facilitate regulatory efficiency. Regulatory efficiency means the optimum level of regulatory goal achievement in the shortest time with the least cost. This means the avoidance of duplication, high morale among regulators and public support. Avoidance of duplication requires open and constant communication among regulators and a regulatory control structure that identifies and resolves inter-regulatory conflict quickly. High morale requires clear goal identification, clear lines of responsibility, and an inter-regulatory conflict resolving mechanism that is felt by the regulators to be fair. Public support requires as much visible regulatory activities as possible and also requires access to the regulatory process by private individuals and groups.

In the past this latter function has been served to a large extent by judicial review. Judicial review can achieve the minimum oversight at the maximum cost.* The courts recognize this but seem unable or unwilling to do anything about it. What is needed is a regulatory

*See the discussion below in the section on dispute resolution.

access system that allows ventilation of private concerns and a governmental response to those concerns that is prompt, considerate and final. In a federal constitutional union with an independent judiciary and a litigious tradition some litigation is inevitable and desirable; but the present level is undesirable and may in fact be disastrous. Legal institutions more efficient than our regular courts but with the courts' public acceptability are needed. That is a tall order.

The regulatory goals having to do with power development are primarily energy that is adequate and reliable and the protection of the environment. Other, somewhat less salient goals are national security, economy and fair distribution among the states of the benefits and burdens of energy production. The regulatory context is a federal union with a tradition of democratic collective action and private ordering. The federal union means that there is a maze of governmental units: suprasovereign, cosovereign, and subsovereign. Democratic collective action pulls for the smallest (most local) governmental control where possible. Private ordering (the trust in the Antitrust Law is a manifestation of this tradition) pulls for voluntary non-governmental arrangements for concerted action. The traditions of democratic collective action and private ordering invariably breed conflict. Democracy demands openness. Private ordering demands (or at least desires) privacy.

This then is the context in which the search for legal and institutional arrangement for the interstate regional coordination of major power facilities siting goes on.

III. MEANS AND MECHANISMS TO FACILITATE INTERSTATE COMMUNICATION

A. By Informal Agreement

In the context of state governments interrelationships, an informal agreement* is one that does not have the force of law in either agreeing state because it is not an official act of either sovereign, but an agreement between executive officials only morally binding as between them. But assuming it is entered into with some sense of mutual advantage, as long as conditions don't change, it probably will be lived

*As the term will be used in this working paper. In the private law context an "informal contract" is one not under seal and such informal contracts are perfectly enforceable if for consideration or other validating circumstance. Indeed, informal contracts compose almost the entire modern doctrine of contracts; formal contracts, i.e. contracts under seal, are almost unknown today.

up to. Legally, it will not be binding on successors in office, and no judicial action can be brought by either side to enforce it. It could be effected by a hand shake between governors or their agents--perhaps meeting at a governors' conference, and unilaterally broken off by either side at any time.

This is a weakest form of interstate agreement but in a sense its weakness is its strength. Because it is not an act of the state qua state (i.e., as a sovereign), is not legally binding (i.e., no sanctions for violation of the promise), and as a corollary can be unilaterally withdrawn from, such informal agreements are easily entered into.

Weak informal agreements are not worthless. Responsible public officials as a matter of habit and sound practice keep their word. Even though such non-binding agreements are "informal", they can be formalized into a carefully worded, written agreement setting out what the parties will do. For instance, if information about potential site locations is to be exchanged, the agreement could state what details the information should contain, and what efforts the sending state will make to receive the information early. Such careful wording of a written instrument of agreement helps avoid disputes as to what was agreed on. Disputes in the context of a "non-binding informal" agreement usually lead to the dissolution of the agreement.

The legal right of state officials to enter into such informal agreements can be inferred from each of the six states (Indiana, Illinois, Kentucky, Ohio, Pennsylvania, and West Virginia) having some version of the standard Commission on Interstate Cooperation Act. That act states, in part:

"It shall be the function of this Commission:

- (3) To endeavor to advance cooperation between this state and other units of government whenever it seems advisable to do so by formulating proposals for, and by facilitating:
 - (d) The formal cooperation of governmental offices with one another individually.
 - (e) The personal cooperation of governmental officials and employees with one another individually.
 - (f) The interchange and clearance of research and information.
 - (g) Any other suitable process, ..."

Since it is the Commission's function to "endeavor to advance" by

"formulating proposals for" and "by facilitating" interstate cooperation in the pertinent ways quoted above, obviously this is a mandate or at least a clear authorization for state officials to so cooperate whether or not the Commission "facilitates". Only Kentucky strongly suggests channeling of such cooperative efforts through its Commission (called there the Legislative Research Commission). Section 8.040 Kentucky Code states inter alia:

"The Commission shall advance cooperation between the Commonwealth and other units of government by exercising principal responsibility and authority for... (d) the interchange and clearance of research and information; (e) any other intergovernmental action ... that affects intergovernmental cooperation." (Emphasis added.) But, even here, the law says "principal", not exclusive, responsibility and authority. Therefore, even in Kentucky, such cooperation through informal agreements seems to be authorized even if not initiated by the "Commission."

Such informal agreements could be used to facilitate exchange of information from the first glimmer of forecasts and plans, to joint research, and into information exchange in the permitting process.

B. By Formal Agreement Establishing a Regional Forum

What distinguishes a forum from other modes of communication is that it has a special location--a place for people to get together to talk about a subject of mutual interest. Such an arrangement requires greater formality in its creation since each member state must commit some time and energy to preparation for and participation in an interstate forum. The amount of time and energy committed would be no doubt minuscule by comparison to most state expenditures, but it might be enough to be politically noticeable. There must be some assurance that the effort will not be wasted by other states failing to follow through with a like effort. Formality guarantees some seriousness of commitment by the agreeing states as well as some precision as to what is agreed on.

As used here, a "formal agreement" differs from a constitutionally authorized interstate compact because the latter requires Congressional approval while the former does not. The distinction was first made by the United States Supreme Court in Virginia v. Tennessee, 148 U.S. 503, 519 (1893) and was reiterated and elaborated on in U.S. Steel Corp. v. Multistate Tax Comm. 434 U.S. 452 (1978). An agreement requires Congressional approval only if the agreement poses a potential threat to federal supremacy by giving the interstate agency or institution established by the agreement such powers as can only be safely entrusted to the national government. Although, this standard is vague (as are

many Constitutional standards), it is clear that a "forum" established by interstate agreement would not possess such powers as potentially to threaten federal supremacy.

The agreement creating a forum could be one ratified by each state's legislature. A ratifying state's participation would be positive state law having a separate code designation in that state. This is very much like the compact ratification process. On the other hand, the agreement creating a forum could be accomplished under an existing authorization to interstate cooperation such as the standard Interstate Cooperation Act of which each Ohio Valley state has some version. The commissions created by such acts could propose an agreement that would create a forum for the "interchange and clearance of research and information" on the siting of major power facilities. Such proposed agreement could designate the governors of the several cooperating states as being the signators for their respective states. When a given number of governors agree, the forum would come into existence. Other state laws may exist which authorize the creation of and participation in an interstate forum for information and research exchange. For example, the Ohio Power Siting Act (Ohio Revised Code Section 4906.14) authorized the power siting commission to "make joint investigations, hold joint hearings within or without the state ... whether the commission is functioning under agreements or compacts between states or under the concurrent power of states to regulate interstate commerce or as an agency of the United States, or otherwise." However, only Ohio of the six study states has such a broad mandate. Moreover, the broad Ohio authorization is not free from doubt. Could Ohio's power siting commission for example by its own decision enter into an agreement creating an interstate forum for power facilities siting information exchange "under the concurrent power of states to regulate interstate commerce"?* Ohio has recently extensively amended its Power Siting Act eliminating the Power Siting Commission as an entity separate from the Public Utilities Commission.**

State environmental acts may contain some general authorization but no mandate for interstate cooperation. Whether such authorization allows the state environmental agency or the governor to enter a formal agreement to create an interstate forum is highly dubious.

*What does the "concurrent power of states to regulate commerce" mean? Does it mean that two states acting together have more power to regulate interstate commerce than one state acting alone? Constitutional doctrine thus far developed suggests that such cannot be the meaning. "Concurrent must mean concurrent with federal power."

**The Ohio Power Siting Commission is now the Power Siting Board within the Public Utilities Commission. The new "board" maintains the same powers and duties previously possessed by the Commission. Sub. Sen. Bill 378 passed February 24, 1982.

The advantages of legislative ratification of such an agreement are (1) legal certainty that it is the state's act and, as a corollary, that a state makes a firm commitment to furnish its share of whatever resources (probably very small) are necessary to furnish such a forum and (2) any act of unilateral withdrawal will require further legislative deliberation giving forum interests time to promote their case for continued participation. This delay in withdrawal also gives greater stability to the forum. Since state legislatures do not meet continuously, the forum is assured of continued state participation while not in session. This latter merit of legislative ratification presupposes the right of any state to unilaterally withdraw. Such right is probably legally necessary to avoid the agreements being of the type that requires Congressional approval. The Supreme Court in U.S. Steel Corp. v. Multistate Tax Comm., 343 U.S. 452 (1978), a case mentioned above, laid some weight on the unilateral withdrawal feature in holding the Multistate Tax Compact not as an agreement requiring Congressional approval. However, the Court did not say such right is a sine qua non of exemption from Congressional approval. The Court looked at the aggregation of powers in making its conclusion. Since an interstate forum would have no regulatory powers nor any other power to force a member state to do anything (except to talk) perhaps the right to unilateral withdrawal would not be essential in this context to the avoidance of the requirement of Congressional approval.

On the other hand, the right to unilateral withdrawal may be a political necessity. At least such a feature of any proposed agreement would enhance its chances of legislative approval. Perhaps a term of years of no withdrawal after which there could be unilateral withdrawal would be a possible compromise. Such a compromise might both make it politically feasible and constitutionally acceptable without Congressional approval and give the forum stability.

Such a forum could establish an interstate agency to serve as the collection point for certain designated information furnished by each state. Each state would furnish a portion of the cost of running the agency. The proportion and time of payment would be designated in the agreement. The agency could simply collect and organize the information and, at certain designated times or on request, furnish it to the member states. Or the agency could have the further responsibility of analyzing the information furnished by the states in terms of regional impacts, duplications, etc. Personnel from the agency could visit each member state each year to discuss the information or data analysis and be available to answer questions at any time. Alternatively, an annual, semi-annual or bi-annual meeting of certain key state officials (e.g., the agreement could simply state that each state's governor would designate that state's officials) could be the occasion for the dissemination of the information or data analysis. Such information could then be the focal point for discussions among the various assembled state officials.

Such a regular assembly of designated state officials could be the

sole purpose of an agreement in which case the agreement would not establish a regional data collection or analysis agency. The states could simply furnish each other the information in advance of the meetings so as to facilitate discussion or the states could wait and exchange information at the meetings. The cost of such a forum calling only for regular meetings would probably not have to be separately budgeted.

An existing regional agency such as the Ohio River Valley Water Sanitation Commission or the Ohio River Basin Commission could be designated as the agency for information collection or analysis. Moreover, an existing regional agency's offices could be the assembly point for the periodic discussion meetings, whether or not such agency functioned as a data assembler or analyst. Article III of the Ohio River Valley Water Sanitation Compact provides that ORSANCO shall have "such additional powers as may be conferred upon it by subsequent action of the respective legislatures of the signatory states or by act or acts of the Congress of the United States." Thus, without actually amending the compact or obtaining the approval of Congress, ORSANCO could by agreement approved by its states' legislatures be given the additional power to collect power siting data, to analyze such data and to serve as a periodic meeting place.

C. By Reciprocal Legislation

The advantages of reciprocal legislation as a means of information exchange or of facilitating other cooperative ventures such as a forum are clear: no interstate agreement need be reached and no state sovereignty need be sacrificed either to an interstate organization or to the federal government. If an act is "reciprocal" no obligation to another state is incurred until the other state passes substantially the same act. Thus, a simple act to furnish information about sites and site planning within a state would not obligate a passing state to send siting information to any state whose reciprocity is not guaranteed by the passage of a similar act in that state.

There are several disadvantages to reciprocal legislation. One is that it is difficult to pass an act that another state will like in enough detail, such that the other state's passage of a similar act will be "substantially the same." The National Conference of Commissioners of Uniform State Laws functions to hammer out reciprocal laws that will be acceptable in the usual case. Such "hammering out" usually takes years of hard work.

A second problem is that the states interested in cooperation in this manner may have dissimilar internal laws relating to the siting process. A reciprocal exchange of information may be very advantageous

to a state that gathers very little information about proposed siting or gathers it very late. Exchanges of its information with a state that gathers a large amount of information or gathers it very early in the planning stage would benefit both parties. This could be true even where the reciprocal exchange acts themselves are identical and thus trigger one another. A reciprocal exchange act could be worded so as to require that the quantity and quality of information another state offers to exchange must meet a certain minimum standard. Such wording would avoid the inequality problem but might make reciprocity very difficult.

A third problem with reciprocal legislation is that the passage of a reciprocal act is essentially an offer to all other states. For example Ohio may want to participate in Indiana's siting but not care about participating in Pennsylvania's siting and may not want Pennsylvania participating in its siting--whether it be information exchange or permitting. State reciprocal legislation is unlike the offer of a contract or agreement which can be specifically directed. Reciprocal laws cannot discriminate in this fashion or at least they never have.

One final disadvantage of reciprocal laws is that if the need for sensitivity to multistate issues is regional in scope, one or two states refusing to pass reciprocal legislation may make the passage and use by the other states in the region worthless or essentially so. For example, what if all but one of the ORSANCO states passed a reciprocal exchange of siting information act, would the missing information make the exchange between the other states worthless?*

D. Unilateral State Action

Reciprocal legislation is technically unilateral since no agreement with another state is needed for passage. Nonetheless, it is not really effective until another state "agrees" by passing similar legislation. A state could attempt data exchange by simply initiating a program of systematically sending siting data to other states. This probably could be done without further legislation purely on the initiative of state agency officials. The hope would be that the other states would reciprocate but such reciprocation would not be a condition of continued receipt of the data. Even without reciprocation, an advantage to a sending state would be early warning from sister states of their

*An example of Interstate Power Siting Data Exchange Act is contained in the ORBES report "Legal and Institutional Aspects of Interstate Power Plant Development the Ohio River Basin Energy Study Region." Office of Research and Development, U.S. Environmental Protection Agency, Washington, D.C., November 1980, p. 92.

concerns about a particular site and an early chance to iron out potential conflicts. Moreover, in any litigation started at a late stage of the siting process by a sister state against a state that had furnished data since the earliest planning stages, the defendant (the data-sending state) will be on much surer ground to complain to the court about the late entry and perhaps either get the complaint dismissed for laches or get more favorable treatment by the court because of the delay.*

IV. MEANS AND MECHANISMS TO FACILITATE AN INTERSTATE PERSPECTIVE IN THE SITING PROCESS

A. By Informal Agreement:

1. Allowing feedback to furnished information.

One state's siting agency could agree with its counterpart in another state to send information about siting proposals, to receive reaction from the other state and to respond to that state's concerns. This dialogue may make the permitting state sensitive to other-state concerns and cause it, to "adjust" to those concerns. Moreover, it would give early warning of possible time consuming, acrimonious and ultimately costly litigation and create an opportunity to avoid it.

It would seem that existing law would permit such informal arrangements for data exchange and feedback. This would be true whether the exchange and feedback was with one other state or several states. Arrangements with several states could be by several bilateral agreements or by a multilateral accord.

This "informational dialogue" through such informal agreements need not begin only at the permit stage for any particular siting or development proposal, but could take place at an earlier stage. States could agree to report to one another as soon as information becomes available to its agencies. But if states have greatly varying policies as to when utilities or other power developers must report to them or as to what information they must make available, then the states will probably not want to trade such unequal information. A first step to an interstate informational dialogue is more uniform state internal

*Laches and limitations on legal actions is discussed more fully in the section on dispute resolution below. Laches is an equitable doctrine that a suit be dismissed if the suiter delays so much in bringing the law suit after it has accrued as to be unfair to the other side.

procedures for obtaining information from the private sector as to site plans.

2. Allowing standing to other states as parties to the permitting process.

State A acting through its governor could indicate to state B, "we will allow you to appear and make comments at hearings for site approval before our Public Utility Commission if you will do the same for us." Assuming state B agreed and if the state hearing process were sufficiently flexible, state A could directly intervene in state B's permit process and vice versa. Given this proposition, three questions immediately arise: (a) Do the six valley states composing the study region have permitting laws sufficiently "flexible" to allow other-state standing* without further legislation? (b) Are the permitting processes of the six states sufficiently alike as to allow a realistic chance of region-wide or even bistate agreements for mutual intervention? (c) Should the right to intervene be coupled with a "right," which implies a duty on the part of the permitting state, to have the extra state concerns actually considered in the permit decision? I will attempt to answer these questions in the order given.

a. Are existing "site permit laws" in the six states flexible enough to allow standing to other-state representatives?

No definite answer can be given to this question because the specific issue has never been raised in any of the six jurisdictions and language in the various state acts would probably permit either interpretation.

For example, in Illinois, Section 64 (Ill. Revised Statutes 1973, Ch 111 2/3, par. 68) authorizes complaints by any "... body politic ... to any act ... claimed to be done in violation of any provision of this act" Does "body politic" include a sister state? Likewise Rules passed by the commission (under Section 64, Ill. Revised Statutes 1973, Ch 111 2/3, par. 60) for the conduct of hearings, which would include new construction certificate hearings (See Section 54 c, Ill. Revised

*The word "standing" means in this context the right to be a party to the procedure. At the most general level, this means notice, input, and appeal (or the right to initiate the next step in a procedure where the "next step" is not automatic). Procedures vary widely and do not necessarily involve an evidentiary hearing or any kind of oral hearing (i.e., one where people appear before a decision maker and orally present arguments) but assuming a particular procedure did provide for a trial-like oral hearing, then being a "party" would imply the right to notice, to appearance, to put on evidence, to make argument, to receive the result and to appeal the result (if an appeal were provided).

Statutes 1973, ch 111 2/3, par. 56 "Certificate of Convenience and Necessity") state in Section 3 (a) of the Commission's rules of Practice:

"The parties to proceedings before the Commission are complainants, petitioners, applicants, respondents and intervenors ... 'Intervenors' are persons, corporations, associations or public authorities who, upon written permission, are permitted to intervene in any proceedings before the Commission ..." (Emphasis added.) By Section 3(c) of the Commission's rules, the Commission "may permit all persons, corporations, associations, or public authorities to be heard but they shall not be parties unless so designated." (Emphasis added.) Again does "public authorities" include other states? More research on Illinois law would be necessary to give a confident answer.

In Illinois, Tel. Association v. Illinois Commerce Commission, 67 Ill 2d 15, 364 N.E. 2d 63 (1977) the Illinois Supreme Court gave a broad interpretation to the words "persons and corporations" in the appeal section of the same act (Illinois Rev. Stat. 1973, ch. 111 2/3, par 72) to include anyone of the above entities who have been made a party by the Commission. Thus, if a "body politic" were made a party by the commission, it could also appeal the decision to the Illinois courts. But that still does not answer the question as to whether a sister state would be counted a "public authority" or a "body politic" in Illinois even though a sister state or its agencies is clearly both in ordinary usage of the language. Regardless of ordinary usage the issue in interpreting the Illinois statute would be: What did the Illinois legislature "intend" when it used the word "body politic" or "public authority"?

Ohio law provides the region's only power siting commission act (Section 4906.01 et seq., Ohio Revised Code) that the commission "may make joint investigations, hold joint hearings within or without the state, and issue joint or concurrent orders in conjunction with or concurrence with any official or agency of any state ..." Joint hearings are authorized, however, simply to allow another state to be a party to an Ohio certification hearings seems to be forbidden. Sections 4906.06 and 4906.08 specify who must be served (affected local governments, state agencies and petitioning local citizens) and these are apparently the only parties. Section 496.08 (c) states, "The Commission shall accept written or oral testimony from any person at the public hearing, but the right to call and examine witnesses shall be reserved for parties."

Kentucky's siting law, principally Section 278.025, "Certificate of Environmental Compatibility (electrical energy generating facility only)" and Section 278.020 "Certificate of Convenience and Necessity required for construction or operation of (any) utility," Kentucky Revised Statutes, is very vague as to parties and hearings. Section 278.020 reads in part: "... after a public hearing of all parties interested ..." Section 278.025 reads in part: "the commission shall

conduct a public hearing on the application which shall be open to all interested persons. For the purposes of this paragraph an interested person "shall mean any person whose living environment would be affected by the construction of the proposed facility." Since the definitions are broad, a state could be a "party interested" (Section 278.020) and a person in another state (including her/his representative) could certainly be "a person whose living environment would be affected." Since Section 278.040 gives authority to the energy regulatory commission to "... adopt ... reasonable regulations to implement the provisions of KRS Chapter 278, perhaps the regulations could specifically identify sister states as potential parties under Section 278.020, or as representatives of people potentially "affected" in other states.

The West Virginia certification statute (Section 24-2-11, West Virginia Code) says nothing about parties. Section 24-4-6 specifies who must complain of anything "done or omitted" to be done by any public utility subject to this chapter as "any person, firm, association of persons, corporation, municipality or county." That listing would not seem to include another state. Section 24-5-1, "Review of final orders of commission," states that "any party feeling aggrieved" may appeal a final Commission order to the Supreme Court of Appeals. Whether the word "party" means someone who had been a party at the Commission hearing (no designation of who such parties may be is made by Section 24-2-11) or means anyone who now "feels aggrieved" is unclear. The Commission has the usual power to make rules to govern its hearings (Section 24-1-8). The vagueness of the definition of party, coupled with its rule making authority, may allow the Commission to allow other states to be parties.

Indiana seems to preclude out-of-state intervention in its various environmental certification processes by its detailed description of who may intervene or appeal. Section 13-6-1-1(d), Indiana Statutes (1971) refers to any citizen of Indiana or corporation, etc. having an office in Indiana. The Public Service Commission has general regulatory control of energy services in Indiana; it seems not to control new construction. (See Sections 8-1-2-83, 84, 86, Indiana Statutes).

Pennsylvania law is similar to Indiana's in that any permits necessary for plant or facility construction come from various environmental agencies implementing federal law or from local government. (See 66 Pennsylvania Statutes Section 1318).

b. Are the present permitting processes of the six states sufficiently alike to allow as a practical matter a realistic chance of region-wide or even bi-state agreements for mutual intervention?

"Probably not" is the safe answer. The above discussion alerts one to the vast differences and problems. Perhaps some bi-state intervention agreements would be possible--Kentucky and Ohio, for

example.

- c. Should intervention be coupled with a "right," implying a "duty" on the part of the "permitting state," to have the extra-state concerns actually litigated?

Even if the state permit law did not expressly state that out-of-state impacts must be considered, the permitting agency would most likely give some weight to out-of-state concerns just because the out-of-state concerns are given voice at the hearing by a sister state representative. In the absence of a specific substantive mandate to consider out-of-state impacts, on appeal of the administrative decision granting the permit, it would probably be impossible to convince a court to give even cursory consideration to claims that the out-of-state impacts were not adequately accounted for in the decision.

Therefore, although a specific substantive mandate to consider out-of-state effects is not essential to informal agreements to allow mutual intervention, the absence of such mandate would certainly make the intervention less effective and thus reduce the incentive to intervene. Moreover, if there is little incentive to actually intervene, there would be little incentive to enter into agreements to create the potential to intervene.

Finally, an informal agreement can not itself cure the defect of a state's law containing no formal substantive mandate to consider out-of-state impacts. The legislature would have to create such substantive mandate.

B. By Formal Agreement:

1. To create a multistate information exchange-feedback, comment process or to allow other state representation in the permitting process.

An informal agreement among states to create a multistate information exchange-feedback-comment process (called here "comment process") or to allow other state representation in the permitting process (called here "standing") is fraught with uncertainty. This suggests the first advantage of a formal agreement--it would be legally fullproof. If the legislatures of the agreeing states enacted laws reflecting their agreement, then the duty either to fulfill the comment process or to allow standing would be beyond serious issue. Agreements of this nature would not require Congressional consent because it would in no way threaten federal supremacy.

On the other hand, such formal agreement involving legislative acts are difficult to make. An interstate organization such as the Ohio River Valley Water Sanitation Commission could act as a proposing

agency. The Commission has sufficient present authority to act both to draft the agreement and then to promote its passage. Article VIII of the compact creating ORSANCO states in part:

"The Commission shall conduct a survey of the territory included within the district, shall study the pollution problems of the district, and shall make a comprehensive report for the prevention or reduction of stream pollution therein. The commission shall draft and recommend to the governors of the various signatory states uniform legislation dealing with the pollution of rivers, streams, and waters and other pollution problems within the district. The commission shall, more than one month prior to any regular meeting of the legislature of any state which is a party thereto, present to the governor of the state its recommendations relating to enactments to be made by any legislature in furthering the intents and purposes of this compact". (Emphasis added.)

Although water pollution is clearly the chief concern of ORSANCO the words of Article VIII ("The pollution problem," "other pollution problems") recognize that air and land pollution are interconnected concerns for one environment and that efforts to control water pollution necessarily involve concern for air pollution, land use allocation and energy-resource utilization.

Any legislation that might be proposed by ORSANCO pursuant to Article VIII would reflect agreement just as the ORSANCO compact is enacted legislation of every compact state. Drafting and proposing is one thing; actual agreement is quite another. Difficulty in reaching agreement even as to a limited "comment process" is the disadvantage of a formal agreement.

2. To allow other states to initiate and utilize a state's process for the judicial review of the permitting process.

Most state officials are probably wary of using another state's courts. The United States Constitution takes cognizance of this fear that "parochial factors might often lead to the appearance, if not the reality, of partiality to one's own." Ohio v. Wyandotte Chemicals Corp., 401 U.S. 493, 500 (1971). In Article III, original jurisdiction is conferred on the Supreme Court for all controversies between states and for all cases between a state and the citizens of another state. Moreover, Article III extends the federal judicial power to all cases between citizens of different states. Nonetheless, many modern commentators feel the fear is much exaggerated. (See the late Justice Felix Frankfurter's concurring opinion in Lumbermen's Mutual Casualty Co. v. Elbert, 348 U.S. 49, 53-56 (1954).) Several times Congress has nearly abolished diversity jurisdiction, most recently in 1978 when the House passed such a bill. (H.R. 9622, 95th Congress, 1st Session). The Senate failed to act on it. Indeed the Supreme Court in the Wyandotte

Chemicals Corporation Case (cited above) refused to exercise its original jurisdiction in an environmental nuisance suit between Ohio and several out-of-state corporations, on the express excuse that Ohio state courts could probably be fair to the out-of-state corporations.*

Suits by one state in the courts of another are a rarity. Most suits of this nature--where a sister state is the initiating party--are to collect taxes. Forty-four states including all six study states have reciprocal legislation allowing such suits in their courts.** Such suits are quite different from the kind of intervention contemplated here. For example, if Ohio sues a taxpayer in West Virginia state court, Ohio law is used and West Virginia has no interest in the outcome. By contrast, a suit by Ohio to seek review of an administrative certification of a new facility site in the West Virginia state courts would be decided under West Virginia law with West Virginia having a very strong interest in the outcome. Thus the analogy between out-of-state tax suits and out-of-state standing for administrative review is somewhat weak. Nonetheless there seems to be no legal impediment to a state's allowing another state to seek judicial review in the first state's courts of its administrative actions.

Since the review would be under state law, the intervening state would not be able to seek further review in the United States Supreme Court. Other reviews may be possible utilizing the judicial review sections of the various federal environmental protection acts which authorize federal court review under certain circumstances.*** Review by

*In Arizona v. New Mexico, 425 U.S. 794 (1976), the Court found the New Mexico state courts a suitable forum to litigate the constitutionality of a New Mexico tax on Arizona utilities and therefore refused to exercise its own original jurisdiction in a suit brought by Arizona against New Mexico to adjudicate the same issue. Of course, in Arizona v. New Mexico, as in the Wyandotte Chemicals Corp. case the Supreme Court could review the final decision of the state court. Such review would not be available in the kind of standing contemplated by this section of the paper. See also, Nevada v. Hall, 440 U.S. 410 (1979) where a citizen of California was allowed to sue the state of Nevada in a California state court, the Court finding no inherent, implicit, or express constitutional restrictions on such suits.

**Such suits have also been allowed without legislation and without the reciprocal feature, merely as a matter of interstate comity. See State ex. rel. Oklahoma Tax Comm. v. Rodgers, 238 Mo. App. 1115, 193 S.W. 2d 919 (1946); see generally, Leffar, Out-of-state Collection of State and Local Taxes, 29 Vand. L. Rev. 443 (1976).

***For example, 42 U.S.C. Section 7604, 7607 (Clean Air Act) but such suits when against a state are subject to Eleventh Amendment immunity.

a state's highest court of its own administrative agency's enforcement of its state law, even at the behest of another state, would not be further reviewable. A new action might be brought by the dissatisfied state against the permit granting state under certain circumstance in the United States Supreme Court, invoking that court's original jurisdiction to hear controversies between states. That is another matter entirely. In any event it is a new action and not a further review of the state court review.

How effective is such a review in protecting other state interests? Assuming that the state permit law contains no express mandate requiring consideration of out-of-state impacts (except those mandated by federal environmental laws)*, the state review court might still protect out-of-state interests. This protection can come in two general ways. A fairly direct way is the court's broadly interpreting such standards in the permit law to include protection of all potentially affected interests, in state and out. It is worth noting that while state laws may not expressly mandate consideration of out-of-state impacts, they also do not expressly mandate ignoring such impacts. A state's agreeing to allow other states to intervene by invoking the judicial review process may be taken by that state's courts as a sign that broad interpretations of the standards is intended. A second way a court might protect out-of-state interests without having an express mandate to do so is less direct. The intervening state may simply insist that the permitting state adhere to its' (the permitting state's) own policy designed to protect its own citizens. This alone could result in a permit grant being reversed. The reversal could result in a site being abandoned or the proposed facility modified, either of which should eliminate or at least mitigate the threatened impact on the intervening state.

Thus such intervention could be useful to the intervenor state and agreements to allow reciprocal intervention in the judicial review process might be viewed as having practical utility, even without concomitant substantive standards.

3. To set substantive permit standards that include taking account of out-of-state impacts.

As discussion in Section III. A.2c. (above), one concludes that without such standards, intervention in the permitting process would be less effective. The immediately preceding section suggests ways in which intervention might be effective in the judicial review process even with no substantive standards. There can be no question that

*See for example the Clean Air Act Section 126 and Section 110 (a) (2) (E) (i) (42 U.S.C. Section 7426 and Section 7410 (a) (2) (E) (i)). See "Legal and Institutional Aspects of Interstate Power Plant Siting." ORBES, pp. 17-18.

intervention by other state representatives either at the permitting stage or the review stage would be much more effective in bringing about an actual accounting for out-of-state impacts where the permit granting standards mandate such an accounting.

There does not appear to be any reason why substantive standards could not be set to include the full range of potential impacts from any proposed site, in state and out.

4. To create a neutral arbiter/mediator to resolve interstate disputes concerning the application of permit standards at a particular site.

A mediator is merely a helper, an aid. An arbitrator by contrast is a decision-maker. Both are dispute settlers in the broadest sense, but the mediator helps the parties reach an agreed settlement, whereas the arbitrator dictates a settlement. The mediator helps by providing a neutral perspective; he or she clarifies the issue or issues between the parties and suggests possible compromises. In short, the mediator breathes a breath of detached objective reality into the dispute. The parties still must settle the dispute themselves. On the other hand the arbitrator is like a judge in that he imposes a solution usually based on some standard already in existence. With a judge the standard is the general law of the community. With a non-judge arbitrator (usually the meaning of "arbitrator") the standard is usually a contract which establishes, defines and regulates the relationship between the parties (labor and commercial contracts contain 99 percent of the arbitration clauses). When there exists a standard for settling the dispute, the arbitrator's role is to interpret that standard and apply it to the dispute.

There can be arbitration that is standardless, that is without standards known to or agreed on by the parties in advance. For example, people talk about submitting a labor dispute to "binding arbitration."* What is usually intended by the term, since arbitration is by definition binding, is standardless arbitration. Such arbitration is much like mediation, except that this "mediator" may impose a settlement. Most labor contracts contain clauses providing for the arbitration of disputes arising under the contract, i.e. for ordinary arbitration, which is binding.** Labor disputes outside of a contract (either because there is no contract or the contract does not purport to cover the

*As we shall see "binding arbitration" could as easily be called "binding mediation" and without the redundancy.

**The arbitration decision made by a private (non-governmental) arbitrator is "binding" in the sense that a court of law will enforce it with its contempt power (usually) by granting a decree of specific performance. See Textile Workers Union of America v. Lincoln Mills, 353 U.S. 448 (1957).

particular dispute) are settled either by negotiation, with or without a mediator, or by "binding arbitration." "Binding arbitration" is a product of either (a) the operation of a law which requires that certain kinds of disputes under certain circumstances must be submitted to binding arbitration or (b) the agreement of the parties. In many places public employees unions have won the right to the binding arbitration of wage and hour disputes. Legislators might grant the right in lieu of the right to strike as a political trade-off. The agreement of the parties to arbitrate could be an agreement made before the dispute begins or during the dispute when negotiation fails. In the first case, the agreement might designate certain kinds of disputes arising between the parties as disputes to be arbitrated in a certain way after a certain period of efforts at negotiated settlement had passed. In the second case, the parties seeing a negotiated settlement as unlikely and preferring some settlement as more desirable than no settlement*, agree to have a settlement imposed on them.

Mediation is a political process. It helps others reach compromises in order to settle on a future course of action. Arbitration is a legal process. It settles disputes by interpreting and applying the standards resulting from past compromises**, compromises resulting in law or in contract. Mediation helps the parties to agree. Arbitration imposes a settlement based on past agreement reflected in contracts or in laws.

Where does so called "binding arbitration" fit in? It is political in that there is no prior settlement manifested in law or contract on which to predicate the resolution of the present dispute. A wholly new settlement is required. On the other hand it is legal in the sense that it depends not on the negotiated agreement of the parties, but on the decision of a non-party. Such a settlement contains political compromises but not as the parties choose but as the arbitrator chooses. Thus "binding arbitration" is a hybrid or mediation and arbitration that can more descriptively be called political arbitration.

In sum dispute settlement through the medium of a third party takes three forms: mediation, legal arbitration (ordinary arbitration) and political arbitration ("binding arbitration").

A formal agreement between states could without question be used to bring into existence any of various mediation schemes that might be devised. Since a mediator has no decision making authority, no state

*In the usual dispute, one party has more to gain by non-settlement, than by settlement-i.e., the status quo is better than any possible settlement. Thus the law's delay is aided and abetted by the dilatory tactics of one side or the other in most law suits.

**Law is, in one sense at least, simply old politics.

sovereignty is threatened by creating a mediator. Such agreement could also provide for apportioning the costs of mediation, which should be quite small, even in a scheme calling for a permanent office and staff. The advantages of a formal agreement over an informal agreement are certainty of funding and greater commitment to use.

A formal agreement between states would doubtless not be sufficient to bring into existence a legal arbitration process. If it could be done, it would probably require an interstate compact approved by Congress.

A formal agreement between states could possibly bring into existence a political arbitration system. Since such a scheme is essentially an agreement to agree and requires no substantive or prescriptive law, it seems not to encroach on federal judicial or legislative power. On the other hand if the "bindingness" of such arbitration is to have any meaning in the legal sense, it would have some superstate enforcement power behind it. Perhaps the exclusive original jurisdiction of the United States Supreme Court to settle disputes between states could be used. An action would be brought in the Supreme Court against the state refusing to obey the arbitration decision. It would probably seek mandatory relief. (See, Wyoming v. Colorado, 259 U.S. 419, 496 (1922) and subsequent suits brought to enforce the 1922 decree, 286 U.S. 494 (1932); 298 U.S. 573 (1936) and 309 U.S. 572 (1940).) Whether the Supreme Court would enforce the decision of an agreed on political arbitrator is problematical and the mechanisms of actual enforcement are complex as suggested by the above citation.

C. By Federal-State Compact to Create Any of the Mechanisms Suggested Above.

Federal-state compacts are of two general varieties: 1) The ordinary interstate compact approved by Congress* and 2) the interstate compact not only approved by Congress, but with the federal government as an active voting participant in an ongoing joint effort.** The first type was used originally as the settlement of a dispute--as a treaty between nations settles a dispute--and not as an ongoing mechanism for

*Agreements between states that do not require the consent of Congress (see above discussion under III B. are often called "compacts" but here the term "compact" is limited to those formal agreements between states that do require congressional consent.

**ORSANCO has federal members as if the federal government were a party to the compact the same as the member states, but in determining a quorum (Art. V) and taking action against a pollutor (Art. IX) only states count. But in adopting rules (Art. VI) the federal members apparently count like the members from the signatory states. Thus, ORSANCO is not a federal-state compact because although the federal government is a partner in the enterprise, it is not a full partner.

settling disputes. Boundary disputes between states were often settled this way with the compact document being the formalized manifestation of a permanent settlement which, when approved by Congress, settled the matter forever. It is a legislative alternative to judicial dispute settlement. As between states, judicial dispute settlement involves the original jurisdiction of the United States Supreme Court.

The other common dispute between states is over water rights. The first compact settling a water dispute* was the Colorado River Compact of 1921 which simply fixed an allocation of "beneficial consumptive use" between the upper basin states (Colorado, Utah, New Mexico, Wyoming) and the lower basin states (California, Arizona, Nevada). The history of settlement between the states in each basin is long, complex, and illustrative of the two ways to settle interstate disputes. The upper basin states entered into a compact in 1949 (The Colorado Basin Compact of 1949) and the lower basin states ended up in the Supreme Court (Arizona v. California, 373 U.S. 546 (1963)). The 1922 compact established no permanent agency to enforce the allocation. But unlike boundary dispute settlements, water disputes settlements establishing an allocation formula require continual monitoring to see that the terms are being adhered to. Therefore the 1949 compact established the Upper Colorado Basin Commission. The Commission also acts to promote development in the Basin. It has no planning or policymaking function.

The establishment of such a compact commission is a comparatively new development, but there are now a number of compacts with such commissions.** However, the existence of such commissions should not be taken to mean that there are now a number of agencies for exercising governmental regulatory authority on an interstate regional basis. Most such commissions are development and custodial authorities--they own public property, they build on it, they plan and control private development of a public resource. The new federal-state compacts for the Delaware River Basin and Susquehanna River Basin are of this variety. These commission are analogous to a municipal port commission or water commission. They carry on the proprietary functions of government.

There is one exception, the Ohio River Valley Water Sanitation Commission (ORSANCO). ORSANCO is the first and only interstate regulatory commission. It acts like an administrative regulatory agency of government; it makes rules and invokes their application by using member state or federal courts. It cannot legislate in the sense of

*The Supreme Court had been and still is resorted to for the settlement of most such disputes. See, for example, Nebraska v. Wyoming, 325 U.S. 589 (1945).

**Port of New York Authority Compact of 1921 was the first.

making primary regulatory policy. That is done by the Compact itself (see Articles I and VI). But it can make rules that give force and effect to the primary policy. ORSANCO is one the few interstate regional agency with such authority.*

The question is can interstate compacts be used to create any of the mechanisms discussed above. The short answer is a compact could be used to do any of the things a formal agreement (without Congressional approval) could do. But, except for the political arbitration process, it probably would have no advantages over a formal agreement. An interstate compact with Congressional approval could establish a regional agency for political arbitration of siting disputes or even their legal arbitration. On the other hand, a formal Congressionally approved compact is unnecessary to the creation of a mediation process whether the process is carried out on an ad hoc basis or with a permanent mediation policy center. A formal agreement without Congressional consent would serve as well. Similarly there would be no significant advantage in a formal compact to allow "intervention" or "feed-back." There again a "formal agreement" would do as well.

Article III of the ORSANCO compact authorizes the commission to exercise such additional power as may "be conferred upon it by subsequent action of the respective legislatures of the signatory states or by act. . . of Congress." Thus without further Congressional approval, the ORSANCO states could authorize ORSANCO to take on a mediation role.

V. MEANS AND MECHANISMS FOR INTERSTATE CONFLICT RESOLUTION

The goal of a dispute resolving mechanism is to resolve disputes in such a way as not to delay the implementation of a desired social policy

*The Lake Tahoe compact is another. Tahoe Regional Planning Compact, 83 Stat. 360, Cali. Gov. Code Section 66800-66801. The Tahoe Regional Planning Agency was created by this compact to coordinate and regulate development in the Lake Tahoe Basin resort area and to conserve its natural resources. To this end TRPA was to adopt and enforce a regional plan for land use etc. This involved some legislative and regulatory authority but for a very limited bi-state area. See Lake Country Estates, Inc. v. Tahoe Regional Planning Agency, 440 U.S. 391, 99 S. Ct. 1171 (1979).

or project.* The social project might be the building of new and/or improved energy producing or transmitting facilities. The social policy might be clean air, clean water and energy self-sufficiency. This goal could be called the goal of efficient dispute resolution. The goal is an ideal and will not be perfectly achieved but does give something to aim for. Achievement of the goal requires the following:

- (1) Early identification of potential conflicts;
- (2) Early available means to resolve the identified conflicts by
 - (a) mutual agreement of parties asserting adverse interests or
 - (b) imposed resolution through an authoritative agency such as a court or arbitration panel;
- (3) A mechanism that requires early use of the available means to resolve the identified conflicts such as a statute of limitations or the equitable doctrine of laches;
- (4) An authoritative dispute resolving mechanism, when such mechanism must be resorted to, that is fast, final and acceptable. "Acceptable" means that the parties whether perceiving themselves as "winners" or losers" accept the decision as definitive.

In American society, the most "acceptable" and it would appear the only acceptable dispute resolving mechanism is our regular system of courts. This is true partly, no doubt, because courts are final; partly because they are thorough (often involving several layers of review), and partly because of a long tradition of deference to judicial decisions. However, the thoroughness that fosters acceptability is earned in part by a deliberateness which sacrifices speed. Speed, of course, is essential to our goal of an ideal dispute resolving mechanisms. "Deliberateness" has two main components which slow down the process. First, the American judicial process requires the party's initiative in moving the process along. Since generally one party or the other perceives it to be in his interest to keep things as they are, i.e. to do nothing, that party will take whatever steps are available within the dispute resolving process to slow the process down. Since

*Of course, a possible dispute is the desirability of a particular project (or of any project) in which case those who think a proposed project undesirable at a particular place or any place will consider delay itself partial victory. See Vermont Yankee Nuclear Power v. Natural Resources Defense Council, Inc., 435 U.S. 519 (1978). By 1978 eleven years of "delay-victory" had been won by the opponents of the proposed nuclear plant.

the process is itself elaborate, it can often be "used" successfully to slow down or postpone the decisional process. Second, deliberateness allows the decision maker to take as much time as necessary in deciding that case (unless it is a jury case). When a court takes a case "under advisement," especially an administrative appeal, it may take two weeks or two years to render a decision.* It is accountable only to itself. The total time it takes a case to wind through the courts (after the administrative proceedings) generally runs to several years. In the Vermont Yankee Case cited above the delay was eleven years when the Supreme Court decided it but the case was still far from over.

This section will describe how the present system implements the four factors of efficient dispute resolution in the general context of energy facility siting and, where appropriate, will suggest ways these existing mechanisms could be better used, and will examine the "joint review process" as a mechanism for efficient conflict resolution.

*See ORBES report on "Legal and Institutional Aspects", pages 152-153. See for example National Resources Defense Council v. Nuclear Regulatory Commission 666 F2d 595 (D.C. Cir. 1981) case argued April 8, 1981 decided October 1, 1981. The case was filed in the Court of Appeals on March 24, 1980. That is a typical case. The United States Court of Appeals for the Fifth Circuit (and the new Eleventh Circuit formed from the old Fifth Circuit) no longer publishes both the date of oral argument and the decision date. Thus, even the small measure of accountability public visibility alone could bring to decisional delay no longer obtains in two circuits.

A. Existing Means of Conflict Resolution

1. National Environmental Policy Act (NEPA)

The National Environmental Policy Act of 1969 requires that all federal agency action "significantly affecting the quality of the human environment" be preceded by an environmental impact statement (EIS).*

*42 U.S.C. Section 4332 (1970). Of course, this statement ignores the many potential issues involved in determining (1) the duty to file an EIS, (2) the scope of the EIS and (3) the substantive impact of an EIS, i.e. will a reviewing court say that full disclosure is not enough but the federal agency must be shown to have weighed the environmental concerns in its decisionmaking process. Much litigation has resulted from such issues. The duty issue turns on the meaning of "significantly affecting" (40 C.F.R. Section 1508.27) and whether use of the word "major" to modify "Federal action" (id. (c)) means that action must be both "major" and have "significant" environmental impact. The Council on Environmental Quality's (CEQ) own rule says "major" adds nothing to "significant," 40 C.F.R. Section 1508.18, but the United States Circuit Courts of Appeals are divided see, for example, NAACP v. Medical Center, Inc. 584 F. 2d 619 (3rd Cir. 1978) (holding "dual standard" necessary) and Minnesota Public Interest Research Group v. Butz, 448 F. 2d 1314 (8th Cir. 1974) (holding that "major" adds nothing). The scope issue is complex and CEQ's definition of "scope" underlines its complexity while adding little to clarify. (40 C.F.R. Section 1508.25). See Winnebago Tribe of Nebraska v. Ray, 621 F. 2d 269 (8th Cir 1980) which held that a Corps of Engineers' environmental assessment need not include entire 67 mile transmission line project but only the 1.25 miles of actual river crossing. The substantive content of NEPA is an issue much debated. (See ORBES report at pp. 14-15). The Supreme Court seems to have closed the door to a broad substantive mandate in Strycker's Bay Neighborhood Council Inc. v. Karlin, 444 U.S. 223 (1980) but left the door slightly ajar to a narrow substantive content. (Id. footnote 2 and Klepp v. Sierra Club, 427 U.S. 390, 410 n. 21 (1976): "The only role for a court is to insure that the agency has taken a 'hard look' at environmental consequences, it cannot interject itself within the area of discretion ..."

Since more major energy facility siting involves building water intake and discharge structures and barge facilities, the Corps of Engineers must issue permits under 33 U.S.C. Section 403 (Section 10, River and Harbor Act of 1899) and 33 U.S.C. Section 1344 of the Clean Water Act. Ordinarily the Corps will be required to prepare an EIS. But EPA is ordinarily not required to file an EIS under either the Clean Air Act* or the Clean Water Act** even where federal environmental act implementation has not been turned over to the state. Therefore, unless it is a hydroelectric facility (FERC), a nuclear facility (NRC) or a rural cooperative facility (REA)*** no other federal agency except the Corps of Engineers needs to file an EIS for the siting of a major energy facility. Moreover, the environmental assessment prepared by the Corps would not need to include more than the river impact. (See Winnebago Tribe of Nebraska v. Ray, 621 F. 2d 269 (8th Cir 1980) and Zabel v. Tabb, 430 F. 2d 199 (5th Cir 1970) cert denied 401 U.S. 910 (1971)). Zabel holds that the entire river impact, ecological as well as navigational, may be included in the Corps' EIS. Although CEQ's regulations provide for the reporting of "indirect effects and their significance" (42 C.F.S. Section 1502.16 (b)), "indirect effects" means foreseeable effects caused by the federal action but later in time or farther removed in distance than the "direct effects" which "occur at the same time and place." (40 C.F.R. Section 1508.8 Effects. See also 40 C.F.R. Section 1508.25.) The key to understanding why "indirect effects" probably does not include the total environmental impact of the proposed energy facility is the word "caused." The Corps of Engineer's action in permitting a water intake and discharge structure must be the cause directly or indirectly of the environmental effects it reports on in the EIS. It can be argued that an indirect effect of permitting the water structure allows the whole facility to be built; in other words, but for the permit, no facility would exist. Every effect of the proposed facility is an indirect effect of the federal permit action,

*15 U.S.C. Section 793 (c) (1) (Energy Supply and Environmental Coordination Act of 1974, Section 7 (c) (1)).

**33 U.S.C. Section 1371 (c) (1) (FWPCAA of 1972, Section 511 (c) (1)) except for EPA grants for the construction of treatment works and issuance of permits for new sources.

***FERC is the Federal Energy Regulatory Commission formerly the Federal Power Commission (FPC), NRC is the Nuclear Regulatory Commission formerly the Atomic Energy Commission (AEC) and REA is the Rural Electrification Administration.

yet such a notion of causation is usually rejected in the law. Indeed it was just such a notion of cause that was rejected in Winnebago Tribe of Nebraska v. Rey, supra at 273:

"If, however, appellant's position were correct, then an EIS for a properly segmented portion of a highway would have to consider impacts of subsequent segments as well. ... Completion of a non-federal aspects of this single project does not constitute a secondary or indirect effect of the federal action."

Winnebago is not a Supreme Court decision and thus not the last word. Assuming Winnebago would be followed still leaves open two questions: even if the Corps of Engineers has no duty to include total facility impacts in its EIS does it have the authority* to include such impacts if it so chooses, and if it has such authority to file an expansive EIS, will it choose to do so?

The EIS process, whatever the scope of the EIS in a particular case, could be used for conflict resolution in a limited way. It could provide for early identification of potential conflicts by full use of the CEQ prescribed "scoping meeting." (40 C.F.R. Section 1501.7). Moreover, the scoping meeting could be used to give early notice to the various potentially interested states and possibly to have other states than the site state participate in making the EIS.

Section 1501.7 Scoping says, "There shall be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action ... as soon as practicable after its decision to prepare an environmental impact statement and before the scoping process the lead agency shall publish a notice of intent in the Federal Register ...

(a) As part of the scoping process the lead agency shall:

- (1) Invite the participation of affected Federal, State and local agencies ... and other interested persons (including those who might not be in accord with the action on environmental grounds) ...

This language leaves no doubt that the lead agency has the right to notify other affected states and perhaps has a duty to so notify.

*The reason this authority is necessary, of course, is that the private developer (e.g. an electric utility) will have to bare most of the cost of the EIS and since the cost can be sizeable, the developer will resist an expansive EIS if the federal agency has no authority to require it.

Whether other states (non-permitting states/non-site states) identified by the preliminary environmental assessment (40 C.F.C. Section 1501.3 and 1508.9) as being affected can be made cooperating agents is problematic. 40 C.F.C. Section 1501.6 Cooperating agencies seems to refer to federal agencies. The one reference to "agency" without the adjective "federal" ("An agency may request the lead agency to designate it a cooperating agency.") seems in context to imply "federal agency." However, Section 1508.5 which defines "cooperating agency" states in part that "(a) State or local agency of similar qualification (i.e. "has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal") ... may by agreement with the lead agency become a cooperating agency." (Emphasis added.) Perhaps an affected non-state's environmental protection agency would count as a "State agency with special expertise with respect etc." For example, Pennsylvania claims it will be affected by a proposed plant near Steubenville, Ohio, and asks that its EPA or Clean Air Agency be made a cooperating agency for filing the EIS. If this can be done it would certainly allow an early out-of-state input into the siting process.

The shortcomings of the use of NEPA as a conflict resolver is that the mandated EIS has little or not substantive control. The EIS is not a prescription of future action, public or private, and it is not a resolution of conflicting interests. An EIS is only the full disclosure of environmental and other impacts of a proposed action; it mandates no action about them.* However, such full disclosure should provide early identification of potential interstate conflicts especially if "other affected states" participate in the disclosure itself. Early identification of conflicts is one important factor in the goal of efficient conflict resolution.

2. State Courts

The use of state courts to resolve interstate disputes** was discussed in previous sections. Generally state courts are unavailable to settle disputes between states but interested private parties in other states are sometimes allowed to intervene in state review of administrative action. But this process is both time consuming and generally futile. It is time consuming because the very nature of judicial review is time consuming. If initial review occur in a state

*See discussion above in first footnote in this section and in the ORBES study, pp. 13-15.

**The term "interstate disputes" can mean either disputes between states, between a state and the citizen's of other states, or between citizen's of different states. Unless I otherwise indicate I mean all three kinds by the term "interstate dispute."

trial court, two levels of review above the trial courts occurs in many states (Pennsylvania, Ohio, Illinois, Kentucky, Indiana). Moreover, state court procedure is very involved for rules about which court--trial, intermediate appellate, supreme appellate--is the origin of administrative appeals; rules about means other than judicial review for invoking the judicial process--injunction, mandamus, certiorari, prohibition, common law nuisance suit or statutorily authorized citizens suits*; rules about appeals to higher courts (when, where, scope of review); and the rules of procedure of what court one finally finds oneself in. All of the above areas of formal rules applicable to state judicial dispute settlement are themselves the sources of disputes which have to be settled in the process of settling the substantive dispute.** Much time is spent on this "formal dispute" settlement itself. The whole process is very time consuming; an excellent vehicle for those disputants to whom delaying is winning.***

In states where there is no one stop permit process for facility siting, there may be several simultaneous administrative permit processes and several avenues for judicial review. Only Ohio of the six main stem states has a one stop siting process. Judicial review of that process in Ohio is streamlined, forcing one definitive review in the Ohio Supreme Court.**** The Ohio process is a vast improvement in efficiency but even in Ohio this process would be of limited use in multistate dispute settlement because of the lack of standing of out-of-state would-be intervenors (including the states themselves), lack of substantive permit standards that include taking account of out-of-state impacts, and lack of any other standards by which a state court could settle an interstate dispute.

(3) Federal Courts

Like most Ohio Valley state courts, the federal courts are three tiered: United States District Courts, from which one has an automatic right of appeal to the United States Circuit Courts of Appeals from which one has a discretionary appeal to the Supreme Court. Most federal administrative appeals begin in the middle tier, the Circuit Court of Appeals, and contain strict time limits. Section 307 of the Clean Air Act (42 U.S.C. Section 7606 allows only 60 days after final agency action to appeal to appropriate circuit). But citizens suits under Section 304 of the Clean Air Act (42 U.S.C. Section 7604) are brought in the lowest tier, the United States District Court from which there is an

*See ORBES study pp. 139-40.

**See generally ORBES study pp. 138-153.

***See the discussion of Illinois dispute over scope of review in ORBES study p. 155 and previous discussion at pp. 36-38.

****See ORBES study p. 154.

appeal as of right to the circuit court of appeals and a further appeal from the circuit court to the Supreme Court can be sought. Citizens suits can be brought by any person* against any governmental pollutor-- federal, state or local, or the Administrator of EPA for failure to perform a non-discretionary act, or against a person polluting or proposing to pollute without a PSD or non-attainment permit.**

Along with the usual problems of judicial delay, three other factors make the federal environmental laws with judicial oversight in the regular federal courts a not very satisfactory vehicle for interstate dispute settlement: (1) each federal environmental law, air, water, solid waste, etc., has its own process and no one federal process covers all impacts from a particular proposed site; (2) the most important act from an interstate disputes standpoint, the Clean Air Act, contains an inadequate substantive standard for interstate pollution; (3) the administrations process mandated by the various acts is fraught with potential for delay.

The substantive standard of the Clean Air Act is contained in Section 110 (a) (2) (E) (i): "The administrator (of EPA) shall approve such (proposed state implementation) plans, if he determines ... that-- ... (E) it contains adequate provisions (i) prohibiting any stationary source within the state from emitting any air pollutant in amounts which will (I) prevent attainment or maintenance by any other state of any such national primary or secondary ambient air quality standard, or (II) interfere with measures required to be included in the applicable implementation plan for any other state under part C to prevent significant deterioration of air quality or to protect visibility..."***

*Subject to the rules of "standing". See ORBES study p. 152.

**New England Legal Foundation v. Costle, 475 F. Supp. 425 (D. Conn. 1979) represents a failed effort by Connecticut citizens to use a citizens suit to protect themselves from New York and New Jersey pollution.

***Subpart (ii) refers to "insuring compliance with the requirements of Section 126 (42 U.S.C. Section 7426) relating to interstate pollution abatement" and has been held to refer only to Section 126 (a) which contains a requirement that an SIP contain provisions for "written notice to all nearby states that the air pollution levels of which may be affected by such (a PSD controlled or potentially NAAQS violating) source .. " Connecticut v. EPA, ___ F. 2d ___, 16 ERC (Environment Reports Cases) 1467 (2nd Cir. August 4, 1981). Section 126 (b) contains a provision that a state may petition the Administrator that Section 110 (a) (2) (E) (i) is being violated or will be violated by a "major source." Thus Section 126 contains no substantive standard but refers back to the Section 110 standard.

"Part C--Prevention of Significant Deterioration of Air Quality" states inter alia in Section 160 (purposes) (42 U.S.C. Section 7470):

"The purpose of this part are as follows: (3) to insure that economic growth will occur in a manner consistent with the preservation of existing clean air resources; (4) to assure that emissions from any source in any state will not interfere with any portion of the applicable (SIP) to (PSDAQ) for any other state; and (5) to assure that any decision to permit increased air pollution in any area to which this section applies (roughly any area that is not a "nonattainment area", i.e. any area that is not reliably established as one violating NAAQS) is made only after careful evaluation of all the consequences of such a decision ..." (Emphasis added).

This substantive standard is applied in three procedural settings: (1) procedures for EPA approval of SIP's (Section 110 (a) (2): 42 U.S.C. Section 7410 (a) (2)); (2) procedures for EPA approval of a revised SIP or a SIP variance for a specific "fuel burning stationary source" (Section 110 (a) (3); 42 U.S.C. Section 7410 (a) (3); Train v. Natural Resources Defense Fund, 421 U.S. 60 (1975)); and (3) procedure for a state complaint to EPA to make a finding about a major source in an other state (Section 126 (b), 42 U.S.C. Section 7426 (b)). At least in the first procedural context EPA has fairly broad authority to require that SIP's contain provision sufficient to address the problem of interstate air pollution. Alabama Power Co. v. Costle, 636 F.2d 323, 13 ERC 1993 (D.C. Cir. 1980). See final EPA PSD regulations in 45 Fed. Reg. 52676 (August 7, 1980). But the extent that EPA must address interstate impacts within any of the three procedural contexts is more problematic. See Connecticut v. EPA, 16 ERC 1467, 1472 (2nd Cir 1981). And the viability of the Clean Air Act substantive standard as a general vehicle for settling interstate disputes is even more problematic. EPA itself has stated it lacks adequate legal authority to deal with the acid rain problem. It called the Section 126 process "cumbersome" and that it entails "political hassles." It suggests the Act should be amended to allow EPA to take interstate regional approach to managing air quality and controlling acid rain.*

It was shown in earlier discussion above that the original jurisdiction of the United States Supreme Court is not an efficient dispute settling device.

*11 Environmental Reporter 482 (1980). See also Findley & Farber, Environmental Law, Cases and Materials, pp. 219-23 "Note on Interstate Air Pollution and Acid Rain" (1981) and ORBES study pp. 17-18.

B. A Joint Review Process

A process that can be worked out through informal interstate agreements is the "joint review process." It would entail an agreement among the six state governors to notify one another of any proposed new energy facility and an agreement to agree in the future as to the joint handling of the permit process for a particular proposal or set of potentially competing proposals. For example state A says M electric utility wants to build plant X and state B says N utility wants to build plant Y where X and Y satisfy the same need and both are needed. Ideally, once each state knew of the other's proposal, the states would jointly decide which was the better proposal or work out some compromise.

If the ideal is not achieved (and of course it seldom is) then an agreement to agree at least means the states will be in communication with regard to specific site proposals and that communication itself ought to make each state more responsive or at least sensitive to affects in other states.

The agreement among the state executive departments specific to a proposed site could be part of an agreement between the entity (probably a private entity such as an electric utility) proposing the site and executive department of the site state. The agreement between the site proposer and the site state would not be binding contract in the usual sense, but instead would be like a protocol or agenda, stipulating how the legal mandated permitting process would be structured in that particular case. In other words, it might stipulate that a particular report disclosing facts relating to a particular environmental issue would be prepared by a given date and submitted, that a hearing would be had on a given date, that a decision would be rendered within an agreed upon period and that a further review would be combined with a report for another agency on a related issue. Thus within the existing permitting process mandated by law, an agreed on streamlining procedure would be imposed. Attached to the streamlining could be the agreement with other states to allow intervention at various agreed on stages of the permit granting process.

Even without substantive standards directing the siting state to consider out-of-state impacts in its decision, the out-of-state intervention should have some impact. However, if the state executive under the rule making authority of the various permit laws, made rules requiring careful consideration of all impacts, then the out-of-state intervention could be much more effective. The authority for making such rules could come from a comprehensive reading of the federal law authorizing the state implementation plan. For example, the Clean Air Act's Section 110 (a) (2) (E) (i) (I) & (II), especially (II) referring to prevention of significant deterioration, would allow a SIP to require the state EPA not to issue a permit for a stationary source without a detailed analysis of out-of-state effects and a finding as to what steps must be taken to minimize them and bring them within acceptable limits.

Regulations requiring analysis of out-of-state impacts coupled with allowance of out-of-state intervention in an agreed on format could lead to early identification and resolution of interstate conflicts with a minimum of time consuming litigation.

Each state's interest in streamlining regulation to minimize costly project delay should induce it agree to mutual streamlining procedures that not only speed up their own internal procedures but allow the early resolutions of time consuming delays caused by law suits brought by other states or out-of-state parties. Such law suits can almost literally take forever.

C.8 A MULTISTATE PERSPECTIVE OF THE OHIO RIVER VALLEY

I. INTRODUCTION

Within the reality of today's economic climate and environmental constraints, energy development - particularly the design and siting of major energy facilities - has taken on many of the characteristics of a zero-sum game.

In his 1980 book, The Zero-Sum Society, Economist Lester C. Thurow defines this kind of game and relates it to the energy problem:

- A zero-sum game is any game where the losses exactly equal the winnings. All sporting events (for example) are zero-sum games. For every winner there is a loser, and winners can only exist if losers exist.
- Nowhere is the nature of our fundamental dilemma more clearly illustrated than in energy

Actually, of course, the objective of a well designed and administered siting process is to optimize rather than cancel out the net benefit of a new energy source. If the costs - social, economic, and environmental - do, indeed, equal or exceed the benefits in a specific instance, a proposed facility presumably will not or cannot be built. In either

*This paper was prepared by William McGorum of Baird-Williams Associates, Columbus, Ohio, under contract to The Council of State Governments.

case, however, there likely would be those who considered themselves "winners" and those who saw themselves as "losers" with regard to specific issues. It is in that more limited respect that the zero-sum analogy helps to characterize the nature of the energy siting problem and set the stage for the discussion which follows.

One purpose of this analysis is to review broadly the basic kinds of issues or trade-offs which must be considered in making facility-siting decisions. A second purpose is to point out and emphasize the typically multistate or "regional" nature of many of these issues.

Paralleling both of these purposes are two corollary objectives, both having to do with the common dimension of "interrelationships" in facility-siting matters. One corollary objective is to emphasize functional interrelationships among the issues being considered. The other corollary objective is to emphasize geographical or multistate interrelationships.

In a purely functional sense, siting decisions involve the interrelation of social, economic, and environmental considerations and the trade-off choices which must be made in areas of conflict. Conceivably these may touch virtually any facet of human and economic activity. The sorting out and balancing of these factors - some of which are quantifiable and some of which are not - is the heart of the siting process. It typically occurs within the boundaries of a single state.

In a purely geographical sense, siting decisions involve the interrelation of social, economic, and environmental considerations between individual states and constituencies within those states. This might be thought of as adding a second or multistate dimension to the one-dimensional or single-state functional process briefly mentioned in the paragraph above.

As part of its purpose, therefore, this analysis will advance the proposition that "one-dimensional" or single-state siting cannot in most cases be adequately representative of a "two-dimensional" or multi-state social-economic-environmental system which draws upon common resources having finite capacity and limited availability.

A final purpose will be to portray broadly - using available statistics - certain of the similarities, differences, and interrelationships of the Ohio Valley states in terms which are directly or indirectly related to energy-facility siting considerations. Included will be a characterization in statistical terms of those states either individually or collectively.

II. Consideration of A Multistate Approach to Energy-Facility Siting

The discussion which follows makes no presumption as to how a multistate approach to siting might be developed, i.e., what institutional or procedural mechanism might be used and how that mechanism might relate to

participation by state, local, and federal governments or members of the public and representatives of industry. Rather, it simply examines the primary functional objectives or results which, by definition, would be expected to occur from improved communication and broadened perspective among the Ohio Valley states in developing their individual or "regional" energy resource base for the future. Four possible objectives are discussed separately below in terms of the key energy-related siting issues which characterize each one.

It should be noted that the term "region" as used throughout is intended to be only loosely rather than rigidly applied. It simply signifies the collective interests of those states which comprise the Ohio River Valley and addresses the "what if" possibility of their coordinated approach to energy-facility matters.

Objective 1: Provide for equitable, economically sound, and environmentally prudent long-term use of common water and air resources.

It would seem that the overriding objective of a multistate or regional approach to siting by the Ohio Valley states would be to assure an equitable, efficient, and environmentally prudent use of the region's two principal common resources, water and air. More specifically, there are three primary parameters or issues arising out of these shared resources which are of equal concern to each of the states individually and to the region as a whole. These parameters, in turn, are basic to the planning, design, siting, and subsequent operation of most major energy-

producing operations. Thus they form an important part of the central framework around which a workable approach to multistate coordination in energy-facility siting must be constructed. The three parameters are water quantity or availability, water quality, and air quality.

Up to a point, water quantity might be viewed as a purely technical problem for the facility design engineer, i.e., is there enough water to meet cooling and/or process requirements under all probable conditions during the expected life of the unit? Beyond that point, however, it becomes equally an environmental problem of quality rather than quantity.

Even at the planning stage, therefore, there is a dual and mutually conflicting emphasis on the need to examine and balance the quantity-quality trade-offs for regionally shared water resources. What begins as primarily a design-engineering concern with quantity - water sources, volumes, flow rates, and effects to and from competing uses - then shifts to what is principally an environmental concern with water quality expressed in thermal, chemical, physical, and biological terms.

For example, it has been estimated that power plant cooling - largely using wet cooling towers because of environmental reasons - will account for 40% of the growth in nonagricultural water consumption in the United States between now and the year 2000. This is due to the fact that water lost to evaporation in such plants is of the order of 15 million gallons per day.

for every 1,000 megawatts of additional capacity. That represents about 90% of total water consumption for cooling in electrical generation and synthetic fuels production. Cooling water, of course, is recyclable, but water evaporated into the air does not necessarily remain at its point of origin.

The discussion above merely emphasizes the point that water quantity and water quality are simply two different parameters of the same regionally-common resource. It is essential biologically as well as socioeconomically. These two parameters are frequently mutually dependent and they are also frequently mutually conflicting. It becomes apparent, therefore, that water quality, water quantity, and energy-facility planning are indissolubly linked technically, environmentally, economically, socially, and geographically.

It perhaps should briefly be mentioned also that water quantity or availability is critical not only for electrical generating plants but also for coal refining and emerging synthetic fuel technologies in general. As will be discussed later, the importance of coal as a natural resource in the Ohio River Valley strongly suggests the fundamental economic logic of viewing coal and alternative coal technologies as the foundation for future energy development in that region.

Alternative coal technologies include such processes as coal gasification, coal liquefaction, solvent refining or coal cleaning (to reduce sulfur content), and coal slurry pipelines. They all require water in substantial quantity. In addition, they affect water quality in the form of acid mine

drainage - a significant source of water pollution in mining areas - and effluent from coal cleaning and synthetic fuel operations.

To round out the picture of dependency and conflict in the regional use of scarce or diminishing water resources, it should be noted that energy uses alone in the general midwest area have been estimated to grow from less than 5% of all consumptive uses in 1975 to almost 20% by the year 2020. Meanwhile, the total water use will also be increasing by an estimated 70%. Competing uses include agricultural irrigation, manufacturing, mining, recreation, fish and wildlife, sewage, human consumption, and other miscellaneous public or private categories.

The second principal common resource is air. The parameter of concern in this case is air quality as defined by the National Ambient Air Quality Standards (NAAQS) contained in the federal Clean Air Act Amendments of 1977. These standards basically control four types of pollutant in stack emissions: particulate matter, nitrogen oxide, carbon monoxide, and sulfur dioxide.

The fact that air and whatever pollutants it may contain cannot be physically confined to a predetermined area or flow pattern, as can water, is merely a statement of the obvious. Beyond that generality, however, there is substantial opportunity for conceptual, scientific, and legal disagreement regarding such things as interpretation of the clean air standards themselves, mathematical modeling techniques, sampling and measurement

techniques, and the specific nature and degree of airborne impact to humans and ecological organisms.

In short, air quality regulations and their resulting constraints represent perhaps the single most controversial issue not only in the siting of new energy-producing facilities but also in the operation of existing emission sources. This is an area, for example, where state regulators may disagree with federal regulators, where regional federal regulators may disagree among themselves, where states and interest groups may bring suits against other states and other interest groups, and where there is disagreement even between countries on the possible effects of long-range transport of air pollutants. The random and circulating nature of air is further illustrated by the fact that radiation from an atomic explosion deep within the Asian continent, for example, can be detected and tracked across the United States several days later. Thus, air quality, as a siting consideration, extends beyond even a multistate regional boundary. In reality, it is world wide in its possible effects.

Under air quality as a generic issue, there are three principal subsidiary issues which have multistate implications for a major energy facility planned for location in the Ohio Valley region. These are as follows:

- In terms of meeting either the NAAQS or the Prevention of Significant Deterioration (PSD) standards, what effect will the proposed facility have both on nearby and on more remote areas, either of which may be in another state?

- How will this affect future needs for similar facilities in the same multistate service area?
- How will this affect alternative uses of currently available air increments in the sites being considered?

Objective 2: Provide for strengthening and developing the region's coal resources and related technology as a prime contribution to state, regional, and national energy requirements.

Coal is the third major resource, along with water and air, which gives the Ohio Valley some of its most distinguishing characteristics. It is discussed separately because of its unique importance economically, socially, technologically, and environmentally in energy planning deliberations.

It is largely the co-existence and mutually reinforcing effect of these three core resources which make the Ohio Valley a regional focal point for energy and economic development. At the same time, however, they also create a singularly complex interrelationship of federally-mandated environmental constraints. Almost paradoxically, so it would seem, each element in this potent three-sided combination of water, air, and coal constitutes an asset in some respects and a liability in others. Added to the multi-state nature of the energy-facility planning and siting problem, therefore, this "Jekyll and Hyde" aspect of the three most important natural-resource components introduces a further dimension of complexity into an already formidable Ohio Valley problem.

To illustrate this point more specifically, shown below is a very simplified comparison - in the most basic functional terms - of how each of these core resources influences the economic-energy-environmental equation.

Water

- As a basic biological resource
- As a basic social-economic resource (including hydro-electric and transportation)
- As a raw material for steam-energized systems
- As a cooling medium for steam-energized systems
- As a raw material and cooling medium for synthetic fuel production
- As a raw material in coal mining, processing, and pipeline distribution
- As an environmental constraint in all categories of use

Air

- As a basic biological resource
- As a basic social-economic resource (including transportation)
- As a raw material for combustion
- As a raw material for industrial processes (including synthetic fuel production)
- As a medium for heat and stack-emission dispersal
- As an environmental constraint in all categories of use

Coal

- As a basic social-economic resource
- As a natural fuel
- As a raw material for chemically treated fuel
- As a raw material for slurry fuel

- As a raw material for synthetic gas or liquid fuel
- As a raw material for industrial processes
- As a source of negative environmental impact - air, water and land
- As a source of health and safety risk

The six states within the Ohio Valley itself are currently supplying about 65% of the nation's coal. They are consuming about 49%. Approximately one-third of that 450-million-ton supply of coal is coming from Kentucky, another 40% from West Virginia and Pennsylvania, and the remainder from Illinois, Ohio, and Indiana. Consumption patterns, on the other hand, occur in almost the reverse order, with the two largest producers - Kentucky and West Virginia - being the smallest consumers. Although a more complete statistical portrayal will be presented later, these brief totals suggest the importance of coal to the economy of the six-state region.

It appears that the stringent sulfur dioxide emission standards in the NAAQS will be the most critically limiting air quality constraint on facility siting in the Ohio Valley for the foreseeable future. It appears, too, that the problem of sulphate formation and long range transport together with the more ambiguous phenomenon of acid rain formation will not be easily or quickly solved to everyone's satisfaction. Consequently, there apparently will continue to be ample environmental incentive to develop and apply economically viable technologies which can reduce the sulfur effects of coal, particularly the high-sulfur varieties.

Financial support for the scale of technological development needed to mitigate or solve the "sulfur problem" will have to come primarily from the large users of coal and from programs funded wholly or partially by the federal government. It appears doubtful that the states themselves can spare more than token amounts from their restricted budgets for substantial coal research, especially with federal grants for energy development now being severely reduced.

Implicitly, therefore, the fourth principal resource required for future energy-facility expansion in the Ohio Valley - in addition to water, air, and coal - is capital investment of a magnitude which only the federal government, state governments collectively, or large corporate enterprises can hope to provide. This will have to be made available in two forms. The first, as mentioned above, is research and development, which is a direct, non-amortizable expense - a charge against revenues for a private sector company. The second is investment in new plant and equipment based on the reasonable prospect or risk of adequate return over the anticipated life of the project. The economics of investment requirements vs. business risk have so far kept synthetic fuel production largely a business of government rather than a business of private industry.

Arising out of these considerations is perhaps the most important economic issue in the eyes of those who will be furnishing the large amounts of investment capital which are needed for major energy facilities in the Ohio Valley, particularly in an era of severe inflation and abnormally high interest

rates. In their view certainly, a coordinated multistate approach to facility siting which significantly increases predictability of outcome and significantly decreases the uncertainties of administrative and legal delays will encourage rather than discourage their long-term interest. Without the willingness to invest by either private or public-sector enterprise, even a multistate approach to siting with other presumed advantages would have little practical value.

In brief summary, then, it appears reasonable to believe that many, if not most, of the major energy facilities which might be located in the Ohio Valley region during the next several decades increasingly will employ new concepts of technology dictated by environmental considerations. The primary focus of these new technologies will be coal as the basic fuel raw material combined with the essential but inevitably more limited and costly resources of water, air, and capital investment. The central problem, therefore, will be to employ these basic energy variables in the most regionally effective and expeditious way, with judicious balancing of environmental and economic factors.

What kinds of coal technologies are being envisioned here? Shown below very briefly are examples of some but not necessarily all. These are arranged under the two functional energy categories of production and distribution.

Production

- Long-wall underground mining - Increasing extraction yield at lower operating cost

- Solvent refining or coal cleaning - Removing approximately 20% of sulfur from steam coal before combustion
- Synthetic fuel: Coal gasification - Chemical, physical, thermal change, permitting also distribution by gas pipeline
- Synthetic fuel: Coal liquefaction - Chemical, physical, thermal change, permitting also distribution by oil pipeline
- Fluidized bed combustion - Reducing stack pollutants, especially sulfur dioxide, through improved combustion process
- Pressurized fluidized bed combustion - Further reducing stack pollutants, especially sulfur dioxide, plus improving steam cycle efficiency through improved combustion process
- Electrostatic precipitation - Current technology for removing particulates from stack emissions, producing fly ash
- Wet scrubbers - Current technology for removing sulfur from stack emissions, producing sludge
- Evaporative cooling: Cooling towers and cooling ponds - Closed cycle alternatives to once-through water cooling for steam-electric and steam-processing plants
- Dry cooling - Limited alternative to wet cooling systems for steam-electric and steam-processing plants where applicable

Note: Omitted from the list above are co-generation (using excess steam capacity to generate electricity) and non-coal electric generating alternatives such as nuclear, hydro, wind, and solar. Likewise omitted, only because they are not related to coal technology, are synthetic alcohol and gasohol plants and petroleum refineries.

Distribution

- Coal slurry - Mechanically mixing powdered coal with water for distribution by pipeline

- Ultra high voltage electrical transmission - Increasing the current-carrying capacity of electric transmission lines by raising operating voltage design limits from the present upper limit of 750,000 volts to perhaps 1,000,000.

Note: Omitted from the list above are possible incremental improvements in conventional energy distribution systems such as railroads, highways, pipelines, barges, and ships together with possible expanded use of existing electric transmission line corridors.

As a final observation in connection with the above, it should be noted that the scenario of significant siting issues and their respective priorities typically will depend not only on the type of energy facility under consideration but, equally as well, on its predominating technological characteristics. This suggests the need for a planning and siting process which combines broad perspective with depth and versatility in all of its principal dimensions.

Objective 3: Help strengthen the ability of the states in the Ohio Valley to cooperate on mutually advantageous economic/energy-development programs and, at the same time, enhance their effectiveness in managing the area's natural resource base.

This possible objective of multistate energy-facility siting would reflect primarily the perspective of the states themselves. It focuses on the question: How might the responsibilities and interests of the Ohio Valley

states - in terms of energy development, social-economic improvement, and environmental oversight - be served by a more actively coordinated approach to energy-facility siting?

Among the types of regionally interconnected, energy-related issues which might be included within this objective are the following:

- Coordinated review of alternate sites located in more than one state for a proposed major energy facility
- Multistate sharing of output from a projected major new facility
- Multistate sharing or mitigation of primary impacts resulting from a major new facility
- Multistate evaluation and sharing of secondary impacts resulting from a major new facility - especially, for example, the siting of pipelines and electric transmission lines which cross state boundaries
- Multistate coordination in providing new or improved access corridors to energy facilities in remote areas
- Multistate coordination in land use planning as related to major new energy facilities
- Multistate coordination in solid waste disposal - particularly of hazardous materials - as related to major new energy facilities

- Multistate coordination point for dealing with federal administrative agencies on matters related to energy-facility siting

With respect to the issues outlined above, there are several points which deserve emphasis or clarification. These are discussed below.

Occasionally, electric or gas utility service areas and fuel distribution markets lie entirely within single-state boundaries. Frequently, however, they do not, especially for the larger utility systems and energy producers. But even utilities whose corporate activities may be confined to a single state are nevertheless physically linked to an electric grid or a pipeline network which is regional or national in its extent.

It is typically obvious, too, that energy production units such as electric generating plants, particularly those located on rivers which form state boundaries, either do serve or have the capability of serving load centers in an adjoining state. It is also typical operating practice for a utility in one state to sell power temporarily to a utility in another state to help balance peak loads or during emergencies. This is done routinely through the regional grid merely by flicking a switch. A fundamental characteristic, therefore, of energy production as well as energy distribution is its inherently regional or multistate nature.

Thus, in selecting sites for major energy facilities - keeping in mind the need to balance load center or market considerations with resource center considerations - the ability to reduce the effect of state boundaries as a planning constraint would appear to advance the interests of industry, government, and the public alike.

Particularly during the construction phase of such facilities, the localized socioeconomic effects - both positive and negative - provide equally a stimulus and a challenge to local governmental entities. For the moment, it is assumed that local governments involved are neutral on this subject until the facts are fully developed. Balanced against the economic benefits of increased tax revenues and personal consumption expenditures are the offsetting requirements for housing, municipal services, and commercial services for engineering and construction personnel and possibly their families. In addition, there are the economic and environmental effects of the construction activity at the site itself. Some of these are positive - employment and consumption of materials and services, for example - and some are negative, such as noise, dust, traffic, and possible ecological dislocations. For new facilities near state boundaries particularly, the opportunity for early coordination and planning by the states and their local governments would appear to be fully consistent with their interests and responsibilities both economically and environmentally.

Generally speaking, land is not a common resource between states in the sense that water and air are. Excluding what might be called legally exotic situations or simple boundary disputes, there are two principal

exceptions to this generality:

- Land in one state which is used partly for the benefit of another state. A hazardous waste or nuclear waste disposal facility might be an example of this. Satisfactory disposal of hazardous wastes is a generic siting issue for major energy-producing facilities generally, especially synthetic fuel plants
- Unique similarity of land use or land area on both sides of a state boundary, possibly with similar protective statutes or unwritten policies in both states. This might include, for example, wetlands bordering a river or a lake or a wildlife habitat in the same or a different area

Land use planning is becoming increasingly more necessary, especially in areas where there is growing conflict between urban, rural, commercial, industrial, and recreational uses. In this regard, and excluding air and water considerations, there appear to be several types of energy-facility siting issues which might require resolution between two or more states or local entities within those states:

- Disruption of wildlife habitat, migratory patterns, or wetlands ecology, or the encroachment on a floodplain
- Disruption or deterioration of scenic views or scenic areas
- Disruption of public or private hiking, camping, hunting or other recreational areas
- Incompatibility with land use patterns in nearby areas. For example: Generation of heavy traffic, trailer parks, and undesirable commercial activities in the vicinity of state parks, historic sites, rural and suburban areas, and small communities

Of particular importance in considering the possible effects of a multi-state approach to energy-facility siting is the issue of coordination vertically between a multiplicity of state-level agencies and a similar multiplicity of their counterparts at the federal level. The advantage of creating a means of communication for Ohio Valley energy-facility planning and related environmental matters is equally persuasive from either a state or a federal perspective.

Although implied, it perhaps also should be mentioned that the federal government plays a key role in facility siting by virtue of its Congressionally mandated environmental responsibilities (air and water quality, for example) as well as its authority in such other energy-related areas as hydro-electric power, wholesale distribution of electricity, rural electrification, nuclear power, synthetic fuel development, and administration of rivers and harbors. The principal federal agencies which could have an interest in siting matters are listed further on in this section.

The issue of federal-state coordination specifically on behalf of the Ohio Valley is complicated by these factors:

- The Valley - depending on whether it is geographically or hydrologically defined - contains large portions of six or more states whose principal commonality is the river valley itself. At the same time, it perhaps should be noted that the single issue of water quality alone has provided the incentive for an eight-state water improvement venture which has been in operation successfully for over thirty years.
- No individual federal agency has jurisdiction over the full range of social-economic-environmental elements intrinsic to the Valley's energy development needs. In this regard, too, it is instructive to note that the national government's current "new federalism" policies are emphasizing greater reliance on state and local as opposed to federal initiative in dealing with national energy and environmental objectives.

· In none of the federal agencies having a major functional responsibility related to the Valley's range of social, economic, environmental, and energy needs is there a regional subdivision which contains all the Valley states within it. In other words, in every relevant federal agency, Valley-wide jurisdiction is shared by two or more regional organizations, each with its own individual administrative style and set of priorities. This functional and regional diversity is illustrated below. The number beside each entity indicates the number of its regions which contain the six states physically located within the Ohio Valley.

Environmental Protection Agency (3)

Department of Energy, including (3)

Energy Regulatory Administration

Federal Energy Regulatory Commission

Energy Research

Nuclear Regulatory Commission (3)

Department of Defense, including

Army Corps of Engineers (3)

Department of Agriculture, including (3)

Rural Electrification Administration

Natural Resources and Environment

Department of Commerce, including (3)

Economic Development Administration

Bureau of the Census

Department of the Interior, including (3)

Geological Survey

Fish and Wildlife and Parks

Bureau of Mines

Bureau of Land Management

Department of Transportation (3)

Department of Health and Human Services (3)

Department of Labor, including (3)

Mine Safety and Health Administration

Interstate Commerce Commission (Wash. D. C.)

U. S. Courts of Appeals (5)

Federal Reserve Bank System (4)

Objective 4: Provide a means for improved communication on major energy-related facility siting matters - where local governmental entities, members of the public, and representatives of industry can appropriately participate with state and federal agencies.

The issues in this "what if" objective are basically concerned with expanding communication into the public domain, beyond exclusive state-federal interaction, and thereby reducing significantly the need for and prospect of legal action in the court system to adjudicate otherwise unresolvable conflicts. Underlying such a conjectural objective is the assumption that a deliberately fostered climate of good faith and objectivity in these matters, as contrasted to a climate of adversarial hostility, will encourage a requisite degree of flexibility among all participants. In other words, the frequently zero-sum nature of facility siting would be greatly diminished under a multistate approach which gave high priority to just such an objective.

More specifically, the issues to be considered can be summarized as follows:

- Two-way communication with individual or group members of the public at an early stage of energy-facility planning
- Local government contribution to early planning for energy facilities which may involve their communities
- Direct communication by industry representatives with the public and governmental groups at an early stage of energy-facility planning
- Significant reduction, or virtual elimination, of potential

conflicts which typically lead to administrative delays and formal legal challenges, especially during the substantively critical stages of the facility planning or siting process.

The first three issues are essentially self-explanatory, requiring no further discussion for the purposes of this analysis. They are primarily issues of process rather than issues of possible social-economic conflict.

The fourth issue, however, would benefit by a brief review of the current litigation climate for energy facilities in the Ohio Valley. The brief discussion which follows below is intended to help answer the question: To what extent is a formal litigation process - administrative or judicial - now being used to resolve disputes arising from energy facilities which are either operating or in some stage of planning and construction? As a general rule, what time period is required for such a process?

During the past five years or so, air quality has been the principal focus of formal action for preserving or improving the natural environment in and beyond the Ohio Valley. This has primarily taken the form of petitions to the federal EPA by individual states based on the enforcement provisions of the Clean Air Act.

The sample of litigation activity which has been reviewed here can be briefly summarized as follows:

- Air Quality: Petitions to EPA for abatement of existing single-plant source in adjoining state. Three petitions. One decision (elapsed time 3/4 year). Two cases pending (elapsed time 3 years and 2 years respectively).
- Air Quality: Petitions to EPA for abatement of existing multi-plant sources in adjoining and non-adjoining states. Two petitions. Both cases pending (elapsed time 2 years and 1 year respectively).
- Air Quality: Petition to EPA to deny new-source permit for single plant in adjoining state. One petition. Decision rendered (elapsed time approximately 1 year).
- Air Quality: Action in U. S. District Court (jointly by industrial firm and county government) to allow industrial rather than electric utility use of reserved air increment. Third appeal pending, following two earlier appeals (elapsed time 2 years).

As applied to the siting of a prospective energy facility, the litigation activity briefly summarized above suggests two conclusions. First, it confirms the sensitive and controversial nature of air quality as a critical constraint for virtually any Ohio Valley site. Second, it indicates that time delays of one to three or more years can be the expected result of resolving inter-state disputes through the statutory mechanism of the Clean Air Act. Additional time, of course, would be required to challenge

in the federal courts a determination made pursuant to that statute.

One other point perhaps should be noted with respect to delay in resolving environmental issues. For an operating facility - a presently emitting source - delay postpones both the possibility of environmental improvement and the possible need for major capital investment. For a prospective facility, on the other hand, delay postpones both productive output and its accompanying environmental impact while it escalates both the capital cost of the facility and the administrative expense of the licensing or permitting process.

In addition to the formal petitions summarized above, there has also been activity revolving around health and safety concerns in connection with the two nuclear power plants being constructed in the Ohio Valley - Marble Hill in Indiana and Zimmer in Ohio. This activity, too, has been confined to the administrative rather than the judicial system, with the Nuclear Regulatory Commission (NRC) being the licensing agency in these cases. Licensing delays in these two instances have occurred primarily as a result of the NRC's rigorous regulatory process. The issues which have been dealt with are fairly typical for nuclear power plants in general, including those which began receiving greater regulatory emphasis following the Three Mile Island episode.

III. Statistical Overview of the Six-State Ohio Valley Region

Partly for convenience and partly for reasons of simple definition, this analysis is being centered on the six states which actually form the shores

of the Ohio River, namely, Kentucky, Indiana, Illinois, Ohio, Pennsylvania, and West Virginia. The concept of a multistate approach to energy-facility siting in this general area of the United States, however, is not limited merely to these states alone.

Also for convenience - but equally in the interest of reality - much of the statistical information which has been assembled reflects the entire area of each of the six states rather than only that part which lies geographically within the Ohio "Valley" or hydrologically within the somewhat larger Ohio "Basin." The Ohio River Basin, for example, encompasses some 440, or 80%, of the 524 counties in the six-state region. In certain ways, the economic and social characteristics of the Basin area - and the Valley area - are different from those in the other 20% of the total region.

It is recognized, for example, that the tidewater-oriented, eastern part of Pennsylvania is different in a number of significant ways from the more interior-oriented, western part. Likewise, the lake-oriented, more urbanized, northern tier of Illinois, Indiana, and Ohio differs in equally significant ways from the more rural and river-oriented southern sector.

The purpose of this analysis, however, is not just to describe and examine issues exclusive to the Ohio River Valley itself as a specific sub-region cutting across the boundaries of a larger state-defined region. An even more fundamental purpose is to examine the idea of governmental coordination between entire states - as indivisible sovereign entities -

on behalf of common problems and opportunities in the Ohio Valley portion of those states. For that reason, the view taken here should be broader rather than narrower.

The total population of the six-state region is 44.5 million or 20% of the United States total. The Ohio Valley itself - representing somewhat less than 80% of the counties of the six-state region - contains about half of its population. In physical area, the six Ohio Valley states represent about 7% of the United States total and have an average population density of 183 people per square mile as compared to the U. S. average of 61.

Kentucky's 664-mile frontage along the Ohio River is the longest of any of the six Valley states. Ohio is next with 452 miles, followed, in turn, by Indiana with 350, West Virginia with 277, Illinois with 133, and Pennsylvania with 40.

The six states have 19% of the nation's manufacturing establishments. They provide 28% of the nation's dollar payroll and account for 27% of its total value added by manufacture. Illinois, Pennsylvania, and Ohio account for 80% of the region's manufacturing establishments, payroll, and total value added.

In regard to agriculture, the Ohio Valley states have 20% of the nation's farms but only 9% of the national farm acreage. The latter reflects the relatively small size of the average farm in the region - 186 acres as compared to the national average of 416. Nevertheless, it produces 18% of

the nation's crop value. On average, the largest farms in the region are in Illinois and the smallest are in Kentucky.

The Ohio Valley itself contains about one-third of the farm acreage in the six-state region. It is estimated that that farm acreage represents less than 50% of the total Ohio Valley area. About 70% of that acreage is cropland and the other 30% is pasture. Approximately 40% of the Valley is forested.

The importance of coal as a regional raw material resource was indicated earlier. With current production in the vicinity of 450 million tons per year, the six-state region supplies approximately 65% of the nation's bituminous coal requirement. Each of the six states produces significant tonnages, with Kentucky the largest and Indiana the smallest. Kentucky and West Virginia together account for over 50% of the region's coal production.

The region as a whole consumes about two-thirds as much coal as it produces. Ohio and Pennsylvania are the largest users, accounting for about 50% of the region's coal consumption. Indiana and Illinois use another 30%. Kentucky and West Virginia use 20%. In total, the region uses 49% of United States coal consumption as compared with its 65% share of national production. In addition, it should be noted that the Ohio River Basin contains an estimated 60% or more of the nation's bituminous coal reserves, which excludes lignite.

Approximately 75% of the region's coal consumption is used by electric utilities. This compares with an 81% average utility use for all U. S. coal production. The difference between these two useage figures could be explained as the combined result of the Ohio Valley region's need for industrial coal and steelmaking coke together with the possible effect of sulfur content.

Comparing the six states individually, the percentage of coal production from those states used by utilities is as follows: Kentucky 90%, Illinois 87%, West Virginia 84%, Ohio 75%, Indiana 67%, and Pennsylvania 64%. It should again be noted that particularly in Ohio, Pennsylvania, and Indiana, substantial amounts of coal - in the range of 20 - 30% of production - are used to make coke for steel and for industrial fuel.

For the United States as a whole, 57% of the coal produced is transported by rail, 16% by river, and 14% by truck. Although comparable figures are not specifically known for the six-state Ohio Valley region, it can reasonably be assumed that the percentages are generally equivalent.

On the Ohio River itself, coal and coke account for better than 50% of the total freight tonnage. They represent close to 60% of the tonnage on the Ohio and its major tributaries combined.

In electricity, as in coal, the six-state region is a net exporter. Measured in billions of kilowatt hours, the region generates about 24% of the

nation's electricity and consumes about 22%. In slightly different terms, the region consumes 81% of the electricity it generates, giving it a generation-to-consumption ratio of 1.23.

The generation-to-consumption ratio for the individual states is as follows: Ohio 0.97, Kentucky 1.05, Illinois 1.07, Indiana 1.30, Pennsylvania 1.30, and West Virginia 3.34. From these ratios it can be concluded that Ohio, Kentucky, and Illinois are reasonably well balanced in terms of actual generation vs. actual consumption while Indiana and Pennsylvania are substantial exporters of electrical energy. West Virginia stands out as an export location for regional electrical producers.

It has been estimated that roughly 60% of the electrical generation in the six-state region originates within the Ohio Valley itself. About half of that is located along the Ohio River main stem and the other half is located on its tributaries. An estimated 2-3% of the Ohio Valley generating capacity is hydro-electric. The remainder uses fossil fuel, primarily coal.

The six-state region contains approximately 84,000 circuit miles of electrical transmission lines rated at 22,000 volts and above. This represents about 19% of the United States total. About 85% of the region's electric transmission circuit miles are fairly evenly divided among the states of Ohio, Pennsylvania, Illinois, and Indiana. The remaining 15% is evenly divided between West Virginia and Kentucky. In slightly different

terms, West Virginia and Kentucky have about one-half to one-third as much electric transmission line mileage as the other four states in the region.

The six-state region as a whole produces about 2% of the nation's crude oil, approximately 50 million barrels per year, with over 40% of that production coming from Illinois. The region consumes five times more than it produces, however, accounting for about 20% of the nation's total consumption. It has 16% of the nation's oil-pipeline mileage.

The region's natural gas profile is similar to that of its oil. It produces 2% of the United States total, approximately 400 million cubic feet, with West Virginia supplying about 40% of that amount. The region consumes roughly nine times more than it produces, representing about 18% of the country's total consumption. It has 22% of the nation's mileage of natural gas pipelines. In addition, the region accounts for approximately 17% of the nation's consumption of LP gas and 19% of its consumption of gasoline.

Earlier it was mentioned that the Ohio River Basin contains an estimated 60% of the country's total reserves of bituminous coal. By comparison, the six-state region also contains an estimated 2% of the nation's crude oil reserves and 27% of its natural gas reserves. Oil reserves are located predominantly in Illinois, Ohio, and Pennsylvania. Natural gas reserves are located predominantly in West Virginia, Pennsylvania, and Ohio.

Related to these totals are the region's 36,000 miles of oil pipelines (16% of the U. S. total) and 224,000 miles of natural gas pipelines (22% of the U. S. total).

In summary form below is a basic economic and energy resource profile for the six-state Ohio Valley region. The figures shown are regional totals expressed as percentages of national totals.

- Population 20%

- Labor force 20%

- Area 7%

- Manufacturing

 - Number of establishments 19%

 - Payroll 28%

 - Value added 27%

- Agriculture

 - Number of farms 20%

 - Number of farm acres 9%

 - Crop value 18%

- Coal

 - Production 65%

 - Consumption 49%

 - Reserves 50% (bituminous, excluding lignite)

- Electricity
 - Generation 24%
 - Consumption 22%
 - Transmission 19%
- Oil
 - Production 2%
 - Consumption 20%
 - Reserves 2%
 - Pipeline mileage 16%
- Natural gas
 - Production 2%
 - Consumption 18%
 - Reserves 2%
 - Pipeline mileage 22%
- LP gas consumption 17%
- Gasoline consumption 19%

In broad but significant terms, the profile above leads to the following final observations:

- The importance of high-value-added manufacturing to the economy of the region

- The important contribution of agriculture as a regional economic resource
- The importance of electricity as a basic regional energy resource
- The dominant importance of coal as a basic fuel and raw material resource
- The unique significance of the Ohio Valley as a multistate focal point for energy and environmental coordination

Appendix D

EXISTING STATE, FEDERAL AND REGIONAL INSTITUTIONAL ARRANGEMENTS

- D.1 State Air, Water and Solid/Hazardous Waste Permits
- D.2 Federal Agencies and Statutes Involved in the Energy Siting Process
- D.3 Electric Power Plant Siting Process
- D.4 Regional Organizations and Roles in the Energy Facility Siting Process
- D.5 State Permit Coordination and Streamlining Processes

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE PERMITS

D.1 - ILLINOIS

April, 1982

AIR

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/ HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIMARY
Environmental Protection Agency/Division of Air Pollution Control	Environmental Protection Act (1/2/79) Title I and III		Environmental Protection Act - Title I section (2) & (3) - "It is necessary to establish a unified state-wide program ... cooperate fully with other states & with U.S. for protecting the environment."	Environmental Protection Act Title I Section 5 - Pollution Control Board. All board meetings open to public ... public notice of all meetings.		
Air Pollution Control Regulations (1978)		Construction installation modification operation PSD		Intergovernmental agreements to exchange information concerning air impacts, etc.		NSPS PSD primary NESHAPS (partial)

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE PERMITS

The Council of State Governments

D.1- ILLINOIS

April, 1982

WATER

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/ HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE OF STATE PRIVACY
Environmental Protection Agency	Environmental Protection Act (1/8/79) Title I and III		Environmental Protection Title I Section (2) (3) "It is necessary to establish a unified state-wide program... cooperate fully with other states & with U.S. for protection the environment."			
	Illinois water pollution regulations	Pretreatment construction modification operation NPDES permit		Water pollution regulations, Section 906 Public notice of general area affected (local) notification of persons on mailing list on NPDES permits. Public hearings may be requested.		NPDES state privacy
Division of Public Water Supply		Water supply permit				
Department of Transportation		Flood plain permit				

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE PERMITS

0.1- ILLINOIS

SOLID WASTE/HAZARDOUS WASTE

The Council of State Governments

April, 1982

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/ HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIVACY
Illinois Environmental Agency/Div. of Land Pollution Control	Illinois Environmental Protection Act (1/8/79) Title V		Illinois Environmental Protection Act Title I (2) (3)			
	Solid Waste Regulations (3/15/79)	Experimental, development, operating, special waste hauling		Solid waste regulations. No mention of notice. ... may petition for hearing if affected. Mandatory public hearing of development of hazardous waste sites.		Cooperative arrangement (agreement between the state & federal government to carry out parts of hazardous waste management. States cannot write permits or initiate enforcement).

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE PERMITS

The Council of State Governments

April, 1982

D.1 - INDIANA

AIR

REFERENCE
TO STATE
INTERACTION
TO RESOLVE
CONFLICT

PUBLIC
NOTICE/
HEARINGS

REFERENCE TO
REGIONAL
COOPERATION

REQUIRED
PERMITS

LAW/ACT

AGENCY

STATUS
OF STATE
PRIMACY

Indiana Air Pollution
Law 13-1-1-4 (b) (1)
"duty and power to
assist and cooperate with
other agencies of the
states, towns ...
industries other states
and federal government
and with affected
groups."

Construction
installation
modification
operation
PSD

Indiana Air
Pollution
Regulations
(10/15/80)

Board of
Health/Air
Pollution
Control
Division

PSD primacy

Indiana Environmental
Management Act
Chapter 13-7-5-1(f)
"represent the state
in all procedures
or negotiations for
interstate compacts."

Indiana
Environmental
Management
Act (1981)

intergovernmental
agreements to ex-
change information
concerning air im-
pacts, etc.

Indiana air regu-
lations Article 2
rule (1) (f) (2),
notify public of
construction in
newspaper ...
general circula-
tion in county
where facility
is proposed
county health
dept & EPA notified.
30 day review period.
Public hearing if
requested.

STATE AIR, WATER SOLID/HAZARDOUS WASTE PERMITS

The Council of State Governments

April, 1982

D.1 - INDIANA

WATER

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIVACY
Indiana Stream Pollution Control Board Department of Natural Resources/Water Division	Indiana Stream Pollution Control Law (1981)		Indiana Stream Pollution Control Law Chapter 4 13-1-4-3(a) "cooperate with the surgeon general and other agencies of the federal government, other states, interstate agencies and other interested parties."			
	Indiana NPDES permit regulations (1982)	NPDES permit		Indiana NPDES permit regulations, Sec. 6. Public notice on NPDES permits in local newspapers. Public hearings upon request or petition.		NPDES state privacy
Natural Resource Commission		Permits for Floodway structures, obstructions, deposits, excavations				
	Indiana Environmental Management Act (1981)	Construction Installation modification operation	Indiana Environmental Management Act Chapter 5 13-7-5-1(f) "represent the state in all procedures or negotiations for interstate compacts."			

STATE AIR, WATER SOLID/HAZARDOUS WASTE PERMITS

The Council of State Governments

D.1 - INDIANA

SOLID WASTE/HAZARDOUS WASTE

April, 1982

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIVACY
Indiana Environmental Management Board Board of Health/ Div. of Sanitary Engineering	Indiana Refuse Disposal Act (79) Environmental Management Act	Storage, transportation, treatment, processing, disposal (hazardous/solid waste)		No mention of notice public may petition for hearing.		
			Environmental Management Act, Chapter 5 13-7-5-1(f)...			
	Indiana Hazardous Waste Act (1981) (passed 4/21/80)	Facility permit	Indiana Hazardous Waste Act, Chapter 8.5 13-7-8.5-3 "Consider action taken by adjoining states and the federal government for purposes of uniform criteria"...			Cooperative Arrangement (agreement between the state and federal government to carry out parts of hazardous waste management. States cannot write permits or initiate enforcement).
	Hazardous Substance Energy Response Trust Fund (1981)					
	Indiana Solid Waste Management Regs.					
	Indiana Industrial waste hauler permit regulation	Industrial waste hauling				
	Hazardous Waste Facility Site Approval Authority	Facility permit				

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE PERMITS

D.1 - KENTUCKY

AIR

The Council of State Governments

April, 1982

REFERENCE
TO STATE
INTERACTION
TO RESOLVE
CONFLICT

PUBLIC
NOTICE/
HEARINGS

REFERENCE TO
REGIONAL
COOPERATION

REQUIRED
PERMITS

AGENCY

LAW/ACT

STATUS
OF STATE
PRIMACY

Department for
Natural
Resources and
Environmental
Protection/
Division of
Air Pollution
Control

Kentucky
Environmental
Protection Law

Kentucky Environmental
Protection Law 225.033
(14) "advise, consult,
and cooperate with
other agencies ... other
states, the federal
government, and inter-
state agencies ..."

Kentucky Air
Pollution
Regulations

Construction
Installation
modification
operation
PSD

Kentucky Air
Pollution Rega
401 KAR 30:035
make available in
each region that
the facility is
to be constructed,
newspaper notices,
notification to
any state regional
landuse planning
agency.

PSD delegated
NSPS

Intergovernmental
agreements to ex-
change information
concerning air
pollution, etc.

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE PERMITS

E-1 - KENTUCKY

The Council of State Governments

WATER

April, 1982

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/ HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIVACY
Department of Natural Resources and Environmental Protection/ Division of Water	Kentucky Environmental Protection Law, Chapter 224 (1980)	-----	Kentucky Environmental Protection Law, Chapter 224, 224.033 (14)	-----	-----	-----
	Water discharge regulations (5/7/80)	Water discharge permit	-----	-----	-----	-----
	Kentucky Water Quality Standards	Construction operation	-----	-----	-----	-----
		Floodway construction	-----	-----	-----	-----
		Water with-drawals	-----	-----	-----	-----

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE PERMITS

D.1 - KENTUCKY The Council of State Governments

April, 1982

SOLID WASTE/HAZARDOUS WASTE

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/ HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIVACY
Kentucky Dept. of Natural Resources & Environmental Protection/ Division of Waste Management	Kentucky Environmental Protection Law 224	-----	Kentucky Environmental Protection Law 224.033 (14) ...	Kentucky Environmental Protection Law 224.855 Publication in newspaper of general circulation where proposed waste site is located.	-----	
	Solid Waste Management Regulations	Construct, operate sanitary landfill Construct, operate industrial landfill	-----	-----	-----	
	Kentucky Hazardous Management Regulations	Generators, storage processing, disposal of hazardous waste	-----	-----	-----	Interim Authorization 4/1/81
	Kentucky Garbage & refuse disposal law	-----	Kentucky Garbage & Refuse Disposal Law 109.011 "management of solid wastes primarily be a function of state, regional & local agencies"	-----	-----	

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE MANAGEMENT

D.1 - OHIO

The Council of State Governments

AIR

April, 1982

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIVACY
Environmental Protection Agency/Office of Air Pollution Control	Environmental Protection Agency Law (1980)	-----	-----	Environmental Protection Agency Law, Section 3745.07 - Notification regarding permits by newspaper and mailing list of persons who subscribe annually. Public hearing if appropriate.	Environmental Protection Agency Law, Section 3745.09 - Pollution sources outside the state... if violation is caused by or contributed to from air or water pollution sources outside of Ohio ... notify responsible officials of the state where source lies, EPA, Attorney General in effort to secure prompt compliance in respect to air, water solid waste	
Ohio Air Pollution Control Laws/Regs (1/1/77)		Construction modification Installation operation PSD	Ohio Air Pollution Control Laws, Section 3704.03 (B) "advise, consult, contract & cooperate with any governmental or private agency ..."	Intergovernmental agreements to exchange information concerning air impacts, etc.	-----	PSD Privacy Full privacy for NSPS, partial approval of state SIP.

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE PERMITS

D.1 - OHIO

The Council of State Governments

WATER

April, 1982

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/ HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIMARY
Environmental Protection Agency	Environmental Protection Agency ORC 3745.01	-----	-----	Environmental Protection Agency ORC - Section 3745.07 ...	Environmental Protection Agency ORC - Section 3745.09	
Division of Wastewater Pollution Control	Water Pollution Control Act ORC 6111.03 as amended (7/23/80)	Discharge into any state waters	Water pollution control act section 6111.03 (B) "advise, consult, cooperate with other agencies of the state, federal government other states and interstate agencies and with affected groups political subdivisions and industries."	-----	-----	
	ORC 6111.03 (j)	Permit to install	-----	-----	-----	
	ORC 6111.45	Plan approval	-----	-----	-----	
	OAC 3745-32	Section 401 Water Quality Certification	-----	-----	-----	
	OAC 3745-13	NPDES permit	-----	-----	-----	NPDES state primary

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE MANAGEMENT

D.1 - OHIO

The Council of State Governments

SOLID/HAZARDOUS WASTE

April, 1982

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/ HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIMACY
Division of Land Pollution Control	Ohio Solid Waste Disposal Law (3/19/79)	Solid waste	Ohio Solid Waste Disposal Law 3734.02 "cooperate with and enter into agreements with other state, local or federal agencies ..."			
Ohio Environmental Protection Agency	Environmental Protection Agency Law				Environmental Protection Agency Law Sec 3745.09 "Pollution sources outside of Ohio ... notify responsible officials of the state where source lies, EPA, Attorney General in effort to secure prompt compliance in respect to air, water, solid waste"	
Division of Hazardous Materials Management	Ohio Hazardous Waste Law (10/8/80) OAL 3745-50-58	Hazardous waste				Cooperative arrangement (agreement between the state and federal government to carry out part of hazardous waste management).

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE PERMITS

D.1 - PENNSYLVANIA

The Council of State Governments

AIR

April, 1982

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIVACY
Department of Environmental Resources/ Bureau of Air Quality Control	Pennsylvania Air Pollution Control Act (1960) as amended /Regulation	Construction modification reactivation operating	Pennsylvania Air Pollution Control Act P.L. 2119, Sec. 4 (18) cooperate with appropriate agencies of the U.S. or of other states or any interstate agencies ... control, reduction, abatement."	Pennsylvania Air Control Act P.L. 2119, Sec. 7 notification in region of the commonwealth affected ... public hearing held.	-----	Delegated authority for Federal NSPS and NESHAPS Partial PSD authority

Intergovernmental agreements to exchange information concerning air impacts, etc.

STATE AIR, WATER AND SOLID/HAZAROUS WASTE PERMITS

D.1 - PENNSYLVANIA

WATER

The Council of State Governments

April, 1982

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/ HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIMARY
Bureau of Water Quality Management	Pennsylvania Clean Stream Laws Chapter 91 & 92 of DER regulations	NPDES permit construction operation	Pennsylvania water resource regulations Chapter 91.2 "rules and regulations of department shall conform to any interstate obligations. The Commonwealth of department has assumed or shall in the future assume with other states, federal government or their agent under interstate agreements or other formal commitments."	Pennsylvania water resource regulations Chapter 92.61 Notification of NPDES permit in PA Bulletin. Petition required for hearing.	-----	NPDES state primary
Bureau of Dams and Waterway Management	Flood Plain Management Act	Flood control	-----	Public notice on flood control plans	-----	

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE PERMITS

D.1 - PENNSYLVANIA

The Council of State Governments

SOLID WASTE/HAZARDOUS WASTE

April, 1982

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/ HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIVACY
Pennsylvania Dept. of Environmental Resources/ Bureau of Solid Waste Management	Pennsylvania Solid Waste Management Act (1980)	Processing disposal generation transport	Pennsylvania Solid Waste Management Act, Section 103 (2) "cooperate with appropriate Federal, state, interstate and local units of government with appropriate private organizations in carrying out its duties under this act."	Section 504 - Applications for permits shall be reviewed by appropriate county, county planning agency or county health department and the host municipality. Section 502 - The Department shall give written notice to each municipality in which a proposed hazardous waste facility will be located upon receipt of an application for a permit.	-----	Cooperative arrangement (agreement between the state & federal government to carry out part of hazardous waste management. State cannot write permits or initiate enforcement).

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE PERMITS

D.1 - WEST VIRGINIA

The Council of State Governments

AIR

April, 1982

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/ HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIMARY
West Virginia Air Pollution Control Commission	West Virginia Air Pollution Control Law	Construction modification operation	West Virginia Pollution Control Law section 16-20-5 "to advise, consult, cooperate with other states, federal government, industries ..."	Section 7-8 notice in area where source is located... and substantial interest for a public hearing	-----	

Intergovernmental agreements to exchange information concerning air impacts, etc.

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE PERMITS

D.1 - WEST VIRGINIA

The Council of State Governments

WATER

April, 1982

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIMACY
Department of Natural Resources/Div. of Water Resources	West Virginia Water Pollution Control Act (1979)	Discharge permit	West Virginia Water Pollution Control Act II 20.5A. 3 (b) (1) "cooperate with federal government and other states and interstate agencies."	West Virginia Water Pollution Control Act III 20-5A-5 ---Public Notice-- opportunity for public hearing if substantial interest expressed.	-----	NPDES state primacy on May 10, 1982

STATE AIR, WATER AND SOLID/HAZARDOUS WASTE PERMITS

D.1 -WEST VIRGINIA

The Council of State Governments

SOLID WASTE/HAZARDOUS WASTE

April, 1982

AGENCY	LAW/ACT	REQUIRED PERMITS	REFERENCE TO REGIONAL COOPERATION	PUBLIC NOTICE/ HEARINGS	REFERENCE TO STATE INTERACTION TO RESOLVE CONFLICT	STATUS OF STATE PRIMACY
Department of Health/Environmental Health Division/Solid Waste Disposal Program	West Virginia Solid Waste Regulations (1978)	Construction operation				
	West Virginia Hazardous Waste Management Act (1981)					Cooperative arrangement (agreement between the state and federal government to carry out parts of hazardous waste management. Final authority for primacy in FY 83).

0.2 - FEDERAL AGENCIES AND STATUTES INVOLVED IN
ENERGY SITING PROCESSES

Compiled by The Council of
State Governments, April, 1982

AGENCY	LAW/ACT	MAJOR ELEMENTS OF LAW/ACT APPLICABLE TO SITING	MAJOR ELEMENTS OF LAWS/ACTS OR OTHER MECHANISMS TO RESOLVE STATE/INTERSTATE INTERAGENCY CONFLICTS	APPLICATION	AUTHORITY LICENSES/ PERMITS	SUBJECT TO NEPA (EIS INPUT)
Environmental Protection Agency	CLEAN AIR ACT Authorized a compre- hensive regulatory program designed "to protect and enhance the quality of the nation's air resources".	Section 107-Developed Air Quality Control Regions. Section 108-Air Quality Criteria & Control Techni- ques. Section 109-National Ambient Air Quality Standards. Section 110-Implementa- tion Plans (actual abate- ment requirements). Section 111-Standards for Performance for New Stationary Sources. Sections 160-166-PSD Requirements.	Section 102-Cooperative Activities & Uniform Laws. Section 113-Federal Enforcement. Section 115-Interna- tional Air Pollution Abatement. Section 126-Interstate Air Pollution Abatement. Section 304-Citizen Suits.	All Major Energy- Related Facilities affecting air quality.	Prevention of Signi- ficant Air Quality Deterioration (review & approval).	Review and Comment on the environ- mental issue impact if re- lated to EPA's juris- diction. (EIS not required).
	CLEAN WATER ACT Authorized a compre- hensive regulatory program with goals of eliminating the discharge of pollu- tants into navigable waters by 1985; attaining and main- taining water quality that provides for the protection of fish, wildlife & recreat- ional resources by July 1, 1983; and prohibiting the discharge of toxic pollutants.	Section 304-National New Source Performance Standards. Section 307-National Standards for Specified Toxic Pollutants. Section 302-Water Quality Related Effluent Limita- tions. Section 303-Water Quality Standards & Implementation Plans. Section 316-Special Con- sideration for Thermal Discharges. Section 402-National Pollution Discharge Elimination System.	Section 103-Interstate Cooperation & Uniform Laws. Section 309-Federal Enforcement. Section 310-Internat- ional Pollution Abatement. Section 505-Citizen Suits. Section 208-State Management Plans.	All Major Energy- Related Facilities affecting water quality.	National Pollutant Discharge Elimina- tion System (review and permit).	NPDES permits subject to NEPA if issued by EPA to "new sources" (EIS required)
	SAFE DRINKING WATER ACT. Promulgate regula- tions establishing primary and second- ary standards for specific contaminants concentrations in public water supplies or requiring the use of specific treatment technologies for pur- poses of protecting the public health and welfare.	Section 1412-National Drinking Water Regula- tions. Section 1421-Regula- tions for State Programs.	Section 1449-Citizen's Civil Action. Section 1424-Any person may petition against an underground injection well.	All Major Energy- Related Facilities affecting public water supplies.	Provides state grants under the under- ground injection well program. If states do not in- itiate a program EPA will issue permits for de- signed under- ground injection wells.	

D.2 - FEDERAL AGENCIES AND STATUTES INVOLVED IN ENERGY SITING PROCESSES

Compiled by The Council of State Governments, April, 1982

AGENCY	LAW/ACT	MAJOR ELEMENTS OF LAWS/ACTS OR OTHER MECHANISMS TO RESOLVE STATE/INTERSTATE INTERAGENCY CONFLICTS		APPLICATION	AUTHORITY LICENSES/ PERMITS	SUBJECT TO NEPA (EIS INPUT)
		MAJOR ELEMENTS APPLICABLE TO SITING	MAJOR ELEMENTS OF LAWS/ACTS OR OTHER MECHANISMS TO RESOLVE STATE/INTERSTATE INTERAGENCY CONFLICTS			
Environmental Protection Agency	RESOURCE CONSERVATION AND RECOVERY ACT OF 1976. Prosligate regulations for the disposal of solid & hazardous wastes.	Subtitle C, All Sections- Waste Management, Standards, Permits, Inspections. Subtitle D, All Sections- State or Regional Solid Waste Plans.	Section 3008-Federal Enforcement. Section 7002-Citizen Suits. Section 7004-Citizen petitions against regulations of the act.	All Major Energy-Related Facilities generating solid or hazardous waste. hazardous waste.	Resource Conservation and Recovery Act Permit (hazardous waste treatment, storage, disposal). Permits issued by EPA for Hazardous Waste Management facilities may be subject to NEPA. (EIS required)	
	NOISE CONTROL ACT OF 1972. A national effort to control noise pollution at the source of emission.	Section 6-Standards for Equipment Noise Emissions.	Section 11-Federal Enforcement. Section 12-Citizen Suits.	All Major Energy-Related Facilities (development & operation).	Monitors construction equipment, trucks, motors, electrical equipments, etc.	EIS comment.
EXECUTIVE ORDER #11988		Section 1-Provide leadership and action to reduce the risk of floodplain loss. Section 2(2)-Alternatives to siting in a floodplain. Section 2(c)-Appropriate guidance.	Section 2(4)-Early public review of plans.	All Major Energy-Related Facility development in floodplains.	Reviews & administrators avoidance policy of long & short term impacts of floodplain development.	Section 2(a)(1)-If proposal action will occur in a floodplain... for major federal actions an EIS is required.
	EXECUTIVE ORDER #11990	Section 1-Provide leadership to minimize the destruction, loss or degradation of wetlands. Section 5-Consideration of environmental factors.	Section 2-Improve & coordinate federal plans, functions, programs, resources. Section 2(b)-Early public review on plans and proposals.	All Major Energy-Related Facility development in wetlands.	Reviews and administrators avoidance policy of long & short term impacts associated with wetlands.	If significant an EIS may be required.

D.2 - FEDERAL AGENCIES AND STATUTES INVOLVED IN
ENERGY SITING PROCESSES

Compiled by The Council of
State Governments, April, 1982

AGENCY	LAW/ACT	MAJOR ELEMENTS OF LAW/ACT APPLICABLE TO SITING	MAJOR ELEMENTS OF LAWS/ACTS OR OTHER MECHANISMS TO RESOLVE STATE/INTERSTATE INTERAGENCY CONFLICTS	APPLICATION	AUTHORITY LICENSES/ PERMITS	SUBJECT TO NEPA (EIS INPUT)
Department of Defense/ U.S. Army Corps of Engineers	CLEAN WATER ACT. Delegates responsibility to the U.S. Army Corps of Engineers of permit issuance for discharge or dredged materials.	Section 404-Discharge of Dredged or Fill Material.	Act as a mediator in attempting to resolve disputes created by comments from EIS by any of the affected agencies.	Major Energy-Related Facilities in which activities are within or adjacent to navigable waterways.	Reviews & permits for the discharge of dredged or fill material into navigable waters at specified disposal sites.	EIS required. May be lead agency for power plant facilities.
	RIVER AND HARBORS ACT OF 1899. Empowers the U.S. Army Corps of Engineers with regulatory authority to protect U.S. navigable waters.	Section 9-Permit for construction of dams & dikes in U.S. navigable waters. Section 10-Permit for construction of structures or work affecting U.S. navigable waters.		Navigable Waterway Structures or Alterations.	Permit to construct any dam or dike in a navigable water (if navigable waterway is Interstate the consent of Congress is also required). Permits for the construction of any structures in navigable waters such as piers, breakwaters, bulkheads, power transmission lines & pipeline crossings & revetments. It also includes stream channelization, excavation, filling.	
FISH AND WILDLIFE COORDINATION ACT. Provides for the U.S. Army Corps of Engineers to consult with the U.S. Fish & Wildlife Service prior to issuing any permits.		Section 3-Water Control Consultation.		Waterway Structures, Alterations, Dredging & Filling.	Obligation to consult with the U.S. Fish & Wildlife Service prior to issuance of any water related permits.	

D.2 - FEDERAL AGENCIES AND STATUTES INVOLVED IN
ENERGY SITING PROCESSES

Compiled by The Council of
State Governments, April, 1982

AGENCY	LAW/ACT	MAJOR ELEMENTS OF LAW/ACTS OR OTHER MECHANISMS TO RESOLVE STATE/INTERSTATE INTERAGENCY CONFLICTS		AUTHORITY LICENSES/ PERMITS	SUBJECT TO NEPA (EIS INPUT)
		MAJOR ELEMENTS OF LAW/ACT APPLICABLE TO SITING	APPLICATION		
Nuclear Regulatory Commission	ATOMIC ENERGY ACT OF 1954. Regulate private nu- clear facilities to protect the public health, safety, & welfare.	Chapter 23, Subchapter 5, Sec- tion 2073-Domestic distribu- tion of special nuclear mat- erial (licenses). Subchapter 6, Section 2093- Source Material Licenses. Subchapter 6, Section 2111- By-product licenses. Subchapter 9-Atomic Energy Licenses.	Chapter 23, Subchapter 10 Section 2152-International Activities, Cooperation with other Nations. Subchapter 17-Enforcement. Subchapter 1, Section 2021-Cooperation with States.	Licensing the conste- uction & operation of nuclear reactors & other nuclear facilities & the possession, use, processing, trans- port, handling & disposal of nuclear material. Prepares National Survey to identify possible nuclear energy sites. Preparation & review of Safety Analysis Report.	EIS required. May be lead agency for nuclear facilities.
Federal Energy Regulatory Commission	FEDERAL POWER ACT To create the Federal Power Commission, & provide for the im- provement of naviga- tion development of water power, & for other purposes.	Chapter 12, Sub-chapter 1-Federal Regulation & Development of Power. Subchapter 2-Regulation of electric utility companies engaged in interstate commerce.	Section 4-Cooperate with Federal or State Agencies. Section 23-Violations, penalties.	Licensing of construc- tion & operation of hydroelectric facili- ties & maintains dams, reservoirs, power houses, & other elements of a power project. Reviews flood control projects. Issues license for electric trans- mission lines that connect with hydro- electric plants.	EIS required. May be lead agency for hydro- electric facilities.
	NATURAL GAS ACT. This act gave the Federal Power Comm- ission, & later the FERC, jurisdiction over interstate state transporta- tion of natural gas.	Section 717(1)- Construction, extension or abandonment of fac- ilities.	Section 17-Cooperation with state commissions. Section 717(j)-State compacts for conserva- tion. Section 717(a)-Enforce- ment.	Issues permits for interstate gas pipelines. (Public Con- venience and Necessity)	

B.2 - FEDERAL AGENCIES AND STATUTES INVOLVED IN ENERGY SITING PROCESSES

Compiled by The Council of State Governments, April, 1982

AGENCY	LAW/ACT	MAJOR ELEMENTS OF LAW/ACT APPLICABLE TO SITING	MAJOR ELEMENTS OF LAWS/ACTS OR OTHER MECHANISMS TO RESOLVE STATE/INTERSTATE INTERAGENCY CONFLICTS	APPLICATION	AUTHORITY LICENSES/PERMITS	SUBJECT TO NEPA (EIS INPUT)
United States Department of the Treasury/Bureau of Alcohol, Tobacco & Firearms	INTERNAL REVENUE CODE Provides for the Bureau of Alcohol, Tobacco & Firearms to administer the laws in the Code that relate to distilled spirits.	Section 5171-Application to register, permits.		Distilled Spirits Plant (ethyl alcohol, ethanol, or spirits of wine that include all dilutions and mixtures from whatever source or by whatever process produced).	Issues Operating or Commercial permit. Issues Experimental DSP permit.	
United States Department of Commerce/Economic Development Administration	PUBLIC WORKS & ECONOMIC DEVELOPMENT ACT OF 1965 Provides for the Economic Development Council to provide grants & loans for small scale profit & non profit energy projects.	Title I - Grants to local governments & non-profit org. Title II - Guaranteed loans for the private sector.		Small Scale profit and non-profit Ethanol Projects (produce less than 1 million Gallons per year).	Funds Ethanol Plants in designated re-development areas.	
Interstate Commerce Commission	INTERSTATE COMMERCE ACT. To regulate, in the public interest, carriers which are engaged in transportation of interstate commerce.	Chapter 1, Part 1-Pipeline Carriers.	Section 13-Investigations of state, interstate complaints.	Interstate Coal Slurry Pipeline.	Issues license to transport fuel. (Public Convenience and Necessity).	Comments.
Council on Environmental Quality	NATIONAL ENVIRONMENTAL POLICY ACT OF 1969. To declare a national policy which will encourage productive & enjoyable harmony between man & his environment; to promote efforts which will prevent or eliminate damage to the environment & biosphere & stimulate the health & welfare of man; to enrich the understanding of the ecological systems & natural resources important to the Nation; and to establish a Council on Environmental Quality.	Section 102(2)(c)-Issuance of Environmental Impact Statement. (required prior to any major federal action that may significantly affect the environment).	Public comments from agencies and other interested parties through the Environmental Impact Statement.	All Major Energy-Related Facilities.	Overall administrative of the requirements concerning Environmental Impact Statements. Issue various regulations to be followed by various federal agencies in preparing such statements.	EIS comments obtained from any Federal Agency which has jurisdiction by law or special expertise with respect to any environmental impact involved or which is authorized to develop environmental standards. EIS Comments.

D.2 - FEDERAL AGENCIES AND STATUTES INVOLVED IN
ENERGY SITING PROCESSES

Compiled by The Council of
State Governments, April, 1982

AGENCY	LAW/ACT	MAJOR ELEMENTS OF LAW/ACT APPLICABLE TO SITING	MAJOR ELEMENTS OF LAWS/ACTS OR OTHER MECHANISMS TO RESOLVE STATE/INTERSTATE INTERAGENCY CONFLICTS	APPLICATION	AUTHORITY LICENSES/ PERMITS	SUBJECT TO NEPA (EIS INPUT)
United States Synthetic Fuels Corporation	ENERGY SECURITY ACT. To improve the nation's balance of payments, reduce the threat of economic disruption from oil supply interruptions & increase the nation's security by reducing its depend- ence upon imported oil.	Title 1-Synthetic Fuels- Financial Assistance.	Synthetic Fuels Projects.	The Corp. is intended to serve as a catalyst in creating a private sector synthetic fuel industry in the U.S. Financial funds pro- vided through loan guarantees, loans, joint ventures.	Not subject to NEPA.	
Department of Energy/ Agriculture Department	Energy Security Act ...	Title 2-Biomass Energy & Alcohol Fuels-Loans.	Alcohol Fuel Projects.	To promote the prod- uction of alcohol & other fuels through loans, loan guaran- tees, price guaran- tees, & purchase agreements.		
Department of Housing & Urban Devel- opment/Solar Energy Development Bank	Energy Security Act ...	Title 5-Solar Energy- Loan subsidies.	Solar Energy Projects.	The bank provides subsidized loans to those making energy conservation improvements or installing solar equipment in residential or commercial buildings.		

D-2 - FEDERAL AGENCIES AND STATUTES INVOLVED IN
ENERGY SITING PROCESSES

Compiled by The Council of
State Governments, April, 1982

AGENCY	LAW/ACT	MAJOR ELEMENTS OF LAW/ACT APPLICABLE TO SITING	MAJOR ELEMENTS OF LAWS/ACTS OR OTHER MECHANISMS TO RESOLVE STATE/INTERSTATE INTERAGENCY CONFLICTS	APPLICATION	AUTHORITY LICENSES/ PERMITS	SUBJECT TO NEPA (EIS INPUT)
United States Department of the Interior/ U.S. Fish and Wildlife Ser- vice	FISH AND WILDLIFE CON- SERVATION ACT.	Section 3-Water resources utilized in conjunction with fish & wildlife management.	Section 3-Interagency water control con- sultation.	Water Resource Development Projects.	Mitigating & compen- sating for project- occasioned losses to fish & wildlife re- sources.	Comments.
	To provide that wild- life conservation shall receive equal consideration & be coordinated with other features of water re- source development.					
	FEDERAL WATER POLLU- TION CONTROL ACT.	Section 216-Special Consid- eration for Thermal Dis- charges.		Facilities emit- ting thermal discharges.	Provide biological input tech. review of W.Q. Criteria, Comments on NPDES.	Comments.
	ENDANGERED SPECIES ACT OF 1973.		Section 6-Cooperation with the States. Section 7-Interagency Cooperation. Section 8-International Cooperation.	All Major Energy- Related Projects.	Conducts assessments & impact studies on endangered species.	Comments.
	To provide conserva- tion & program devel- opment to endangered & threatened species.					
United States Department of the Interior Advisory Coun- cil on His- toric Preser- vation	NATIONAL HISTORIC PRE- SERVATION ACT.	Section 106-Any agency over a proposed federal or federally assisted undertaking, must take into account the project's effect on historic sites and landmarks.	Section 104-Coordination with other federal pro- grams. Section 202-Encourage coop. of historic pre- servation with appro- priate private agencies. Training & education in the field of historic preservation to public & private agencies.	All Major Energy- Related Projects.	Ensures historical & archaeological data not destroyed or lost in flooding, roadbuilding or other activities adjunct to dam con- struction or any other federal action. Coordinates federal, state, & local acti- vities.	Comments.
	To establish a program for the preservation of additional historic properties throughout the nation & for other purposes.					

D.2 - FEDERAL AGENCIES AND STATUTES INVOLVED IN
ENERGY SITING PROCESSES

Compiled by The Council of
State Governments, April, 1982

AGENCY	LAW/ACT	MAJOR ELEMENTS OF LAW/ACT APPLICABLE TO SITING	MAJOR ELEMENTS OF LAWS/ACTS OR OTHER MECHANISMS TO RESOLVE STATE/INTERSTATE INTERAGENCY CONFLICTS	APPLICATION	AUTHORITY LICENSES/ PERMITS	SUBJECT TO NEPA (EIS INPUT)
United States Department of Energy	POWER PLANT AND INDUS- TRIAL FUEL UTILIZATION ACT -- Stimulate in- creased use of coal through a regulatory program restricting petroleum or natural gas.	Sections 201-202-New Electric Power Plants and Major Fuel Installa- tions. Sections 301-302-Exist- ing Electric Power Plants and Major Fuel Installations. Section 602-Loans to assist Power Plant acquisition of Air Pollution Control Equipment.	Subtle C-Enforcement, Civil Penalties, Citizen Suits	New and Existing Power Plants New and Existing Major Fuel-Burning Installations.	Restricts existing and new electric power plants and other industrial facilities from using petroleum or natural gas.	EIS required upon actions involving the grant or denial of any perma- nent exemption from restrict- ions of the Act.

	NON-NUCLEAR ENERGY RESEARCH AND DEVELOP- MENT ACT OF 1974 Conduct a comprehen- sive national program or research and dev- elopment of all poten- tially beneficial energy sources.	Section 4-Conduct non- nuclear energy research, development, and demon- stration. Section 8-Cooperative agreements between non- federal entities to demonstrate energy tech.		Commercial Alter- native Fuel Pro- duction Facilities.	Funding for feasi- bility studies and cooperative agree- ments to fund con- struction to faci- lities.	
United States Department of Agriculture/ Rural Electri- fication Adm- inistration.	RURAL ELECTRIFICATION ACT OF 1936 To provide for rural electrification.	Section 4-Loans for financing Generating Plants, Distribution Lines, etc. (Recent restrictions to rural electric coops.)		Electric Generat- ing Facilities. Transmission and Distribution Lines	Lending Agency with responsibility for developing programs for Rural Electri- fication.	Comments. May be lead agency.
United States Department of Agriculture/ Farmers Home Administration	CONSOLIDATED FARM AND RURAL DEVELOPMENT ACT OF 1972 Provides for guaranteed loans to business and industries to create and maintain employment and improve the econo- mic and environmental climate in rural comm- unities.	Title 1, Section 102- Rural enterprise loans.		Large and Medium Scale Gasohol Plants (500,000 to 5 million gallons per year)	Provides guaranteed loans for Gasohol projects located in a rural setting.	

D.2 - FEDERAL AGENCIES AND STATUTES INVOLVED IN
ENERGY SITING PROCESSES

Compiled by The Council of
State Governments, April, 1982

AGENCY	LAW/ACT	MAJOR ELEMENTS OF LAW/ACT APPLICABLE TO SITING	MAJOR ELEMENTS OF LAWS/ACTS OR OTHER MECHANISMS TO RESOLVE STATE/INTERSTATE INTERAGENCY CONFLICTS	APPLICATION	AUTHORITY LICENSES/ PERMITS	SUBJECT TO NEPA (EIS INPUT)
Water Resource Council (not funded after 9/30/82)	WATER RESOURCE PLANNING ACT. Encourage the conserva- tion, development & utilization of water & related land resources of the U.S. in a coor- dinated & cooperative basis.	Section 102-Studies & assessments, Regional Plans.	Title II, Section 201- Creation of River Basin Commissions to coordinate federal, state, inter- state, local nongovern- mental, water-related plans.	All Major Energy- Related Facili- ties utilizing water resources. U.S.	Prepares Water Re- sources Planning Act level 8 plan for all river basins in the U.S.	Inactive.
NON-NUCLEAR ENERGY RE- SEARCH & DEVELOPMENT ACT OF 1974. Provides for the Water Resource Council to evaluate water resource criteria in non-nuclear energy development.	Section 11-Water resource evaluation. (a) - Project. (b) - Basin. (c) - Technology.	Non-Nuclear Energy Demon- stration Projects.	Evaluates water re- source requirements & water supply availability for non-nuclear energy technologies.	Consults on Demonstration Projects. Inactive.		

D.) - Electric Power Plant Siting Processes

The Council of State Governments

April, 1982

State	Power Plant Siting Law	One Stop Provision	Authority	Application	Appl. Fee	State Annual Utility Forecast	Eminent Domain	Certificate of ...	Regional Cooperation	Public Hearings	Required State Permits From Agencies/Depts.
Illinois			Illinois Commerce Commission (5 Gov. appt.)	Transmission production storage, sale delivery of power & electricity. Pipelines, rates, safety adequacy of power facilities.		No (private corporations)	Yes (Section 50 order)	Certificate of Public Convenience & Necessity	11 Rev. Stat. 1977 Ch 111 Sec. 1004(k) "Agency has duty/authority in any/all matters pertaining to plans, procedures or negotiations for interstate compacts or other governmental arrangements relating to environmental protection."	Before Issuing certificate	EPA, Division of Air Pollution Control, DOT, Division of Water Resources, EPA Division of Land/Noise Pollution Control, EPA, Div. of Water Pollution Control.
Kentucky	Statute 885 278-075 (Certificate of Environmental Compatibility)	No	Public Service Commission (3 Gov. appt.)	Regulate siting of energy production, distribution and transmission	No (authority to charge fees for env. review)	No (needs assessment by KMR)	Yes	Certificate of Environmental Compatibility & Convenience of Convenience & Necessity	Addressed through environmental permits.	Before Issuing certificate	DNREP, Div. of Air Pollution Control, DNREP Div. of Water Pollution Control, DNREP, Div. of Solid Waste Management, Dept. of Housing, Building & Construction
			Dept. of Nuclear Safety	Siting of future nuclear facilities, transportation of nuclear waste, license-inspect & control radiation sources, emergency plans					Reciprocity agreements with other states concerning transportation of nuclear waste		

D.3 - Electric Power Plant Siting Processes The Council of State Governments

April, 1982

State	Power Plant Siting Law	One Stop Provision	Authority	Application	Appl. Fee	State Annual Utility Forecast	Eminent Domain	Certificate of ...	Regional Cooperation	Public Hearings	Required State Permits from Agencies/Dept.
Ohio	Ohio Power Plant Siting Board Law (10/22/72 amended (2/24/82))	Yes	Power Siting Board (6 Gov. appt. (4 Legis-lative - non-voting	Oil, coal nuclear plants (50MW or greater) transmission lines (125KV gas trans-mission lines (greater than 125FSL)	Based on established const- ruc- tion cost & gener- ating capa- city.	10 year updated annually (OOOH)	Yes	Environ- mental Compti- bility & Public Need (must meet air, water, solid waste statutes)	ORC 4906.14 "May nego- tiate & enter into agreements or compacts with agen- cies of other states pur- suant to any consent of Congress for coop- erative efforts ... of major utility facilities."	Before leasing certificate	Dept. of Highways, Ohio EPA, Dept. of Natural Resources, Dept. of Indus- trial Relations.
Indiana			Environ- mental Manage- ment Board	Environ- mental issues, location, permits nuclear power facilities				No ... Addressed in spec- ific environ- mental areas.			
			Public Service Commission (3 Gov. appt.)	Transmission production, storage, sale, deliv- ery of power and elec- tricity, pipelines, rates, safety, adequacy of power facilities. Non-siting issues.	Muni- cipal- ity charged for cost of hearing	No (develop- ment in hearing process)	Yes	Certificate of Necessity & Convenience for Elec- tric Cooperatives only. Cost of other facility approved prior to being incor- porated in rate base.		Yes (rates)	State Board of Health, Air Pol- lution Con- trol Board, Stream Pol- lution Con- trol Board, Dept. of Natural Resources, Environ- mental Management Board, State FIS.

D.3 - Electric Power Plant Siting Processes The Council of State Governments
April, 1982

State	Power Plant Siting Law	One Stop Provision	Authority	Application	Appl. Fee	State Annual Utility Forecast	Eminent Domain	Certificate of ...	Regional Cooperation	Public Hearings	Required State Permits From Agencies/Dept.
Pennsylvania			Environmental Quality Board		Fee on most permits				Addressed through environmental permits		
West Virginia		(Initiating effort to set up informal ambassador to coordinate interstate environmental permit-ting)	Public Service Comm. (3 Gov. appt)	Regulate coal slurry pipelines, generation distribution of energy, rates, equipment & property services, safety	No Fee on certificate	No (Private corp.)	Yes (If area is zoned for such use)	Certificate of Public Convenience & Necessity (if area is not zoned for such use)		Before issuing certificate	DER, Bureau of Air Quality. DER, Bureau of Water Quality Management. DER, Bureau of Solid Waste Management. Dept. of Labor & Industry. PA State Police/Fire Marshall. Dept. of Transportation.
			Public Utility Comm. non-siting	Transmission lines, rates installation of facilities services, extension or expansion, safety, location.	Fee on certificate						DER, Bureau of Air Quality. DER, Bureau of Water Quality Management. DER, Bureau of Solid Waste Management. Dept. of Labor & Industry. PA State Police/Fire Marshall. Dept. of Transportation.
			Public Service Comm. (3 Gov. appt)	Regulate coal slurry pipelines, generation distribution of energy, rates, equipment & property services, safety	No Fee on certificate	No (PSC)	Yes	Certificate of Public Convenience & Necessity	Addressed through environmental permits	Before issuing certificate	DNR, Division of Water Resources. Air Pollution Comm. DNR, Solid Waste Disposal Program (Hazardous Waste). Dept. of Health (non-hazardous waste)

Source: Power Plant Siting in the U.S., Southern Interstate Nuclear Board 1976, (Revised by The Council of State Governments, April, 1982).

D.4 - REGIONAL ORGANIZATIONS AND ROLES IN THE ENERGY FACILITY SITING PROCESS

Compiled by The Council of State Governments, April, 1982

AGENCY	FUNCTIONS	GEOGRAPHIC AREA	COMPOSITION	STRENGTHS	WEAKNESSES	STATUS
Interstate Coal Task Force	The Interstate Coal Task Force is organized to convey the concerns of member states over the continued use of high-sulfur coal. The Task Force considers it important that this coal be utilized in an environmentally acceptable manner, but it also recognizes the critical national interest in the continued vitality of the high-sulfur coal industry.	Kentucky, Illinois, Indiana, Iowa, Kansas, Missouri, Pennsylvania, Virginia, West Virginia, Tennessee, Ohio, Oklahoma.	Composed of a variety of state officials within the member states.	<ul style="list-style-type: none"> Informal, flexible communication device can look at long term problems technical expertise in energy related matters can assist in coordination 	<ul style="list-style-type: none"> unclear position of task force's representation of states interests no established membership no staff no legal authority 	Active
EPA Tri-regional Task Force	A task force established through a memorandum of understanding (1978) to strengthen cooperation in meeting interstate and inter-regional environmental quality issues.	Federal EPA regions III, IV, V.	Administrators of the three member regions.	<ul style="list-style-type: none"> communication mechanism among EPA regional Administrators encourage consistency among 3 EPA regions to implement EPA's final rule on Regional consistency 	<ul style="list-style-type: none"> federal entity composed only of EPA-no other federal or state involvement task force evolved into air related agenda, other concerns not represented rotating leadership hinders consistent direction 	Inactive (last meeting 7/24/80)
East Central Area Reliability Council (ECAR)	A private organization formed to augment reliability of bulk power supply through coordination of planning and operation of generating and transmission facilities.	Indiana, Ohio, Kentucky and portions of West Virginia, Pennsylvania, Michigan.	26 members representing private electric utilities.	<ul style="list-style-type: none"> has technical expertise through the siting coordination committee collects information on existing and proposed electric energy facilities committees on environmental and system planning. 	<ul style="list-style-type: none"> composed entirely of electric utilities with little state, federal or public participation Illinois not included within the region no enforcement authority 	Active

D.4 - REGIONAL ORGANIZATIONS AND ROLES IN THE
ENERGY FACILITY SITING PROCESS

Compiled by The Council of
State Governments, April, 1982

AGENCY	FUNCTIONS	GEOGRAPHIC AREA	COMPOSITION	STRENGTHS	WEAKNESSES	STATUS
Regional Energy Advisory Board (REAB)	Under Section 655 of the U.S. Dept. of Energy Organization Act of 1977 Governors of various states established Regional Energy Advisory Boards. The Board makes specific recommendations to the Secretary of of Energy on issues or pro- grams which have a direct effect on the region.	Missouri, Michigan, Illinois, Indiana, Iowa, Minnesota, Kansas, Ohio, Wisconsin, Nebraska South Dakota, North Dakota, Kentucky	Composed of state officials of member states (State Energy Directors) Federal members: Commerce Interior, CEQ, Coast Guard, EPA, Regional Comm.	<ul style="list-style-type: none"> • recognized by federal statute • technical expertise in energy related matters 	<ul style="list-style-type: none"> • U.S. DOE has not placed a strong emphasis on REAB • West Virginia and PA not included • representatives usually limited to state energy officials 	Inactive
Midwestern Governors' Conference	Created by the states in 1962 to provide for the opportunity for states to meet formally to work on those issues that have regional impacts	Missouri, Michigan, Illinois, Indiana, Iowa, Minnesota, Kansas, Ohio, Wisconsin, Nebraska, South Dakota, North Dakota	Composed of Governors of member states	<ul style="list-style-type: none"> • involved in broad regional concerns • specific task force on energy • functional communication mechanism between regions • members are key state policy and decision-makers 	<ul style="list-style-type: none"> • broad functions and concerns, not focused on energy • Illinois, Indiana & Ohio only Ohio Valley states 	Active
Coalition of Northeastern Governors	Created in 1976 with a mandate to be an activist coalition of governors dealing with national policy issues facing the region and regional self help.	New York, New Jersey, Pennsylvania, Rhode Island, Vermont, New Hampshire, Connecticut, Massachusetts	Composed of Governors of member states. Governors' staff are active participants. Governors appoint four members business/labor partnership to Advisory Board.	<ul style="list-style-type: none"> • involved in broad regional concerns and policy analyses • members include key state policy makers and private sector representatives • Energy and Environmental Committee • flexible communication mechanism 	<ul style="list-style-type: none"> • broad functions and concerns, not focused just on energy • New York, Pennsylvania only Ohio Valley states 	Active

D.4 - REGIONAL ORGANIZATIONS AND ROLES IN THE
ENERGY FACILITY SITING PROCESS

Compiled by The Council of
State Governments, April, 1982

AGENCY	FUNCTIONS	GEOGRAPHIC AREA	COMPOSITION	STRENGTHS	WEAKNESSES	STATUS
Southern Governors' Conference	Created by the states in 1962 to provide for the opportunity for states to meet formally to work on those issues that have regional impacts	West Virginia, Maryland, Virginia Kentucky, North Carolina, Tennessee, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Texas, Oklahoma	Composed of Govern- ments of member states	<ul style="list-style-type: none"> Involved in broad regional concerns specific task force on energy functional communication mechanism between regions members are key state policy and decision-makers 	<ul style="list-style-type: none"> broad function and concerns, not focused on energy KY and WV only Ohio Valley states 	Active
Ohio River Basin Commission	Created by the states in Sept. 1961 for inter- state coordination of water resources planning and management	Illinois, Indiana, Kentucky, Maryland, North Carolina, Pennsylvania, Tennessee, Virginia, West Virginia	One member from each state (appointed by Governor)	<ul style="list-style-type: none"> authority to identify long-range regional issues and problems provide forum for states to develop regional policies and positions on common interstate issues concerning water and related land resources 	<ul style="list-style-type: none"> no legal basis to enforce consistency of state actions organization goals based on water resources management 	Active

C-5 STATE PERMIT COORDINATION AND STREAMLINING PROCESSES

	<u>Implementing Agency</u>	<u>Type of System</u>	<u>Permits Affected</u>
Illinois	Illinois Department of Energy and Natural Resources	Coordinated review	All state environmental and land use permits for major non-nuclear energy development Voluntary for federal & local governments
Indiana	Illinois Environmental Protection Agency	Permit/application coordinator Joint Hearing	All state environmental permits for construction projects
	Illinois EPA Department of Transportation Department of Conservation U.S. Army Corps of Engineers	Joint application	Permits for construction in waterways and flood plains
		Informal communication	
Kentucky	Department of Natural Resources & Environmental Protection	Computer tracking Permit/application coordinator	Surface mining permits All environmental permits for new facilities
Ohio	Ohio Power Siting Board	Permit/application coordinator Joint Application	All permits for powerplant and transmission lines construction
Pennsylvania	Regional Pennsylvania Environmental Protection Offices	Permit/application coordinator	All state environmental permits for industrial or energy projects
West Virginia	Governor's Office of Economic & Community Development	Permit/application coordinator	All state environmental permits for industrial projects
	West Virginia Coal Development Authority	Permit/application coordinator	All state environmental permits for energy projects.

Appendix E

RESEARCH DESIGN

- E.1 Research Design
- E.2 ORSANCO Committee on Energy Facility Siting
- E.3 Interviewees and Workshop Participants to the Study
- E.4 Regional Organizations Contacted During the Course of the Study
- E.5 Bibliography

E.1 RESEARCH DESIGN

The study was designed to examine alternative institutional means--both procedural and organizational arrangements--of addressing multistate issues associated with energy facility siting. Research was divided into two phases. The primary objectives of Phase I were to identify the multistate issues, conduct a preliminary screening of activities needed to address these issues, scope out the range of alternative institutional arrangements to implement these activities and identify the most feasible and effective arrangements for further study. Phase II was originally designed to conduct an indepth examination of those institutional arrangements selected at the conclusion of Phase I, and to provide recommendations for action by the states.

In Phase I of the study, CSG staff reviewed the literature for current studies of energy needs, facility siting, existing multistate organizations, current state and federal laws, regulations and procedures affecting siting and intergovernmental institutional mechanisms. Seventy-five interviews were conducted in April, 1981 with a cross section of key target groups involved with energy facility siting in the six Ohio River Valley states. These included state executives, representatives from state legislatures, private energy companies, special interest groups, local governments and academics. A tabulation of the categories and number of study participants in the various states is attached (see Appendix E.3). The selection of individuals to be interviewed was deliberately oriented to policy-makers, rather than technically oriented individuals, since the purpose was to obtain the perspectives of those who would be directly or indirectly involved in implementation of any interstate mechanism for cooperation.

The questions were open-ended to solicit general perspectives and to allow wide ranging discussions to take place. This approach was adopted to allow those groups most responsible for or impacted by energy facility siting to identify those siting issues and institutional considerations of greatest concern. A copy of the questions asked during the interviews is attached. (Table E.1a.) Concerns expressed during this interview process were the basis upon which multistate issues were identified.

Originally Phase I of the study was designed to identify a limited number of institutional arrangements to be examined in detail during Phase II. The lack of consensus on the issues and nature of desirable institutional arrangements prevented selection of an "optimal" arrangement. At the conclusion of Phase I, the ORSANCO Steering Committee identified three activities needed in order to address the identified issues. They include: 1) communication between key public and private sector decision-makers; 2) ability to provide regional analysis; and 3) a means of resolving conflicts. A Phase I report describing alternative activities and institutional arrangements was issued in July, 1981.

The revised Phase II objectives were to identify and assess institutional means by which the three activities identified in Phase I could be implemented in the Ohio River states. Recommendations on the most feasible institutional mechanism were developed.

The staff conducted a more extensive literature review on the siting process, multistate organizations, mediation and conflict resolution, energy facilities and resources in the Ohio Valley and public decision-making processes. Telephone interviews with existing multistate organizations were conducted to discuss their roles as facilitators of multistate communication, providing regional perspectives in decisions and resolving multistate conflicts. A list of the regional associations contacted follows this section.

Based on the data collected and preliminary analysis, a background paper discussing multistate issues, activities and nine alternative institutional arrangements was developed. Workshops were conducted in each of the six Ohio River states with key state policy officials during January, 1982 to provide feedback and comment on the issues and the preliminary institutional arrangements presented in the background paper. Workshop participants are included in tabulations of the study participants. At the inclusion of the workshops, a draft Phase II report was prepared and submitted to the ORSANCO project Steering Committee for review and comment.

The final project report was issued in May, 1982.

Table E.1a

GUIDE TO INTERVIEWS CONDUCTED WITH
KEY TARGET GROUPS IN THE OHIO RIVER VALLEY STATES

- A-1. DOES THE SITING OF MAJOR ENERGY FACILITIES ALONG THE OHIO RIVER CREATE PROBLEMS WHICH CUT ACROSS STATE LINES?
- B-1. WHAT DO YOU FEEL POSSIBLY MIGHT BE DONE TO ADDRESS THE TYPE OF PROBLEMS YOU HAVE MENTIONED?
- C-1. HAS THE STATE ACTED TO ADDRESS THESE PROBLEMS WHICH CUT ACROSS STATE LINES?
- C-2. HAS ACTION BEEN CONSIDERED OR TAKEN BY ANYONE OTHER THAN THE STATE TO ADDRESS THESE PROBLEMS? (e.g., federal government, regional entity, non-governmental group.)
- D-1. IN YOUR OPINION, WHO MUST BE INVOLVED IN ENERGY FACILITY SITING DECISIONS? WHY?
- E-1. WHAT ABOUT UNILATERAL STATE ACTION?
- E-2. WHAT ABOUT THE STATES DEALING DIRECTLY WITH EACH OTHER--ONE ON ONE?
- E-3. WHAT ABOUT SOME TYPE OF MULTISTATE ORGANIZATION FOR DEALING WITH SITING ISSUES?
- E-4. ARE THERE ANY OTHER MEANS BY WHICH STATES CAN ADDRESS MULTISTATE ISSUES ASSOCIATED WITH ENERGY FACILITY SITING?
- E-5. WHAT ABOUT THE FEDERAL GOVERNMENT--SHOULD IT BE INVOLVED IN ANY MECHANISM DEVELOPED TO ADDRESS MULTISTATE CONCERNS IN ENERGY FACILITY SITING?
- E-6. IN YOUR OPINION, ARE THERE ANY OBSTACLES WHICH MAY MAKE IT DIFFICULT TO IMPLEMENT ANY OF THESE MECHANISMS?
- F-1. WHAT ABOUT MUTUAL INTERESTS--ARE THERE AREAS OF COMMON INTEREST WHICH YOU THINK MIGHT ENCOURAGE STATES TO WORK COOPERATIVELY IN SITING ENERGY FACILITIES? IF SO, WHAT ARE SOME OF THESE?

E.2 OHIO RIVER VALLEY WATER SANITATION COMMISSION (ORSANCO)

Committee on Energy Facility Siting

*Richard Armstrong, Chief, Engineering Division
U.S. Army Corps of Engineers, Ohio River

*Warren L. Braun, Member
Virginia Water Control Board

*Richard Carlson, Director¹
Illinois Environmental Protection Agency

*Peter Duncan, Secretary²
Pennsylvania Department of Environmental Resources

*Paul Emler, Jr., Senior Environmental Advisor
Allegheny Power Service Corporation

Rebecca Hanmer, Regional Administrator⁴
Region IV, U.S. Environmental Protection Agency

Edgar N. Henry, Director
West Virginia Water Development Authority

Clifford L. Jones, Secretary
Pennsylvania Department of Environmental Resources

James McAvoy, Director⁴
Ohio Environmental Protection Agency

Michael P. Mauzy, Director
Illinois Environmental Protection Agency

*Ralph C. Pickard, Assistant Commissioner for Environmental Health
Indiana State Board of Health

*David Robinson, Chief, Division of Water Resources³
West Virginia Department of Natural Resources

**Jackie Swigart, Secretary
Kentucky Department for Natural Resources and Environmental
Protection

*- Current Commission Member

** - Committee Chairman

1-Replaced Mr. Mauzy

2-Replaced Mr. Jones

3-Replaced Mr. Henry

4-Resigned position

E.3 INTERVIEWEES AND WORKSHOP PARTICIPANTS

By Category

	IL	IN	KY	OH	PA	WV	REGIONAL OR FEDERAL	TOTAL
State Executive Offices/ Agencies								
Governor	1	1	2	1	1	1		6
Attorney General				1		1		2
Environmental Protection	3	3	4	5	6	2	4	27
Natural Resource Management	2	1		2		2	2	9
Energy	5	2	2	2	2	1		14
Public Service Commission	1	2	1	5	1	2		12
Planning		2					1	3
Commerce		1	1	1	1			4
Legislators	3		1	1	3	1		9
Legislative Staff	5	2	2	1	5	1		16
Electric Utilities	4	2	4	8	4		2	24
Other		2	2					4
Local Government	1		1		1	1		4
Academic		1	1		1			3
Citizen Groups	1	3	3	3	4	2		16
	26	22	24	30	29	13	9	153

E.3 Interviewees and Workshop Participants

ILLINOIS

Ken Alderson
Municipal League

Frank Beaver
Department of Energy and
Natural Resources

George Benda
Department of Energy and
Natural Resources

Richard Carlson
Environmental Protection Agency

Noel Ebrahim
Department of Energy and
Natural Resources

M. Fred Ellis
Energy Resources Commission

William Frerichs
Department of Energy and
Natural Resources

Daniel Goodwin
Environmental Protection Agency

Case Grintjes
Department of Transportation

Gary Hunt
Commerce Commission

Bruce Kinnett
Staff, State Legislature

Anthony Liberatore
Governor's Office

Mike Mauzy
Environmental Protection Agency

Jim May
Illinois Power Company

Larry Metzroth
Energy Resource Commission

Rep. Ted Meyer
State Legislature

Terri Moreland
Department of Energy and
Natural Resources

Daniel Morland
Illinois Power Company

Mark Nelson
Energy Resource Commission

Rep. Daniel Pierce
State Legislature

David Ramsay
Staff, State Legislature

Jene Robinson
Illinois Power Company

James Rokosch
ORSANCO Public Interest
Advisory Committee

Rep. Fred Schraeder
State Legislature

Don Vonnahme
Department of Transportation

Paul Zimmer
Illinois Power Company

Interviewees and Workshop Participants

INDIANA

William Andrews
Department of Natural Resources

Robert Berlin
Energy Department

Dr. Ronald G. Blakenbaker
State Board of Health

William D. Boyd
Public Service Commission

John Bremer
Legislative Services Agency

Clarence Broadus
Energy Department

Dr. Harold Cassidy
Save-the-Valley

C. William Curry
ORSANCO Public Interest Advisory
Committee

Greg Gordon
Office of Lieutenant Governor

Oral Hert
State Board of Health

Terry M. Hogan
Indianapolis Power and Light Co.

Lisa Kobe
Indiana Chamber of Commerce

Betty Krebs
State Planning Service

Jan Marosky
Staff, State Legislature

Rebecca Meier
ORSANCO Public Interest Advisory
Committee

Lt. Gov. John Mutz
Office of the Lieutenant Governor

Ralph Pickard
State Board of Health

Maria Rudzinski
State Planning Service

Dr. Frank Stanonis
University of Indiana - Evansville

Wayne T. Swallow
Public Service Company of Indiana

Larry Wallace
Public Service Commission

John Walls
Indiana Chamber of Commerce

Interviewees and Workshop Participants

KENTUCKY

Joseph Beard
Kentucky Utilities Co.

Horace Brown
Environmental Quality Commission

Rush Dozier
Governor's Office

Dan Green
Ashland Oil Corporation

Thomas Grissom
Commerce Cabinet

Robert Hughes
East Kentucky Power Cooperative

J. E. "Mickey" Jones
Department of Energy

James King
Governor's Office

Linda Kuballa
Legislative Research Commission

Margaret Lebus
Department of Energy

Rep. Terry L. Mann
State Legislature

Wendell Moore
County Judge, Oldham County

Patricia M. Nightengale
ORSANCO Public Interest Advisory
Committee

Doug Oliver
East Kentucky Power Cooperative

Tom Peacock
International Coal Refinery Company

Caryl M. Pfeiffer
Kentucky Utilities Co.

Ron Sanders
Department of Energy

David Surber
ORSANCO Public Interest Advisory
Committee

Richard Sims
Legislative Research Commission

Dr. Hugh Spencer
University of Louisville

Jackie Swigart
Department for Natural Resources
and Environmental Protection

Michael Taimi
Department for Natural Resources
and Environmental Protection

Marlin Volz
Public Service Commission

Jack Wilson
Department for Natural Resources
and Environmental Protection

Interviewees and Workshop Participants

OHIO

Mike Adams
Department of Energy

D. David Altman
ORSANCO Public Interest
Advisory Committee

Robert A. Beck
Cincinnati Gas and Electric Company

Michael Chatham
American Electric Power Co.

Jolene Genser
ORSANCO Public Interest
Advisory Committee

Karen Hollweg
Audubon Society

Robert F. Howarth, Jr.
Governor's Office

Roger Hubbell
Department of Natural Resources

Dr. Edmund G. James
Economic Development Division

Howard Johnson
Environmental Protection Agency

Jon Kelly
Public Utilities Commission

Peter Kochman
Department of Energy

James McAvoy
Environmental Protection Agency

William McGorum
Power Siting Commission

Dane Mazzitti
American Electric Power Co.

Theodore Nagel
American Electric Power Co.

Wayne Nichols
Environmental Protection Agency

David Northrup
Attorney General's Office

G.M. Pemberton
Cincinnati Gas and Electric Company

Robert Reeves
American Electric Power Co.

Fred Sener
ECAR Power Siting Committee

Sen. Sam Speck
State Legislature

Rex Sprague
Environmental Protection Agency

Robert V. Stamper
Power Siting Board

Glenn Stevenson
Legislative Research Commission

Robert Teater
Department of Natural Resources

Adam Wagenbach
Power Siting Board

Jeff White
American Electric Power Co.

Carl Wilhelm
Environmental Protection Agency

Ron Verian
Power Siting Commission

Interviewees and Workshop Participants

PENNSYLVANIA

Tom Beauduy
Joint Legislative
Conservation Committee

Richard Boardman
Department of Environmental
Resources

Ann Cardinal
ORSANCO Public Interest
Advisory Committee

Joe Cavello
Duquesne Light Company

Brian Clark
State Legislative Staff

Paul W. Emler, Jr.
Allegheny Power Service Corp.

Sen. D. Michael Fisher
State Legislature

Kate Foran
Staff, State Legislature

Robert Freedman
Group Against Smog and Pollution

Josie Gaskey
Allegheny Power Service Corp.

Nathaniel Goldhaber
Lt. Governor's Office

James Hambright
Department of Environmental
Resources

J. Wick Havens
Department of Environmental
Resources

Norman Howenstein
Southwest Pennsylvania Regional
Planning Commission

Patricia H. Hyde
ORSANCO Public Interest Advisory
Committee

Herb Jacobs
Governor's Energy Council

Cliff Jones
Public Utility Commission

Sen. J. William Lincoln
State Legislature

Walter A. Lyon
Department of Environmental
Resources

William Middendorf
Department of Environmental
Resources

Pat Pelkofer
Group Against Smog and Pollution

John Rocco
Duquesne Light Company

Dr. Ed Rubin
Carnegie Mellon University

Frank J. Schrey, III
Department of Commerce

Larry Schweiger
Joint Legislative Air and Water
Pollution Control and Conservation Comm

Robert Shinn
Governor's Energy Council

Gary Triplett
Department of Environmental
Resources

Barbara Updike-Petro
Staff, State Legislature

Rep. James Wright
State Legislature

Interviewees and Workshop Participants

WEST VIRGINIA

Dennis M. Abrams
Attorney General's Office

Carl G. Beard, III
Air Pollution Control Commission

Senator Carl Gainer
State Legislature

R.P. Gerke
Public Service Commission

Edgar Henry
Water Development Authority

Mark Jasper
Legislative Services

Sandra Kerbow
ORSANCO Public Interest Advisory Committee

Ken McBee
Air Pollution Control Commission

Dandridge McDonald
Public Service Commission

Ann Rick
League of Women Voters

David Robinson
Department of Natural Resources

Mark Scott
Office of Economic and Commerce Development

Ron Sikowsky
Huntington Regional Planning and Development Council

Interviews and Workshop Participants

Regional/Federal

Jerry Albert
East Central Reliability Council

Richard Armstrong
U.S. Army Corps of Engineers

Tom Gribbs
Region IV, EPA

John Hagan
Region IV, EPA

Dave Hopkins
Region IV, EPA

Owen Lentz
East Central Reliability Council

John Mitchell
U.S. Army Corps of Engineers

Dave Quinn
Tristate Air Committee

Steve Thrasher
Ohio River Basin Commission

E.4 REGIONAL ORGANIZATIONS CONTACTED DURING THE COURSE OF THE STUDY

New England Governors' Conference

Midwest Governors' Conference

Southern Governors' Association

Western Governors' Conference

Western Governors' Policy Office (WESTPO)

Coalition of Northeastern Governors (CONEG)

Southern Growth Policies Board (SGPB)

Western States Water Council (WSWC)

Interstate Coal Task Force (ICTF)

New England States Coordinating Air Use Management (NESCAUM)

Ohio River Basin Commission

New England River Basin Commission

Delaware River Basin Commission

Susquehanna River Basin Commission

Western Interstate Energy Board (WIEB)

Southern States Energy Board (SSEB)

Ohio River Valley Water Sanitation Commission (ORSANCO)

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The Council of State Governments

The Council is a joint agency of all the state governments—created, supported, and directed by them. It conducts research on state programs and problems; maintains an information service available to state agencies, officials, and legislators; issues a variety of publications; assists in state-federal liaison; promotes regional and state-local cooperation; and provides staff for affiliated organizations.

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NEW STUDY RECOMMENDS STATE/INDUSTRY COOPERATION

June 18 (Lexington, Ky.)---Early cooperation among states and industry can save time and money in economic, environmental and political problems that arise during the siting of electric generating and synfuels plants, coal slurry pipelines and other major energy projects, according to a study recently completed by The Council of State Governments. The location of energy facilities can create or aggravate a host of serious problems that often cross state boundaries complicating their resolution. Currently, when more than one state is involved, federal agencies and the courts are turned to for solutions - - a costly and time-consuming process.

The Council's 16-month study, sponsored by the Ohio River Valley Water Sanitation Commission (ORSANCO) focuses on the Ohio River Valley where a concentration of energy facilities both existing and proposed have created multistate controversies and delays. The study recommends ways for states and industry to deal with these problems using informal procedures and existing laws and institutions. The recommendations are relevant to any state dealing with new energy facilities and are particularly pertinent as increasing responsibility for environmental protection is transferred from the federal government to the states.

In The States and Energy Siting: Cooperation in the Ohio River Valley (Volumes I and II), CSG recommends that states establish procedures for communication, resolving conflicts and assuring cooperation between the affected states,

- more -

the energy industry, and citizens groups. The report provides insight into the ways states work together to solve a variety of mutual problems (Vol. I) and lists current federal and state roles in energy facility siting and includes technical and background papers (Vol. II).

As a result of the report, the Council and ORSANCO are sponsoring a symposium - - "Economics, Environment and Energy in the Ohio River Valley" - - to encourage governmental, private sector and citizen participation in developing a blueprint for action.

ORSANCO's eight member states -- Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, West Virginia and Virginia -- have worked to provide a forum for interstate cooperation for water pollution control since the organization was formed in 1948. The Council of State Governments is a non-profit, nonpartisan, research, information and service organization that has represented all the states on a national and regional basis since 1933.

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(EDITOR'S NOTE: The States and Energy Siting: Cooperation in the Ohio River Valley (Vol. I-RM 708, \$8; Vol. II-RM 709, \$8) is available from the Order Department ATT:NR, The Council of State Governments, P.O. Box 11910, Lexington, Ky. 40578 (606) 252-2291. An executive summary is available/attached for your information.)

IN PROGRESS

Institutional Mechanisms and Siting Major Energy Facilities

Recommendations for Meeting the Challenge along the Ohio River

- Hold** a Regional Symposium to encourage greater public awareness of the significance of energy development to the Ohio Valley
- Establish** a Central Communications Channel, serving as a multistate information clearinghouse for policy concerns and technical issues
- Use** the National Environmental Policy Act (NEPA) process as an effective procedural vehicle for solving energy facility specific/multistate problems.
- Establish** an Environmental Mediation Center to facilitate communication and negotiation among industry, public and governmental disputants in selected energy and other environmental conflicts
- Use** a Multistate Forum to encourage identification and continuing discussion of shared regional issues in the Valley that call for cooperative action
- Set Up** a Regional Association of State Air Quality Officials to identify and assess shared and long-term air quality concerns
- Improve** each state's ability to anticipate and address regional issues through development of state policies and goals for energy and natural resources development

Background

Multistate concerns in major energy facility siting along the Ohio River corridor surfaced in the early 1970's and resulted in a study of thermal discharges to the Ohio River, published by the Ohio River Valley Water Sanitation Commission (ORSANCO) in December, 1975. In the late 1970's plans for major electrical generating and synfuels plants in the Ohio Valley were announced, and the commission's concern with water quality and related issues highlighted the lack of institutional mechanisms which would address the multistate issues of environment, energy and meeting economic needs in the Ohio Valley.

Meanwhile, the drive toward U.S. energy self-sufficiency focused on geographical areas with abundant water, proximity to coal fields and population centers, trained workforce and established transportation routes. The Ohio River Valley was targeted as meeting these qualifications.

An informal survey of natural resources and environmental protection personnel of the eight state members of the commission summarized state energy facility siting regulations and indicated a recognition of the need for some institutional mechanism which could address multistate siting issues. A project was then initiated with the support of a grant from the John A. Hartford Foundation, New York City, in cooperation with the Council of State Governments, Lexington, KY, to explore and recommend feasible and practicable institutional arrangements for addressing multistate siting issues.

The first phase of the formal study, which began in January, 1981, included contact with a broad spectrum of state officials and legislators, industry and citizens groups. The goal was to gather additional information so that several alternative mechanisms would emerge as candidates for further consideration and refinement.

The Ohio River Valley Water Sanitation Commission in cooperation with the Council of State Governments is proceeding with the development of a **symposium, Environment, Energy and Economics in the Ohio Valley**. The symposium will combine opportunities for informal exchange of views with structured discussions of problems, options and proposed actions by government officials, industry and citizens groups. Private funds are being sought to underwrite

What actually resulted, however, was a lack of agreement on any one mechanism, but a recognition of the need for: 1) a forum to communicate and discuss shared and environmental concerns; 2) state leadership efforts if federal intervention were to be avoided; and 3) economic development and sound management of natural resources. A second phase of intensive workshop

discussions with state officials and legislators at the capitals of the six states along the Ohio River mainstem further underscored that these states were most likely to accept a relatively informal communications-oriented mechanism. Similar views were reflected by the power industry.

The major purpose of the project was to find

the cost of the symposium. The Commission has acted to establish an **Energy Roundtable** which will include representatives from the commission-member states and the federal government, Valley industries and citizens groups. The **Energy Roundtable** will serve as a multi-state forum for technical and policy issues on energy development and facilitate open and early communication in the energy development process.

one or more mechanisms that would "smooth out" the energy facility siting process and thus eliminate costly delays caused by litigation by providing opportunity for early and open communication among the government agencies, industry and concerned citizens involved. It was concluded that no one mechanism would meet these requirements. And thus, the Council of

State Governments developed the seven recommendations presented on the first page of this newsletter.

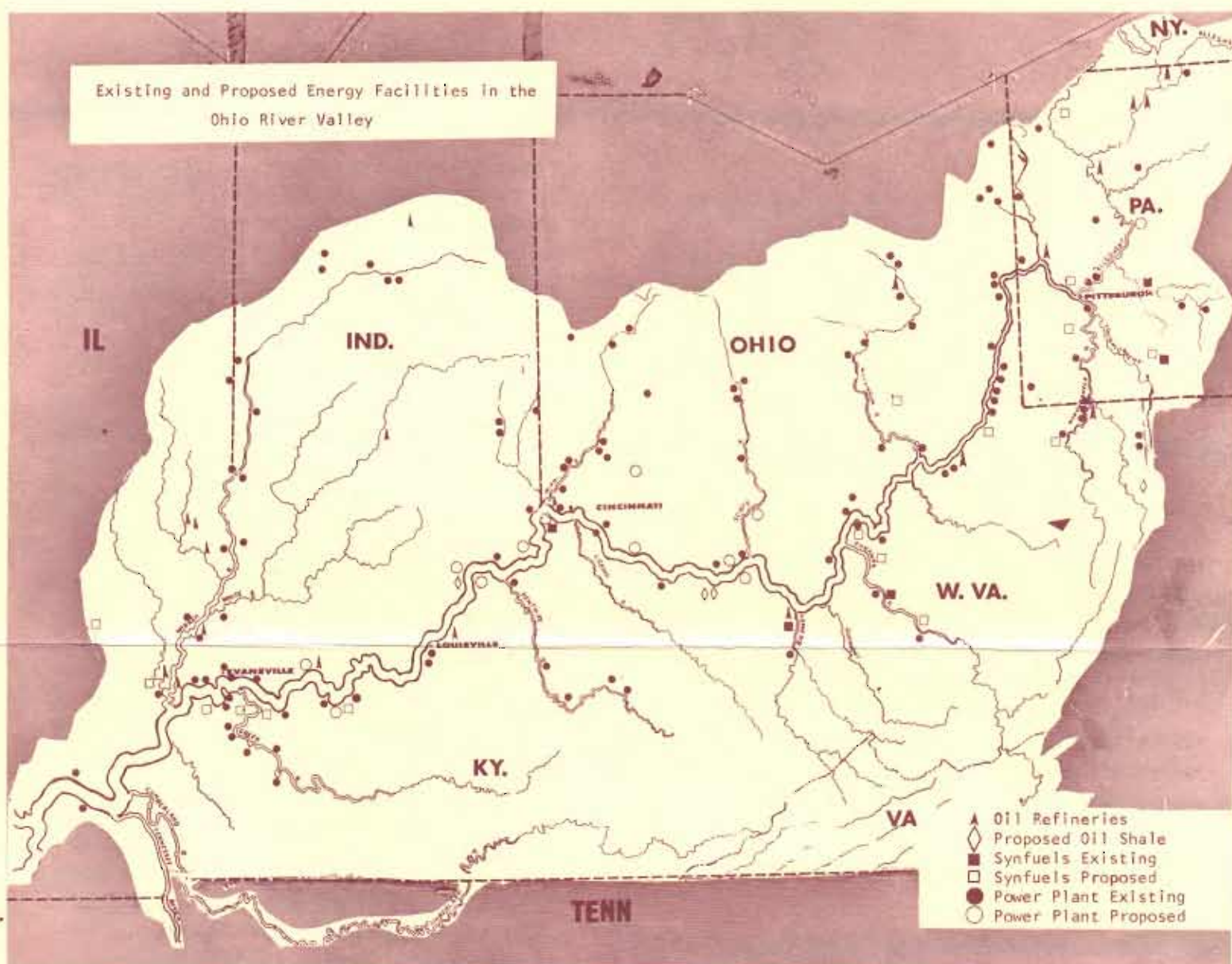
The Ohio River Valley Water Sanitation Commission commends the entire CSG report on the study to the governors of its eight member states.

Afterword

The few years since the early discussions which led to this study have brought major changes to the Ohio Valley. Energy consumption has declined; power plant construction has been postponed; federal encouragement for synfuels development has waned. States' major concerns now revolve around meeting immediate needs and doing so with decreased revenues.

However, the current difficult economic climate can serve to further the cause of regional cooperation in environmental and natural resource areas, as well as orderly energy facility development. Cooperative action among the states is a necessity — just as it was in 1948 when political, industrial and citizens leaders proposed to combat valley water pollution by forming ORSANCO. The Symposium and the Energy Roundtable are the first steps in this cooperative action.

The study report, **The States and Energy Siting: Cooperation in the Ohio Valley**, is presented in two volumes: **Main Report** (Vol. 1) and **Appendices** (Vol. 2). Each is priced at \$8.00 and is available by sending check or money order to The Council of State Governments, Box 11910, Lexington, KY 40578.



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