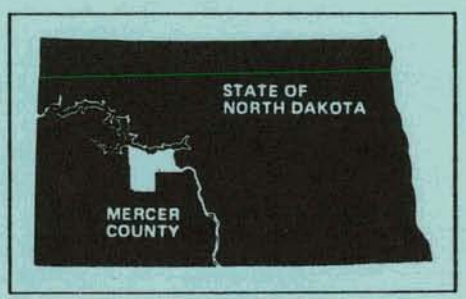
Proceedings of the Third Workshop on the Energy Development Board of Mercer County, North Dakota

Bismarck, North Dakota

November 1 and 2, 1979



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Energy Development Board of Mercer County
State of North Dakota

U.S. Department of Energy
Assistant Secretary for Conservation
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Community Systems Division

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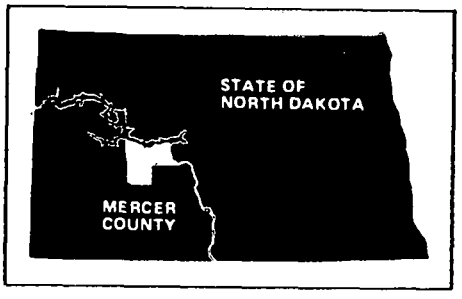

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Foreword

With the passage of the National Energy Act of 1978, the United States began a comprehensive effort to reduce reliance upon foreign oil supplies, increase production and utilization of domestic resources including coal, and implement a number of conservation strategies. U.S. reliance upon coal will increase substantially. All new power plants and major fuel-burning installations are required under the Fuel Use Act of 1978 to possess the capability to utilize alternative fuels. In addition, a large number of oil and gas-burning facilities will be required to switch to alternative fuels. These actions, bolstered by recent legislation that accelerates the development of synthetic fuels, will greatly influence the energy-producing regions of the nation and stimulate energy development in additional regions.

In attempting to meet these national goals, the major coal-producing regions of the country -- the West, Rocky Mountains, Appalachia, and Southwest -- will experience tremendous economic and community growth. This phenomenon, typically characterized as boomtown growth, brings with it a number of problems. An influx of energy development workers, service industries, tax dollars, and disposal income is often accompanied by social, economic, and political conflicts among new and old residents. Moreover, immediate needs (e.g., improvements and expansion of physical and social facilities) require time and money, both of which may be insufficient in isolated energy-producing regions that for decades have had agricultural economies.

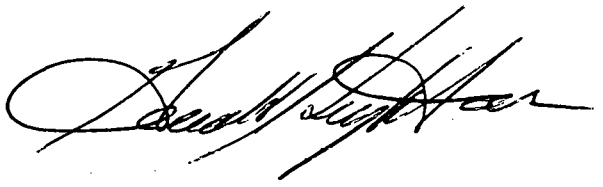
Since the early 1970s, the federal government, along with state and local governments, has been trying to solve the problems associated with boomtown growth. Financial and technical assistance, for the most part, however, have been provided piecemeal rather than in a comprehensive way. The need for remedial programs will be even more acute as the nation relies more heavily on coal. Mercer County, North Dakota, is one of the many rural regions that has recently felt the effects of energy development. There, three years ago, in response to projected growth in the county, the Department of Energy (DOE) initiated a pilot project for comprehensive community energy planning.

Mercer County is now a major producer of lignite coal. Six coal-fired plants are already operating or under construction, and three more have been proposed, including the nation's first coal-gasification plant. This tremendous growth in activity has led to many problems, such as a lack of housing and adequate social facilities for the steadily increasing population. The large financial resources needed to meet these continuing demands are currently unavailable.

To help ensure orderly growth, the local governments of Mercer County in August 1977 formed an innovative joint planning and coordinating body, the Energy Development Board of Mercer County (EDB), with funds from the Department of Energy (DOE). The EDB began working with local, state, and federal governments, industry and private-sector enterprises, to develop plans for managing Mercer County as an energy-efficient community. The EDB has developed a growth management plan that specifically addresses the county's needs; has explored economic diversification measures, including the use of coal ash in cement and power plant waste heat to heat greenhouses; and has continued to provide technical assistance to local governments on a day-to-day basis.

The EDB, the state of North Dakota, and DOE have held three annual workshops focusing on the EDB's efforts to develop a comprehensive approach to energy impact mitigation and planning. This year an additional topic was addressed. Participants representing federal, state, and local agencies dealing with energy impact assistance examined the feasibility of transferring the EDB approach to other communities faced with energy development. Despite geographical, social, and political differences in the East, West, and Southwest, workshop participants agreed that the basic components of the EDB are applicable beyond Mercer County. This transfer effort requires the combined effort of state, federal, and local groups, and pooling of available resources.

The EDB workshops are but one of several efforts to provide a forum for decision makers to discuss strategies for dealing with energy impact assistance. These discussions will be of direct benefit to the EDB and, I hope, to all decision makers involved in energy development and impact assistance initiatives. Given the significant increases expected in energy resource development in this country, I hope you have found these annual workshops to be an effective communication tool.



Gerald S. Leighton
Director
Community Systems Division
U.S. Department of Energy

Mercer County
Countryside

Photo:
R. S. Uzzell III

Introduction

As part of the overall effort to meet the challenge of rapid growth associated with energy resource development, the Energy Development Board (EDB), the Department of Energy (DOE), and the state of North Dakota have sponsored three workshops. The workshops serve two purposes: to tap the knowledge of individuals with wide and varied expertise in community development; and to promote transferability of the EDB concept. Representatives of local, state and federal governments and the private sector have met at all three workshops to discuss the problems facing the county and to suggest practical means of solving these problems.

The first EDB workshop, "Managing Growth in Mercer County, North Dakota," was held in Bismarck, North Dakota, on December 1 and 2, 1977. Participants developed a series of recommendations on growth management that served to guide the EDB in its first year. The second workshop on the EDB, held on October 26 and 27, 1978, focused on the activities of the EDB in that year. Specifically, participants discussed the growth management plan and several of its major components -- the economic diversification program, the energy conservation program, and the socioeconomic monitoring program. In addition, participants discussed a variety of mechanisms for providing impact assistance to areas undergoing energy development.

At the third EDB workshop, "Energy Development in Rural Areas -- Local Implementation of National Priorities," held in Bismarck on October 31 to November 2, participants addressed three major topics: (1) the transferability of the EDB as an organizational approach for managing energy-related rapid growth, (2) the potential for developing integrated energy-resource conservation/economic plans in rural energy development areas, and (3) federal policy and initiatives regarding energy impact assistance.

At the opening plenary session, North Dakota Lt. Governor Wayne Sanstead stressed the need for developing our energy resources through the positive blending of the goals of cities, counties, and states with the national goal of continued economic growth. This can best be accomplished by a partnership approach to solving problems -- by federal, state, and local governments -- and will result in a "new growth" society rather than a "no growth" society.

Ed Helminski, Deputy Director of the White House Management Task Force on Energy Shortages, praised the working of the EDB and emphasized the need for more such organizational approaches that involve all levels of government -- local, state, and federal -- in the decision-making process. He also stated that the major impediment this nation faces in developing adequate energy sources is not the lack of available technology, but the lack of mechanisms that effectively allow all interested parties to participate in making decisions about the development of energy resources.

The second segment of the slide documentary, "Change: Mercer County, North Dakota" was shown; it illustrated many of the changes taking place in Mercer County because of energy development, as well as the EDB's role in managing the effects of rapid growth and implementing energy-efficiency programs and demonstration projects.

Following these presentations, each participant served on one of the following panels:

Panel 1: Federal Policy and Initiatives for Energy Impact Assistance

Panel 2: Integrated Energy Conservation/Economic Development Planning

Panel 3: Transferring the EDB Organizational Approach.

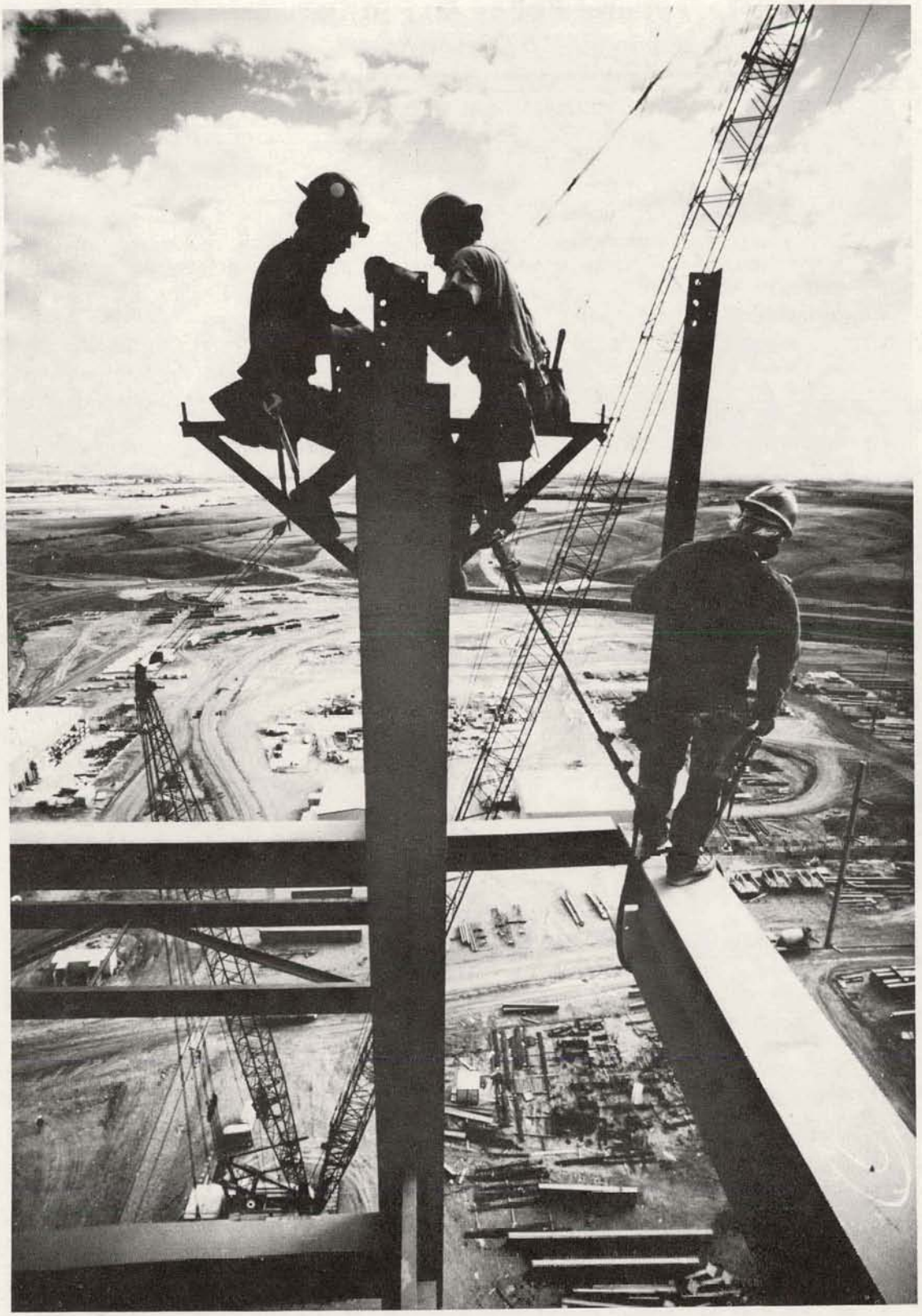
A panel moderator guided the discussions of approximately 30 participants and a team of six panel members. As part of the discussions, recommendations were formulated to not only help Mercer County and the EDB determine and achieve future goals, but also to assist other areas affected by rapid growth from large-scale energy development. The panel moderators presented a summary of each panel's discussion and recommendations at the closing plenary session.

At the closing plenary session, Gerald S. Leighton, Director of DOE's Community Systems Division, emphasized the need for conservation and more efficient use of our existing resources. He also spoke of the opportunity for a renewed partnership between the public and private sectors, working together to solve the energy problems our nation faces.

The Governor of North Dakota, Arthur A. Link, also spoke at the closing session, emphasizing the increased development of renewable energy resources. He particularly stressed the need for exploring the possibilities for alternative energy sources such as methanol and other liquid fuels, and the importance of our country's use of such alternatives in order to become an energy-independent nation. He commended the efforts of the EDB regarding the more efficient use of our energy resources, mentioning in particular the EDB fly ash and energy conservation initiatives.

In addition to the two days of meetings on November 1 and 2, Wednesday, October 31, was designated "Mercer County Day." EDB staff conducted a tour of Consolidation Coal Company's Glenharold Mine, Basin Electric's Leland Olds Power Station, and the sites of two power plants under construction. Participants also visited several communities that have been severely affected by rapid growth to observe the ways those communities have dealt with energy development. The tour provided an excellent opportunity for participants to view firsthand the energy development in Mercer County; review the results of the EDB's activities; and meet with local officials, citizens, and industry representatives.

The recommendations of the three panels are summarized in the following report. Additional information on the workshops and the EDB is provided in the appendixes. Appendixes A, B, and C present the texts of Lt. Governor Sanstead's introductory address, Mr. Helminski's keynote address, and Mr. Leighton's closing remarks. Appendix D contains a complete list of workshop participants. Appendix E is an annotated bibliography of reports produced by the EDB.



Steelworkers Assembling
Superstructure of Power Plant
in Mercer County

Photo:
R. S. Uzzell III

Panel 1: Federal Policy and Initiatives for Energy Impact Assistance

Summary of the Discussion and Recommendations

Panel 1, led by Lieutenant Governor Wayne Sanstead, focused on federal policy and initiatives regarding energy impact assistance. Several recommendations were offered to improve existing impact assistance programs and influence the nature of pending or future programs. Specifically the panel recommended that:

- The current Section 601 program, jointly administered by the Farmers Home Administration (FmHA) and DOE, should be simplified with respect to designation criteria and application procedures, revised to include Indian tribes as eligible for assistance, and funded in the amount of $120 million for FY 1980. The panel also suggested that Congress, especially the House, needed to be impressed with the critical need for appropriating the full $120 million versus the $75 million currently considered.

- Existing federal programs should be fine-tuned to reflect the needs of energy-impacted areas; in addition, local areas should increase the practice of "packaging" several federal programs into their project applications.

- Time frames for channeling impact assistance to communities should be consistent with the financial assistance lead-time being considered for facilities in the energy mobilization board legislation.

- Focal points (coordinating organizations) for energy impact assistance should be established at all government levels – federal, state, and local.

- Improved communication should be established regarding the wide array of local mechanisms and/or approaches for dealing with impact related to energy development (e.g., through the Federal Regional Councils of each federal region).

Background

As a result of recent developments in worldwide energy production, there has been an increase in energy resource development throughout the United States. Over the next 15 years, the federal government proposes to invest billions of dollars in energy supply initiatives. At the same time, the private sector plans to step up its resource development activities as a result of energy price deregulation. These forces, which are bolstered by pending legislative proposals, will ensure a heightened level of energy production. This increase will create a host of problems for many geographical areas of the U.S., especially in the rural, energy-rich regions.

Several federal legislative initiatives and programs have been proposed to mitigate the potential impact of energy growth on such regions. Senator Gary Hart attached his Inland Energy Impact Assistance bill to S1308 (synfuels legislation) in an effort to ensure federal support for reducing the effects of resource development. Senator Wendell Ford has proposed similar legislation.* (Subsequently, the bills were detached from the synfuels legislation and are presently being considered separately.) Some of these programs have already been implemented. For example, Section 601 of the Powerplant and Industrial Fuel Use Act authorized an energy impact assistance program that is being administered jointly by FmHA and DOE. FmHA distributed approximately $20 million to states and communities in FY 1979 and is expected to appropriate more in FY 1980.

Before the 601 program was authorized, several federal agencies supported energy impact assistance efforts on a discretionary basis. For example, the Department of Housing and Urban Development (HUD) relied on its 701C community planning authority and funds to ascertain how western communities could plan for boomtown growth. The Economic Development Administration (EDA) has also been involved in boomtown planning, with current initiatives tied primarily to existing grant programs or discretionary funds.

Several states have also been involved in energy-related growth management. Under the 601 program, local participation is triggered by the governor's request to DOE for impact designation. Funding priorities are set by the states, in cooperation with FmHA, and most of the funds flow to the communities. States also control revenues from severance taxes, and are thus in a position to offer some financial assistance to localities. Few states, however, have the technical resources and staff to handle these problems alone.

In the public arena, several groups have **de facto** responsibility for assisting communities with energy-related growth -- namely, the National Governors' Association, the National Association of Counties, and regional commissions. The Governors' Association, for example, worked with FmHA to develop the impact assistance program regulations. However, because these groups have limited technical and financial resources, their involvement is usually linked to federal funding.

Discussion

Given this overview of past, current, and pending energy impact assistance programs, Panel 1 addressed several issues:

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* Both the Hart and Ford legislation authorize the Secretary of Agriculture (and through him FmHA) to distribute $325 million in federal seed money during FY 1980 and $360 million during each of the following four years to support energy-related growth management and planning. FmHA will also be responsible for coordinating the activities of other federal agencies.

1. How can existing federal programs that provide technical and financial assistance to affected communities be coordinated to reduce duplication or determine where new programs are needed?

2. How can state and local officials ensure that their interest and concerns are considered in developing federal policies on energy impact assistance?

3. While providing the necessary front-end financial assistance to energy-impacted regions, how can federal energy impact assistance programs also best ensure local technical expertise to properly plan for and utilize these funds?

4. Should pending energy impact assistance legislation emphasize a loan or grant approach to funding? Who should play the lead implementation role -- federal, regional, state or local government?

5. Should federal programs address only short-term needs (e.g., impact mitigation) or include long-term planning (e.g., economic diversification programs)?

Although these issues were not discussed in sequence, most of them were addressed in either a presentation or follow-up discussion.

The initial presentation and most of the discussion centered on current federal impact assistance programs and their improvement. In particular, the panel members offered suggestions to improve the Section 601 program. These included simplifying current eligibility designation requirements and application procedures, making Indian tribes eligible for assistance under the program, and ensuring that Section 601 is funded completely to the level of its $120-million FY 1980 authorization.

The participants also suggested that other existing federal aid programs (e.g., in HUD, EDA, EPA) should be finely tuned to reflect the unique needs of communities affected by energy growth, with regard to both the types and timing of required assistance. The Federal Regional Councils (FRCs) were identified as being particularly suited to carry out this "fine-tuning" effort, by increasing awareness of relevant programs and assessing their effectiveness. A panel member also noted the potential for tapping into other federal programs by "packaging," or combining, several of these programs into a single project application. Panel representatives from Colorado and Wyoming noted that this practice proved effective for similarly affected areas in those states.

The panel also addressed the timing aspect of providing impact assistance funds to communities. One panel member pointed out that Mercer County was fortunate that the Great Plains Coal Gasification Project had been sufficiently delayed so as not to have had a simultaneous impact on the local communities with that of the power plants now under construction. He warned that not all locales will be so fortunate, especially with the accelerated facility timetables discussed in the energy mobilization legislation. The panel concluded that the timing of impact assistance for community planning and infrastructure needs, that is, for public planning and facilities, should be consistent with the timetable of the scheduled energy facility responsible for the impact. In addition, such funds need to be expedited and channeled more directly to the affected local regions or communities.

The panel also discussed the pros and cons of whether federal legislation and programs should emphasize a loan or grant approach to energy impact assistance funding. The issue at hand is that most communities affected by large-scale energy development will eventually reap high tax revenues when power plants become operational; however, they are limited in generating revenues during the plant construction period (typically three to six years and coincident with the greatest impact) by state-legislated bonded indebtedness ceilings. The panel agreed that grants were more desirable than loans to finance this deficit period, but made no specific recommendation. The participants also discussed prepayment of taxes by the energy industry as a potential means of narrowing the near-term cost/revenue gap, but decided that this measure was not in the best interest of local communities.

As a last subject, the panel talked about the need for both state and local governments to establish focal points or organizations to coordinate their energy impact assistance efforts. The panel agreed that these specialized coordinating bodies can more effectively assist the development of federal policies and programs, and can subsequently serve as the technical focal point for planning and utilizing energy impact assistance funds. In addition, the panel stressed the need for a complementary focal point at the federal assistance efforts, and suggested an organization similar to the EDB at the local level. The panel offered the A-95 review process and the FRCs as respective examples of organized focal points for the state and federal levels.

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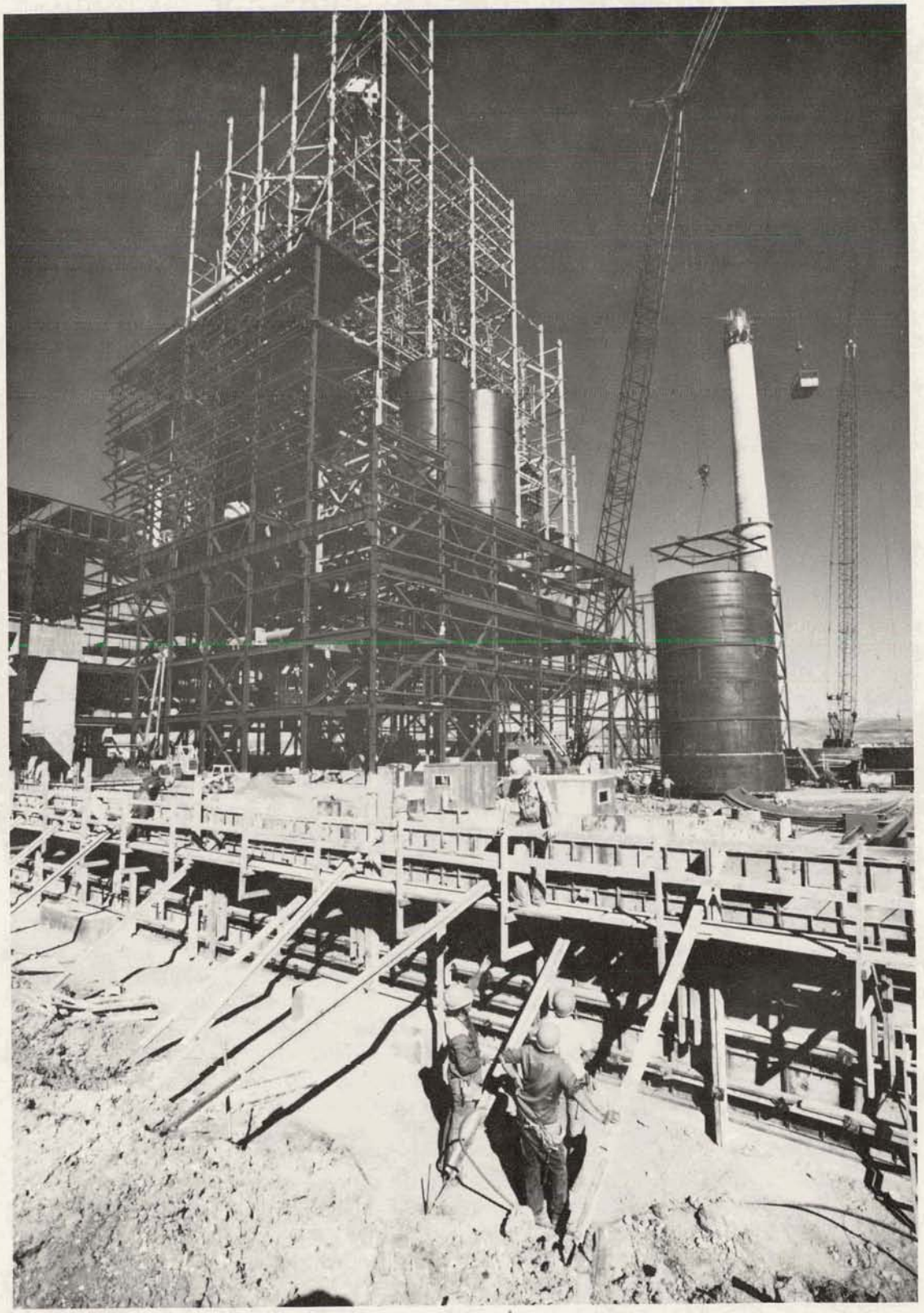

Antelope Valley Station I
Under Construction in North
Central Mercer County

Photo:
R. S. Uzzell III

Panel 2: Integrating Energy Resource Conservation and Economic Development Planning

Summary of the Discussion and Recommendations

Panel 2, led by Mr. Jacob Kaminsky, discussed new opportunities for economic diversification in rural energy development regions. In particular, the panel discussion focused on planning efforts to integrate resource conservation and economic development, recommending five steps that the EDB should take to attract energy-related industries to Mercer County:

- Identify waste and waste technologies that are available and feasible
- Determine the types of industries the county desires
- Determine the types and amounts of energy required by the industries
- Fix a favorable power rate for industries
- Make financing available to new industries.

The panel concluded that, given the usual "boom and bust" cycle of energy development, planning for energy resource and economic development must be integrated. In particular, Mercer County must plan in advance for the decline side of energy development; new industries should be attracted to Mercer County while energy development is still growing. The panel recommended that future energy development boards hire an industrial developer or marketing specialist to coordinate economic activities.

Background

As domestic demand for energy grows, development and exploitation of our natural resources increases. Much of this development is likely to take place in the western portion of the United States; in fact, of the 41 counties identified by DOE as potential sites for synthetic fuels development, 26 are in Montana, Wyoming, Colorado, and North Dakota. Almost all these counties have populations under 50,000 and will be susceptible to "boom and bust" cycles; many have undiversified economies based solely on agriculture or mineral extraction. Craig, Colorado, and Rock Springs and Gillette, Wyoming, have already experienced this cycle.

The Energy Development Board (EDB) of Mercer County, North Dakota investigated the feasibility of diversifying its economy by attracting industries that could use the energy already being developed in the county. The EDB found that several industries could profitably operate in the county using by-products of energy development as inputs to production. For example, greenhouses and fish farms could be heated for a year-round growing season by power plant waste heat; concrete products (e.g., block,

fenceposts) plants could profitably use coal ash to replace cement. These industries would have the added advantage of utilizing energy that would otherwise be lost, as waste heat or ash. (For lignite-supplied power plants, the efficiency of coal utilization is 30-40 percent; the situation is similar for other types of coal-based power plants.) Given the nationwide trend of increasing use of coal for power generation, the potential for conserving coal resources is enormous.

Rural, isolated areas may also see energy-related industrial development as an effective way to retain the younger generation. Although rural areas have historically had a low level of economic activity, energy development could spin off industries that would build up local economy slowly but steadily.

Discussion

In discussing the possibility of integrating energy conservation and economic diversification goals, panelists considered the following issues:

- Can economic diversification in rural areas be founded on energy development?

- Would energy development be a sufficient impetus for the establishment of permanent, diverse business in an area that previously had not had any competitive advantages?

- Is the potentiai for conserving energy resources great enough to provide a key part of economic diversification programs? Is a "net energy" gain possible from using waste products in industries or business? In what types of industry can waste energy be used? What percentage of waste energy is likely to be recaptured through such an economic development program?

- If economic development based on energy development is feasible, should it be attempted? Is such development beneficial to the community, or would it be better to simply maintain an agricultural economy?

- Economic development based on energy development will most likely involve energy-intensive industries or industries that use by-products of resource extraction or power generation. These industries may damage the environment (e.g., through air or water pollution). Is it appropriate to try to attract such businesses, even if they are the only ones available to stimulate economic development and diversification? Can such industries provide the proper mix of jobs to fit the skills of the local work force, or will they simply result in the importation of skilled labor from other labor markets?

The panel first discussed several opportunities for utilizing waste products from power plants in Mercer County:

Fly Ash Utilization. The panel reviewed the work that the EDB, along with the University of North Dakota, has done on fly ash as a building material. Most of the power plants under construction now in North Dakota have limited disposal mechanisms for their waste. By the time the plants are completed, fly ash will be readily available in abundant quantities. The EDB and the University of North Dakota are looking for a way to effectively utilize the waste and at the same time diversify the economy. The panel recommended that the EDB continue its work in fly ash testing, but concluded that fly ash is not yet economically feasible or ready for commercialization. The panel discussed the role of the EDB in future fly ash and other product development and recommended that the EDB decide whether it should be actively involved in product development and testing or restrict its efforts to soliciting industries to the county, which would develop products.

Greenhouses. Much work has been done using waste heat from power plants to heat greenhouses. In areas where waste is plentiful and where greenhouses are profitable, the method is cost-effective. However, the panel concluded that greenhouses are not feasible in Mercer County because of competition from other cost-effective markets.

Aquaculture. Although the panel did not discuss aquaculture at length, it recommended that the EDB explore additional opportunities for aquaculture in Mercer County, as it is a promising means of waste heat utilization.

Recreation. The panel recommended that recreational development be part of an economic development plan for the county. Because the county is located near Theodore Roosevelt National Park and Lake Sakakawea, this recommendation is feasible. The EDB has conducted preliminary studies to determine what facilities and services would be necessary for a successful recreational area.

Other Economic Diversification Opportunities. The panel recommended that the EDB should increase its efforts to select and evaluate key waste products in Mercer County (e.g., sulphur, ammonia, bottom slag, cyclone slag, sludge, and scoria).

Involvement of Other Institutions. The panel also heard reports on other institutions' activities in waste utilization:

- The University of North Dakota is testing a mixture of fly ash and bottom slag for use as a roofing material and a mixture of fly ash and portland cement as a substitute for asphalt in paving.

- Northern States Power has utilized waste heat in greenhouses.

- The Tennessee Valley Authority has hired a full-time industrial developer to work with a county to help locate industries that could use waste heat from power plants. TVA has also conducted experiments involving the use of waste heat for greenhouses, aquaculture, soil warming, and reclamation of livestock waste.

- The North Dakota Department of Business and Industrial Development is identifying industries that could locate in Mercer County.

- The Economic Development Administration (EDA), U.S. Department of Commerce, provides planning, technical, public works, and business development assistance to communities interested in energy-related economic diversification. EDA has provided funds for a market feasibility study for fly ash in Mercer County.

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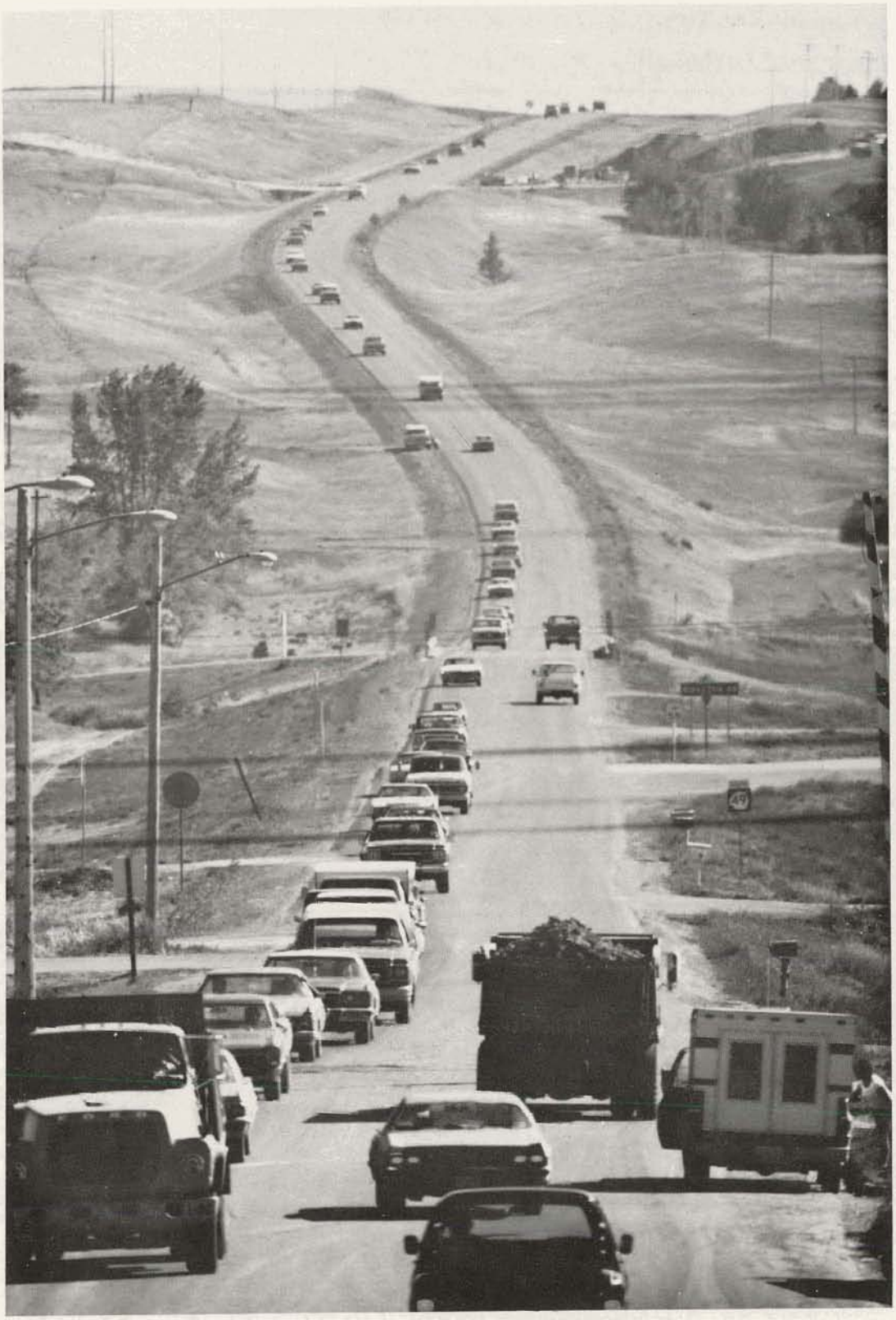

A New Phenomenon in Mercer County -- Rush Hour Traffic on the Outskirts of Beulah

Photo:
R. S. Uzzell III

Panel 3: Transferring the EDB Organizational Approach

Summary of the Discussion and Recommendations

Panel 3, led by Tom Curtis of the National Governors' Association, focused on the transferability of the EDB approach to other areas, notably, Eastern, Western and Indian lands faced with energy resource development. The panel identified and subsequently recommended that five elements be incorporated into any organizational entity (whether it be ad hoc or part of an existing government) dealing with energy-related growth. These are:

- Coordination and control of planning and management at the local level
- Representation by all parties of interest, including elected officials, local residents, and industry
- Adequate financial and professional expertise to support planning activities
- Statutory authority and/or credibility
- Mechanisms to deal with conflicting priorities and interests.

The panel, cognizant of differences in the political and social environments of other areas facing energy-related growth, agreed that information on both the EDB approach and development process could assist other local officials in establishing similar programs for impact mitigation and growth management. Although some modification of the EDB concept will be necessary at the local level to accommodate variations in legal authority, energy impact issues, and financial resources, the EDB offers a comprehensive approach.

Background

The growth of a community is normally a gradual, organic process. The growth triggered by energy resource development, in contrast, often requires immediate, rapid expansion of existing community facilities. This boomtown phenomenon not only strains the physical facilities of the local community (i.e., housing, sewers, roads) but also creates social, political, and economic problems. These problems warrant a special organization to minimize disruption, ensure effective management of resources, coordinate all the major participants, and provide leadership in carrying out mitigation activities.

The EDB, which derives its authority from the Mercer County Energy Development Agreement and existing North Dakota legislation, provides an excellent example of a comprehensive approach to energy impact problems. Mercer County is a rural, somewhat isolated community that

has experienced rapid growth as a result of several energy supply projects. As a joint-powers board composed of representatives from the six cities in the county, five school districts, and the county government, the EDB was formed in August 1977 to coordinate energy-related growth at the local level. It has been operating for two years to improve the quality of community development and promote energy conservation. As currently structured, the EDB can develop a general plan, negotiate financing within the constitutional debt limits of its constituent governments, and monitor the construction of public facilities. As such, the EDB provides a valuable model for new organizations that must deal with similar issues.

In addition to the EDB, there are several other approaches to energy-related growth. For example, local task forces have been established in Colorado and Wyoming to help residents define their development priorities, improve communication between energy industries and local residents, and allocate costs of required improvements. These are primarily voluntary organizations capable of only recommending but not implementing solutions. There are other local-state mitigation efforts which have been organized to deal with a particular problem (e.g., lack of school facilities), but their narrow focus limits their ability to deal with the broad range of impact problems.

Discussion

Using the EDB as a model organization for dealing with energy-related growth, panel members composed of federal, state, and local planners discussed a variety of political, economical, and legal issues that influence its effectiveness and development. These issues included:

- Are existing local governments organizationally and legally equipped to deal with energy impact problems and programs, or, as in the case of the EDB, should new entities with expanded powers be established?

- If a new planning body is required to manage growth, can local governments develop the framework needed without technical and financial assistance from either the state or federal government?

- What type of federal and state assistance will be required to transfer or replicate the EDB in other communities? Are there any components of this transfer which can be done without outside assistance?

- Given the greater technical and financial capabilities of state governments, are they doing enough to assist local communities or are they taking a reactive position?

- To what degree should energy industries be involved in the local organizational approach?

- What lessons can be learned from the developmental process of the EDB that can help other energy-impacted or targeted communities?

Panel members addressed these issues when sharing experiences related to the federal, state, and local handling of energy impact problems. The representative of the Wyoming State Planning Office discussed a different or contrasting approach to the EDB concept. The state of Wyoming was designated to handle energy impact problems and assume the leadership role. Task forces working with local governments and industry were established to identify problems and develop strategies for dealing with physical and social facility construction. These task forces are composed of state and local government staff, industry residents, and other parties at interest. Local contributions are required by the state to help finance mitigation activities. In order to deal with some of the conflicts of interest, the state has limited the number of construction employees allowed at one site, has required financial assistance for infrastructure improvements and established other standards. The Wyoming approach incorporates several of the key elements recommended by the panel; however, state and local governments share in the overall control and coordination of efforts.

The federal approach to energy impact mitigation, as described by a member of the Federal Regional Council (FRC), is compatible with the EDB concept. The FRC's role is that of a mediator; rather than prempt local efforts, the FRC Energy Staff assists the localities in securing financial and technical expertise. The FRC has worked closely with the EDB throughout its development and has already transferred some of its key elements -- in whole or part -- to other communities.

Several panel members were concerned about the capability of the local organization -- be it part of an established entity or an ad hoc group -- to deal with stress. This concern echoes the panel's recommendation that adequate statutory authority be provided to the impact mitigation planning body; otherwise, the organization will never move beyond identification of the problems into the implementation phase. The EDB approach, given its joint-powers authority, provides a vehicle for both planning and implementation. On the issue of transferability, panel members and participants were concerned how the EDB could be replicated, given differences in local political circumstances. Although there are numerous differences between Appalachian communities and western communities, for example, that could limit transferability, one panel member suggested that both the board's organizational approach and development process be shared with other communities.

Many communities do not know the steps involved in dealing with energy-related impacts. These communities could benefit from both the current structure of EDB and its development process. Several panel members supported transferring both the approach and the process to other communities, allowing individual communities to make modifications as needed.

In addition to discussing the issue of transferability, the panel and participants raised the question of whether a board should deal with energy-related impacts before they occur. Specifically, EDB representatives were questioned as to whether the EDB would ever deal with the nature and extent of energy resource development that should occur in the county, along with acting to accommodate the secondary and tertiary growth. Although this may be a desirable role for a local entity, issues of growth have traditionally been handled by private industry and/or state agencies. However, as the magnitude of growth increases with new federal energy initiatives, many localities may attempt to manage growth, as well as impacts.

One final issue debated by the panel was the role of private industry. Private industry cooperates with the EDB; however, it does not actively participate on the board. In other states -- both eastern and western -- industry is more actively involved with impact management. Although no resolution was reached, many felt that the issue should be explored in greater depth.

Appendix A: Introductory Address

Wayne Sanstead
Lieutenant Governor of North Dakota

The state of North Dakota is very much involved in sponsoring this workshop by the Energy Development Board of Mercer County. We want the state government to participate in a most meaningful way in the discussion and consideration presented here over these next three conference days. We know that the Mercer County Energy Board is working to help North Dakota make an easier transition from the basically rural and agricultural region it has been, to the important energy-producing area for our nation it is soon to become.

The development of our energy resources, I believe, is quite clearly the key to the economic future -- not only of this state and this region -- but of the entire nation. Positive benefits from energy development require understanding, courage, timing, and sound business judgment on the part of government as well as private interests, who must work together to do the best job possible in keeping the American system alive and healthy.

The cold hard facts of today must be brought home to people. Providing jobs in the community is important, not just because it brings economic well-being, but also because it is fundamental to the preservation of our entire social structure. Economic growth is not an accident of nature. It is the result of carefully thought-out risk-taking action on the part of responsible leaders who represent cooperative and corporate entrepreneurs.

To me, the proper role of government -- whether it be at the local, state, or federal level -- is to enhance the business climate under its jurisdiction, by creating and nurturing the environment within which the private sector can best work to achieve its maximum productivity and efficiency. The major objective of today's society must be based on a positive blending of the environmental goals of our cities, our counties, and our state -- with continued economic growth.

We know there must be compromises of great magnitude if any energy development program is to be successful. Federal and state governments must come up with some meaningful and consistent definitions in the areas of clean air regulations, nuclear energy, strip mining, and related issues, because in the past these definitions have all too often been conflicting and contradictory.

As Governor Link has so often stressed, at no time must we sacrifice our desire to maintain the healthful protection of human dignity and welfare or the aesthetic conservation of nature's beauty that has made our state one of the fairest in the country.

If we temper that desire with intelligence, however, I believe that energy development can live in harmony with environmental protection in North Dakota and elsewhere. This certainly requires a commitment on the part of industry to be responsible neighbors to our citizens. It requires, moreover, a commitment on the public's part to allow an economic and social environment in which energy development can be both responsible and profitable.

All too often when a situation has arisen which involves a potential threat to the environment, there has been an overreaction. This reaction has sometimes encouraged new legislation which has frequently led to counter-productive over-regulation; it is this over-regulation which has impaired the balance so necessary to healthy, equitable growth.

The formal definition of positive, industrial, and economic development should be this: mobilization of the mental, physical, and financial resources of a community to bring about the optimum of residential, commercial, industrial, and environmental growth in that community. As Shakespeare said, "Ay, there's the rub." This is because the very concept of "growth," a concept that people in North Dakota have been facing over the last few years, has come under question from some individuals within our communities, individuals who clearly consider "growth" tantamount simply to crime, pestilence, and disease.

We must face, in my view, the common realization that growth -- the very essence of life since the beginning of man -- is desirable, and from that common realization, we should proceed to work out the best and most enlightened ways in which it can take place, rather than struggling hysterically to prevent it, regardless of its merits.

I am confident we all recognize that when we will have polluted our rivers, streams, bays, and coastlines, it will not have been because of more people, but because we refused early on to accept the fact that more people simply require more facilities.

I firmly believe we can accept growth -- North Dakota has been a good example of that attitude these past years. We can prepare for it -- and we've been doing that. We can plan for it -- and we're doing that every day -- and that's why you're here today. We can build for it -- and in doing so, sustain the quality of life that we all desire. Or we can refuse to face reality -- waste our energies in complaint and other negative actions and watch in dismay as the complete quality of life is eroded.

It is not a "no growth" society we need, I think but a "new growth." A society with the capacity to preserve and restore the environment, provide opportunities for education, for cultural and recreational activities -- and most important -- provide energy, the very lifeblood of our communities today; in other words, a society possessing both quantity and quality, and providing jobs for the people.

I am confident that we can reach some of the necessary compromises in meeting our energy problems. Effective levers of government must be motivated and melded in a national policy which, when balanced with the ingenuity and initiative of the private sector, can produce for us a program which will not entail a bureaucratic binge, and will allow industry and business to attain those supplies of energy in order that they can continue to provide the job opportunities for the people of our great nation.

Over the years, economically depressed areas, cities, counties, and states didn't just happen. They were born of lack of leadership in a previous generation. Progress is not created by contented people. The future status of any area will also reflect its leadership.

You, ladies and gentlemen, are today's leaders, at the state and local level; we appreciate your participation in government. Martin Luther once stated, "The prosperity of a community depends NOT on the abundance of its revenues, NOR in the beauty of its buildings, NOR on its physical capabilities. The prosperity of a community, rather, depends on its cultivated citizens - its persons of enlightenment, education and character. Here are to be found its true interest, its chief strength, and real power." The future belongs to those who prepare for it.

Real partnership in today's complex system in intergovernmental and private-public relationships requires that all partners be involved in a significant way in the making of basic policy in the areas of each partner's concern. A partnership in which some of the partners are left to carry out policies made elsewhere is inevitably a deficient one.

The historical record shows that the best federal-state partnerships are those in which the federal government takes a positive and active role in promoting collaboration on a partnership basis. A positive federal role means cooperative research and development projects within which the states are an integral part.

I am confident that with the leadership of men and women like yourselves in government, as well as in the private sector, we will have dedicated and competent leaders who together can create an enlightened approach in meeting the energy problems of today and the future, and can act decisively in strengthening the economic and environmental concerns of our great nation.

In that sense, your participation in this conference, I think, heralds a good future for all of us.

Thank you.

Appendix B: Keynote Address

Mr. Edward Helminski
Deputy Director, White House Management
Task Force on Energy Shortages

Over the past eight weeks I've been traveling a great deal representing the White House, and it's nice to come out here and see some old faces. Having worked with a number of you over the course of the last five years, I've had the opportunity to establish and maintain some important working relationships. The type of intergovernmental relationship that is critical in developing a national energy program. We have made tremendous progress in this area, but there is still much to be done; the far-reaching impact of our energy problems requires a strong intergovernmental partnership, well-developed channels of communication, and a multi-level commitment to our national goal of energy security.

I'm not here, however, to tell you what to do. You don't need anyone from Washington to come and tell you what to do... you're already doing it and the Energy Development Board is evidence of that. Your Board is not only an exemplary initiative, but an important innovative institution. We must recognize the tremendous significance of our institutions, mechanisms, and participation in dealing with our energy problems. The energy decision-making process is not an easy or simple one. It must address and coordinate a wide range of interests and concerns. Local governments control zoning laws, states have siting procedures, and the private sector has the capital and investors. Yet, in order to reach a consensus on our national energy program, we must actively involve all of these participants in the decision-making process.

As I'm sure you've discovered, reaching a consensus on just a local energy program is not an easy thing to do -- but you've done it. Reaching a consensus on a national scale is even more difficult -- but we can do it, and we will; as a matter of fact, we must. The National Science Foundation, a few years ago, funded a variety of studies to determine what needed to be done to promote the research and development of coal. Astoundingly, the studies did not recommend that more money be put into coal development and technology. Their conclusion was, and I quote, "After two years of research we have come to one overriding conclusion. Coping with shortfalls between domestic energy production and consumption is infinitely connected to a broadened scope of participation. Only when the ways are found to accommodate the varied interests that will be participating in the decision-making will the energy crisis be resolved." This conclusion was reaffirmed two months ago in a major study by Resources for the Future: "Technology is not the problem; it's building a consensus that is the problem and we need mechanisms to build that consensus."

The Department of Energy, and particularly Jerry Leighton, have recognized not only the need to develop and support innovative institutions, but the need to devote more time to these mechanisms. Designing and implementing a means to channel energies and coordinate efforts requires special attention. We must devote as much time to building the "soft" side of energy development -- the institutional side of energy development, the state and local-federal partnership side -- as we do to building technology. I would ask that we allow institutions as much time to develop as we allow technology. I would also ask that we put as much effort into establishing these institutions as we put into technology. We're willing to sit back for years and wait for new developments in technology, and yet, as a nation, we fail to recognize the need for an overall institutional strategy.

You, however, have already demonstrated an understanding of the importance of such a strategy. Your Energy Board reflects a heightened awareness of the significance of institutional mechanisms in a national energy program and is an outstanding example for other states; in particular, the novel combination of responsibilities that stem from the different processes the Board handles. One process allows state and local governments to participate in the planning of energy development. Board members look at the consequence or possible consequences of energy development and take precautionary measures to be sure that it is responsive to what they think should be done in this area, in light of national interests and local objectives. The other process is concerned with energy efficiency and economic diversification. This process addresses the need to not only supply energy to those who need it, but also build an economic base for the state of North Dakota, Mercer County, and the local government. This is an important aspect that should not be ignored. Technological and institutional plans for energy development should be integrated into a community's general economic strategy. They should reflect a sensitivity for areas in need of diversification and be the product of local efforts, not those of Washington. The design of your Board and direction of your initiatives afford you the opportunity to structure new industries so that they can use waste energy, conserve energy, or just use the energy you are already producing now more efficiently; in turn, this will allow you to build a diversified economic base in the area.

Another very important aspect that you must keep in mind, as you discuss the ways you intend to manage energy development, is what mechanisms the federal government will be establishing to manage the National Energy Program. The President, in his energy program, proposed the establishment of two new institutional mechanisms to deal with energy development, namely, the Energy Security Corporation and the Energy Mobilization Board. Yesterday, I personally discussed with the Western Governors and the National Governors' Association language that we wanted to insert

in the Energy Security Corporation bill. The new language would essentially mandate that the Security Corporation consult with the governors on the manner in which the projects would be developed, the way they would be financed, and the way they could possibly be changed to deal with technological, financing,and environmental problems. You, however, will not be able to participate, unless, and until, you get together on the local level. You must have the capacity within state and local governments to effectively relate to these institutions.

The Department of Energy has demonstrated, and will continue to demonstrate, our willingness to work with you in establishing such participation mechanisms. It must, however, be supported in the long run by you and your local and state government. You should not rely on long-term federal assistance to do what you think you should do, and can do best, without any strings attached. I am not saying that the federal government does not have a role in this area. Rather, that you ought to take it upon yourselves to establish the core, the process, the framework, that you need for energy development in your area. For only with a program consensus will you be able to use federal money efficiently and effectively.

Let me conclude with one last point: it's one I made earlier and goes along with what you are planning. You must look at this institutional process as a kind of experiment. We need ways of communicating, we need ways of making people sit down to develop a consensus of trust, ways that the federal government can deal with states and communities, ways for the private sector to deal in a cohesive manner with state and local governments. We need these processes, but they need a chance to be developed. We are always ready to criticize an institution that fails in its first try. We cannot afford to be insensitive to new institutional difficulties. Alternatively, we must look at it in the sense that we would a new technology, in the American way of always giving something a chance to develop.

I wish the Board, and all participants in the conference, continued success in this challenging and worthwhile endeavor.

Appendix C: Closing Remarks

Gerald S. Leighton
Director, Community Systems Division
Department of Energy

Thank you. At the outset I'd like to correct a few things. First of all, I'm not fortunate enough to fund the EDB. You pay the taxes. I wish I could write a check like that. It's your money coming back to you. And it's **our** experiment, not DOE's alone. The EDB and the Department of Energy have an effort going which serves many purposes, not DOE's alone.

I'd like to take a few moments and take a little different approach to what's been discussed this morning. Let's put things in context of the question of why we have to worry about the impact of developing coal. In recent years we went from 30¢/gallon of gasoline to $1.10/gallon; and we're coping with that, and it seems to be a developing pattern. Increased cost seems to have no impact. We've gotten used to higher prices. But, what is the national cost?

At the present time, based on long-term contracts, a guaranteed price of fuel oil, we are losing about $10 million an hour - dollars leaving America, dollars that could create jobs in this country - $10 million an hour flowing out of the U.S. If we look at the spot market prices, it's more like $30 million an hour. That alone is sufficient reason to try and get away from using imported fuel oil. That's why the President set a limit on how much fuel oil will be imported. It's unfortunate, though, that a major part of the problem is that we use petroleum in the transportation area, and we can't shovel coal into cars as yet. But we can substitute in other areas, coal or renewable resources, for petroleum in the nontransportation sector that may be able to free up domestic supplies for transportation.

Many things were touched on this morning, including conservation. Conservation is not getting along without... it is making more use out of energy resources we have. When conservation is priced as an energy source, we find conservation down at a level of $2/barrel or $4/barrel, compared to imported fuel oil at $20-25/barrel. Conservation is cheap energy and, importantly, once you save that barrel of oil, it's saved. If we find a new barrel of oil someplace and use it for something now, we have to find another one. So conservation is very important. That area of conservation... developing new energy supplies, including the new energy supplies in Mercer County and throughout the West... benefits the nation as a whole; and hence, we have responsibilities in the federal government to work with local governments and states to try and alleviate the impact of such energy development. That's what this program is about. There will be made available, through impact assistance programs and through efforts like Mercer County, methodologies and processes to help.

The goal of this Energy Development Board experiment was to define methodologies and processes that could be used to help local governments deal with rapid development. Other communities may not want to take the EDB process and adopt it 100 percent. But they may take half of what happened, or some other percent, something, and work from that point on.

I just want to leave you with one or two more thoughts before we close this session. Many times the question is raised that since we were able to solve a problem like landing a man on the moon, why can't technology solve... there is no great problem. Let's stop and take a look for a minute. When we went to the moon, we did not have to face institutional problems. There was a single national goal, a single national objective. We also had a known solution. There were no unknowns in the Apollo Program -- it was a major engineering undertaking, but the technology, the approach, etc., were known.

Cost — When Apollo was completed, it was completed below budget. The economy was in good shape; we had very little inflation. Look at the situation now. Every time we make a cost estimate, we have 12 or 13 percent for inflation and no one knows what it's going to be next time. And it's self-feeding -- energy prices go up, inflation goes up, the more it will cost to arrive at a solution. And energy touches on everybody in the country. Apollo really didn't. It touched our pride, our national pride, but it didn't affect people. It wasn't an empty gasoline tank on a car; it wasn't heating for a home. We have a completely different situation, probably one that the country has never faced -- a problem that affects every industry, every home, every individual. That's what we're trying to deal with, and the cost is a very big factor.

Let me be very positive now. The energy problem also provides us with opportunities. I think every problem has its opportunities. What's the opportunity of the energy situation? It's not technology; we now have it, we'll solve the problem. We'll be independent at a point in time. But there is an opportunity right now to rediscover the roots of the nation's foundation in intergovernmental relations, if I can use that term. The partnership role between the federal, state, and local government. I think what the Mercer County approach is doing in part is helping us rediscover where we came from, what this country is all about. With the energy situation we're going to extend the intergovernmental approach, and we're going to see as we've seen in Mercer County a partnership between the private and public sectors, working together. Instead of being on other sides of the table and competing, we will be saying, "We have a common problem; we've got to work together." I think that the energy problems that we face now give us an opportunity to try to rediscover many of the things we should have been doing all along to develop a partnership.

One quick closing remark -- where does the Energy Development Board go from here? The major task now is to get the information out to other communities and that's happening. Many groups are coming in and taking from the EDB or asking the EDB to cooperate with them. We'll be co-operating at the federal level the best we can to help make sure the information gets out.

The three-year question comes up. Next year is to be the end of the original grant, the end of the federally-funded EDB. The EDB was to stand on its own by this time. It hasn't reached that point yet. We started the EDB as a research effort. There were unknowns when the program was started. If we knew the answers, we would not have undertaken the research. The objective of research is to probe those areas where there are no answers.

We expect setbacks in research. One of the major setbacks, in Mercer County, has been the delay in construction of the gasification plant. That's going to have a major impact on the county. Although we'd hoped that the EDB would be out on its own, the start-up difficulties in the delay of the ANG plant have hindered the EDB reaching a point of self-sufficiency in three years.

Over the next year, Bob Wetzel, Bob Stroup, and myself and the people in the San Francisco contracting office will be sitting around the table hammering out the next increment, the next phase of work for the EDB. There will be a little bit more of our direct financial participation until things really gel, and it goes out on its own. So with that, until next year... Thank you very much.

Appendix D: Workshop Participants

PANEL 1: FEDERAL POLICY AND INITIATIVES

Moderator:
Lt. Governor Wayne Sanstead
Federal Air Coordinating Officer
State of North Dakota
State Capitol
Bismarck, North Dakota 58505
(701) 224-2080

Paul Althoff
Energy Development Board of Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

Edsel L. Boe
Facilities Manager
ANG Coal Gasification Company
Beulah, North Dakota
(701) 873-4328

James Boggs
Northern Cheyenne Research Project
Box 388
Lame Deer, Montana 59043
(406) 477-6278

Ray Blazier*
Farmers Home Administration
Department of Agriculture
Room 5014
South Building
12th & Independence Avenue, S.W.
Washington, D.C. 20250
(202) 447-5614

Keith Burdick
Community Planning and Development
HUD Region 8 Office
Executive Tower
1405 Curtis Street
Denver, Colorado 80202
(303) 837-3207

Al DeKrey*
Planner/Coordinator
Energy Development Board of Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

Kelly Eliason
District Land Manager
Consolidation Coal Company
721 Memorial Highway
Bismarck, North Dakota 58505
(701) 255-3132

George W. Gagnon
Director of Administration
Governor Link's Staff
N.D. Governor's Office
State Capitol
Bismarck, North Dakota 58505
(701) 224-2200

Allan Garnaas
Associate
Resource Planning Associates, Inc.
1901 L Street, N.W.
Washington, D.C. 20036
(202) 452-9770

Pauline Garrett
Socioeconomic Program Officer
U.S. Department of Energy
Region VIII
1075 S. Yukon
Lakewood, Colorado 80226
(303) 234-2472

Margaret B. Gough
Billings Community Energy Program
Cumin Associates
528 Grand Avenue
P.O. Box 20762
Billings, Montana 59104
(406) 245-6144

Richard T. Greer*
U.S. Senate Committee on Environmental and Public Works
2404 Dirksen Senate Office Bldg.
Washington, D.C. 20510
(202) 224-8428

Ed Helminski
Deputy Director
White House Management Task Force on Energy Shortages
The White House
2nd West Wing
Washington, D.C. 20500
(202) 456-7152

* Panel respondents.

Charles Henderson*
Executive Director
Uintoh Basin Energy Council
255 West 100 South Street
Vernal, Utah 84078
(801) 789-2300

Steve Herbaly
Green Hill Regional Planning Commission
106 W. 9th Street
Trenton, Missouri 64683
(816) 359-5636

Dan Hickey
Energy Impact Assistance
Federal Regional Council
Region VIII
1961 Stout Street
Denver, Colorado 80294
(303) 837-2751

Gary Jacobson
Community Representative
Basin Electric Power Coop.
Hazen, North Dakota 58545
(701) 748-2249

August Keller*
Director
N.D. Coal Impact Office
State Capitol
Bismarck, North Dakota 58501
(701) 224-3188

Sharron Kelsey
Community Development Specialist
Wyoming Department of Economic
Planning and Development
Barrett Building
Cheyenne, Wyoming 82001
(307) 777-7284

Rick Kron
Project Manager
Community Systems Program
Argonne National Laboratory
9700 South Cass Avenue
Argonne, Illinois 60439
(312) 972-3992

Larry Leistritz
Department of Agricultural Economics
N.D. State University
Fargo, North Dakota 58108
(701) 237-8011

Natalie Lobe
Division of Regional Assessments
U.S. Department of Energy
Room 4117
20 Massachusetts Avenue, N.W.
Washington, D.C. 20545
(202) 376-9102

John Loucks
Exec. Director
Old West Regional Commission
201 Main Street, Sulte D
Rapid City, South Dakota 57701
(605) 348-6310

Lem Lovell
Commissioner
Delta, Utah 84624
(801) 864-2068

Donald Rapp
Los Alamos National Lab
8730 W. Mountain View Lane
Littleton, Colorado 80125
(303) 794-7418

John Rogers
Planner/Coordinator
Energy Development Board of
Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

Jon Samuelson*
Chief, Planning Bureau
New Mexico Office of State Planning
505 Don Gaspar Avenue
Santa Fe, New Mexico 87503
(505) 827-5191

Elizabeth Seibert
Research Associate
Resource Planning Associates, Inc.
1901 L Street, N.W.
Washington, D.C. 20036
(202) 452-9770

Ray Sheetz
Assistant District Director
Farmers Home Administration
Box 2355
Third and Rosser
Bismarck, North Dakota 58501
(701) 255-4011

---

* Panel respondents.

Stan Steadman
Project Engineer
Western Coal Planning Assistance Project
Hedden Empire Building
208 North 29th Street
Billings, Montana 59101
(406) 657-6715

Terry Thoem
Director
Energy Office
Environmental Protection Agency
Region VIII
1961 Stout Street
Denver Colorado 80294
(303) 837-5914

Vi Stroup
Energy Development Board of
Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

Chip Unruh*
Energy Development Board of
Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

Gary Weinrich
Manager of Environmental Affairs
ANG Coal Gasification Company
1 Woodward Avenue
Detroit, Michigan 48226
(313) 965-8300

Robert E. Wood
Public Affairs Representative
Montana-Dakota Utilities
400 North 4th Street
Bismarck, North Dakota 58501
(701) 224-3035

PANEL 2: INTEGRATED ENERGY/ ECONOMIC DEVELOPMENT PLANNING

Moderator:
Jacob Kaminsky
Program Manager
Office of Buildings & Community Systems
Room 2252C
Department of Energy
20 Massachusetts Avenue, N.W.
Washington, D.C.
(202) 376-4818

Gary Anderson*
Energy Analyst
Energy Development Board of
Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

Gary Ashley*
Principal
Ashley Engineering
3585 N. Lexington Avenue
St. Paul, Minnesota 55112
(612) 482-1183

Gerald Bauman
Energy Development Board of
Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

Gary Beazely, P.E.
Dunham Associates
1836 Raven Drive
Bismarck, North Dakota 58501
(701) 223-0790

John Blueeyes
Council of Energy Resource Tribes
5670 South Syracuse Circle
Suite 312
Englewood, Colorado 80110
(303) 779-4760

Gus Bougie
Plant Superintendent
Minnkota Power Co.
P.O. Box 1318
Grand Forks, North Dakota 58201
(701) 795-4000

Ernest Chabot
Technical Assistance Branch
Energy Extension Service
U.S. Department of Energy
Mail Stop 2H-027
Forrestal Building
Washington, D.C. 20585
(202) 252-2302

Dr. Gastone Chingari
General Manager
International Program Development
IIT Research Institute
1825 K Street, N.W.
Washington, D.C. 20006
(202) 296-1610

---

* Panel respondents.

John Conrad
N.D. Office of Energy Management
and Conservation
1533 North 12th Street
Bismarck, North Dakota 58501
(701) 224-2250

Tony DeLongpre
Geologist
Consolidation Coal Company
721 Memorial Highway
Bismarck, North Dakota 58505
(701) 255-3132

Arnold Erbstoesser
Energy Development Board of
Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

Sharold Geist
Energy Development Board of
Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

Cornelius P. Grant*
Economic Development Administration
State of North Dakota Representative
P.O. Box 1911
Bismarck, North Dakota 58501
(701) 255-4011

Gordon H. Gronhovd
Director
Grand Forks Energy Research Center
15 North 23rd Street
Grand Forks, North Dakota 58201
(701) 795-8131

Marcell Hillier
Chairman
North Dakota Agricultural Product
Utilization Commission
Hoople, North Dakota 58243
(701) 894-6115

Janice Huffman
Research Associate
Resource Planning Associates, Inc.
1901 L Street, N.W.
Washington, D.C. 20036
(202) 452-9770

Orville Johnson
Coyote Station Project Manager
Otter Tail Power Co.
215 S. Cascade Street
Fergus Falls, Minnesota 56537
(218) 736-5411

Ed Kepler
Executive Director
National Center for Appropriate
Technology
P.O. Box 3838
Butte, Montana 59701
(406) 494-4572

Rex LaRose
Tribal Planner
Ute Tribal Resources Division
P.O. Box 129
Fort Duchesne, Utah 84026
(801) 722-5141

Oscar Manz*
Director
Coal Bi-Products Utilization Institute
Box 8155 University Station
Grand Forks, North Dakota 58202
(701) 777-3562

David Mosena*
Research Director
American Planning Association
1313 East Sixtieth Street
Chicago, Illinois 60637
(312) 947-2080

Bill Mrdeza, Planner
Energy Development Board of
Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

Norman Ostermann
Engineer
Consolidation Coal Company
721 Memorial Highway
Bismarck, North Dakota 58505
(701) 255-3132

Allen Short*
Program Coordinator
Division of Community Services
Tennessee Valley Authority
139 Evans Building
Knoxville, Tennessee 37902
(615) 632-2494

* Panel respondents.

Martin Staigle
Energy Development Board of
Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

O.B. Taylor*
Energy Development Board of
Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

Barbara Tillman
Project Manager
Starrett City Energy Project
3110 Pennsylvania Avenue
Brooklyn, New York 11239
(212) 642-1600

David R. Torkelson*
Industrial Specialist
N.D. Business and Industrial
Development Department
513 E. Bismarck Avenue
Bismarck, North Dakota 58505
(701) 224-2810

Joseph A. Vaszily
Gas Energy, Inc.
195 Montague Street
Brooklyn, New York 11201
(212) 643-2630

Kenneth Vig
Manager
Minkota Power Cooperative
P.O. Box 1318
Grand Forks, North Dakota 58201
(701) 795-4000

Stanley Voelker
Agricultural Economics Department
N.D. State University
Fargo, North Dakota 58105
(701) 237-8011

Bruce Westerberg
Energy Extension Service Coordinator
N.D. Office of Energy Management
and Conservation
1533 North 12th Street
Bismarck, North Dakota 58501
(701) 224-2250

Leonard Wohlfeil
Energy Development Board of
Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

PANEL 3: LOCAL ORGANIZATIONAL APPROACHES

Moderator:
Tom Curtis
Project Director
Impact Assistance
National Governors' Association
444 N. Capitol Street
Washington, D.C. 20001
(202) 624-5377

Albert Bauman*
Energy Development Board of
Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

Thomas F. Bates
LIA Representative
Central Region
U.S. Geological Survey
Box 25046
Denver Federal Center
Denver, Colorado 80225
(303) 234-5900

Thomas G. Bobby
Resident Manager
Consolidation Coal Company
721 Memorial Highway
Bismarck, North Dakota 58505
(701) 255-3132

Harry Broley
SCETAM, Inc.
950 3rd Avenue
New York, New York 10022
(212) 421-0518

Clay L. Cochran
Community Development Coordinator
Rural Electrification Administration
Department of Agriculture
Room 4308 South
Washington, D.C. 20250
(202) 447-4245

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* Panel respondents.

Jason Cuch*
Director
Ute Tribal Resources Division
P.O. Box 129
Fort Duchesne, Utah 84026
(801) 722-5141

John Dempsey
Vice President
Quality Development Associates, Inc.
Cherry Creek Plaza II
650 S. Cherry Street
Suite 400
Denver, Colorado 80222
(303) 320-0717

Michael Dennis
Office of Congressman Beryl Anthony
2521 Federal Building
Pine Bluff, Arkansas 71601
(501) 536-3376

George DeVeny*
Regional Planner
Socioeconomic Analyses Section
Division of Community Services
Tennessee Valley Authority
144 Evans Building
Knoxville, Tennessee 37902
(615) 632-2494

Eldon Erickson
Mid-West Regional Director
Office of Economic Adjustment
Department of Defense
Room 1906
Federal Building
911 Walnut Street
Kansas City, Missouri 64106
(816) 374-3776

Kim Gillan
Associate
Resource Planning Associates, Inc.
1901 L Street, N.W.
Washington, D.C. 20036
(202) 452-9770

Betsy Graves
Senior Staff Assistant
Argonne National Laboratory
400 North Capitol Street
Suite 185
Washington, D.C. 20036
(202) 376-9500

Tom Graves
Director, Energy Project
U.S. Conference of Mayors
1620 Eye Street, N.W.
Washington, D.C. 20006
(202) 293-7300

Mike Hammer*
Energy Impact Officer
Federal Regional Council
Region VIII
1961 Stout Street
Denver, Colorado 80294
(303) 837-2751

Andrew Hirsch
Energy Program Director
International City Managers Association
1140 Connecticut Avenue, N.W.
Washington, D.C. 20036
(202) 828-3600

Gerald S. Leighton
Director
Community Systems Division
Office of Buildings & Community Systems
U.S. Department of Energy
Room 2251
20 Massachusetts Avenue, N.W.
Washington, D.C. 20545

Linda McDonald
Council of Energy Resource Tribes
5670 South Syracuse Circle
Suite 312
Englewood, Colorado 80110
(303) 779-4760

Elise McNutt
Heritage Conservation & Recreation Service
Box 25387
Denver Federal Center
Denver, Colorado 80225
(303) 234-6462

Adolph Miller*
Energy Development Board of Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

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* Panel respondents.

Neil Modin
601 Program
Farmers Home Administration
Room 208, Federal Building
Third and Rosser
Bismarck, North Dakota 58501
(701) 255-4011

Dean Monteith
State Land Use Coordinator
N.D. State Planning Division
Capitol Building, 9th Floor
Bismarck, North Dakota 58505
(701) 224-2818

Keith Moore*
Director
Industrial Economics Division
Denver Research Institute
Denver, Colorado 80210
(303) 753-3207

Kerry Olson
Transportation Planner
State Highway Department
Bismarck, North Dakota 58505
(701) 224-2500

Mike Reese*
Wyoming Department of Economic Development
Barrett Building
Cheyenne, Wyoming 82001
(301) 777-7284

Vivian Roehrich
Administrative Assistant
Energy Development Board of Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

R. Philip Shimer*
Energy Impact Coordinator
W. Va. Governor's Office of Economic and Community Development
Building 6, Room 548
Capitol Complex
Charleston, West Virginia 25305
(304) 348-2246

Joann Sooktis
Northern Cheyenne Research Project
Box 388
Lame Deer, Montana 59043
(406) 477-6278

Russell Staiger
Assistant Director
N.D. State Planning Division
Capitol Building, 9th Floor
Bismarck, North Dakota 58505
(701) 224-2818

Charles Steele
District Manager
U.S. Bureau of Land Measurement
Dickinson District, Region VIII
P.O. Box 1229
Dickinson, North Dakota 58601
(701) 225-9148

Robert Stroup*
Executive Director
Energy Development Board of Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

Wayne Tanous
Public Affairs Representative
Montana-Dakota Utilities
400 North 4th Street
Bismarck, North Dakota 58501
(701) 224-3553

H.L. Thorndahl
President
Bank of North Dakota
700 East Main Street
Bismarck, North Dakota 58505
(701) 224-2945

Arthur Tonelli
Energy Specialist
Department of Housing and Urban Development
Region VIII
1405 Curtis Street
Denver, Colorado 80202
(303) 837-2291

Robert Wetzel
Chairman
Energy Development Board of Mercer County
Box 670
Hazen, North Dakota 58545
(701) 748-6361

Jim Wright
Housing Planner
868 North Illinois Avenue
Arlington, Virginia 22205
(703) 376-0289

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* Panel respondents.

Appendix E: Listing of EDB Reports

GROWTH MANAGEMENT PLAN

In addition to the policies, land-use plans, and capital improvement programs that Mercer County will need to manage its rapid growth, the EDB has prepared other elements of the plan, which address the county's unique needs. The following are available as separate documents:

Goals and Objectives. This report presents the results of a survey of county residents, undertaken as part of the EDB's effort to obtain citizen input on growth management in the county. The report synthesizes the comments given by county residents, who completed workbooks covering 12 subject areas, ranging from public administration and agriculture to education and energy conservation.

Forecasts. The EDB has developed forecasts of the demographic changes expected in the county as a result of energy development. Data have been collected from industry (ITAT) and the state (REAP) and the forecasting model is being refined to reconcile the differences between the two approaches.

Growth Alternatives. This document presents brief sketches of alternatives available to the EDB and its member governments in managing the growth forecasted for Mercer County. It outlines the alternative ways the local officials can manage population distribution, land use, housing, public facilities and services, and public financing.

Energy Conservation. This document presents the major objectives of the EDB's energy conservation plan and the steps to be undertaken to implement the plan, describes the EDB's current conservation activities, and outlines several potential demonstration projects. The EDB's energy conservation program, which is a major element of the Growth Management Plan, promotes the concept that energy management and conservation are as vital in community planning as the county's social, economic, and environmental goals.

Economic Diversification. The EDB has prepared an Economic Diversification Plan to combat the negative effects of the end of the energy-related construction boom in the mid-1980s. This document presents the plan's major objectives and tasks to be undertaken to implement the plan, presents preliminary feasibility analyses of potential industries, and discusses the formation of a local development corporation to promote economic diversification. The plan will integrate existing industry and employment with new industries that can use Mercer County's extensive natural resources and energy-related industrial by-products to provide Mercer County with a stable population base, sources of revenue to pay for public facilities, and a variety of employment opportunities for county residents.

Mercer County Coal Severance and Coal Conversion Tax Projections. This EDB report presents the expected income from the coal severance and coal conversion taxes up to the year 2000. Along with other tax revenues, this projection can be used as a planning tool by the cities and school districts in the county by providing information necessary in fiscal budgeting, and will be an integral part of the plan's financing element.

Capital Improvement Programs for Mercer County and Its Incorporated Cities. This publication was prepared by the EDB in conjunction with the governing bodies of each of the cities and the county to assist local governments in projecting capital expenses and revenues to determine future budget surpluses or deficits.

Development Plan for Housing, Public Facilities, and Services. This document was prepared by the staff of the Mercer County EDB to address the growth management plan requirements of the Farmers Home Administration's 601 Impact Assistance program. It provides population and construction workforce projections and outlines the capital improvement programs of Mercer County and its six incorporated cities.

Hazen Tomorrow - A Plan. The City of Hazen's adopted growth management plan, prepared jointly by the Hazen Planning and Zoning Commission, the Hazen City Commission, and the Mercer County Energy Development Board, addresses population, land use, transportation, parks and recreation, and capital improvements. Copies are distributed on a limited basis only.

Pick City Tomorrow - A Plan. The adopted Pick City growth management plan, prepared jointly by the Pick City Zoning Commission, Pick City Council and the Mercer County Energy Development Board, addresses issues such as land use, transportation, housing, parks and recreation, and capital improvements, and outlines the city's Zoning Ordinance. Copies are currently not available for general public distribution.

Monitoring. This report outlines the major tasks in the EDB's monitoring program, which was designed to ensure that complete, accurate data will be collected on socioeconomic conditions, energy usage, and environmental impacts associated with energy resource development in Mercer County. The information gathered through the monitoring program will permit the development of current, accurate annual budgets and capital improvement programs.

Data Sources. The EDB has completed a catalog of data sources, which is a reference tool designed to assist the EDB and others in locating data on a wide range of subjects. The document provides a complete listing of existing sources of information on population, housing, the economy, land use, public facilities and services, transportation, the environment, utilities, energy use, and energy production.

Other documents developed by the EDB for both the residents of the county and interested others include:

Energy Conservation Guidebook. The EDB prepared this guidebook to provide residents and developers in Mercer County with a detailed analysis of local climatic conditions and directions for siting, designing, and building their homes and other structures to minimize energy consumption. The guidebook explains how the effects of climate can be modified by the use of landscaping, building orientation, structural form, and construction techniques and materials to decrease energy use. (The guidebook costs $4.00 per copy.)

Mercer County Governments and Advisory Groups. This EDB document contains meeting schedules and membership lists for county government and advisory groups, such as the County Commission, city planning and zoning commissions, city councils, and school boards.

Interim Land-Use Policy Plan. This report was prepared jointly by staff members of the EDB, the Mercer County Planning Commission, and the Lewis and Clark Regional Council. The document, which is an update of the county's 1968 Comprehensive Plan, will be used on a temporary basis until the EDB's more comprehensive and long-range Growth Management Plan for the county is adopted.

EDB Newsletter. The EDB prints and distributes the **EDB Newsletter** on a bimonthly basis to keep interested individuals up to date on the activities and progress of the EDB.

These documents are available from:

Energy Development Board
Box 670
Hazen, North Dakota 58545
(701) 748-6361

In addition to these reports, 1978 and 1979 segments of a film documentary entitled **Change: Mercer County, North Dakota** have been prepared for DOE/BCS and the EDB. These presentations depict the changes occurring in Mercer County because of energy resource development and present the role of the EDB in smoothing the county's transition from an agricultural area to a major energy producer.