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COAL AND ECONOMIC DEVELOPMENT
A Series of Reports

Prepared by:

Mountain Association for Community Economic Development
210 Center Street
Berea, Kentucky 40403

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COAL AND ECONOMIC DEVELOPMENT

Volume I: Coal and Economic Development in Central Appalachia: A New Framework for Policy

Economic development occurs when private and public reinvestment translate economic growth into improvements in the quality of life. For over a century, Central Appalachian states' promotion of growth in the coal industry failed to overcome underdevelopment caused by an unstable, fiercely competitive industry with few linkages and multipliers in the regional economy.

A case study analysis of the developmental impact of growth in rural Kentucky coal counties between 1960 and 1980 indicates that promotion of growth is still an inadequate public policy response to poor conditions in Appalachian coal fields. Reinvestment does not occur automatically in the coal fields, and more deliberate government intervention to stimulate public reinvestment is necessary.

The report recommends a new framework for policy which has three dimensions: (1) a national or multi-state plan to raise severance taxes on the coal industry and invest these revenues in infrastructure through a coordinated state-level regional authority; (2) a commitment to strict enforcement of environmental and road regulations in Appalachian coal states; and (3) acceptance of joint public and private responsibility to address employment problems in the coal fields, both of young people and of those older workers who face structural unemployment as miners, independent operators, or coal truck haulers.

Volume II: Coal Employment: Trends and Forecasts 1975-1995

The first section of this report examines coal production, productivity and employment trends in the United States, Appalachia, and eastern and western Kentucky between 1975 and 1984, identifying patterns in the industry which affect the level and stability of coal-mine employment. Productivity rose 57 percent industry-wide, and while coal production increased by 37 percent, 25,000 jobs were lost due to productivity gains.

Using U.S. Department of Energy/ Energy Information Administration base-case forecasts of coal production in combination with productivity analyses performed by Energy Ventures Analysis, the second section forecasts coal employment for the United States, Appalachia and Kentucky for 1990 and 1995. If present trends and laws continue, employment in the industry would drop by 10 percent, and Appalachia would bear the brunt of job loss, a total of 19,800 jobs.

Like the development analysis in Volume I, these trends and forecasts indicate that promotion of growth in coal will not be a sufficient response to economic development problems in Appalachia.

Volume III: Labor Productivity Changes in Appalachian Coal Mining

This report discusses major factors that influence productivity in the Appalachian coal industry, analyzes productivity gains between 1979 and 1984 on a subregional basis, and makes predictions of future trends in productivity in the region based on this analysis.

The overall finding is that the predicted rate of improvement in labor productivity is greater than the rate of expected growth in demand for coal in Appalachia through 1995. The net result is an overall decline in manpower requirements or employment levels for coal mining in the region. Appalachian labor productivity is predicted to increase from 1.74 tons per man-hour in 1984 to 2.15 tons per man hour in 1995.

Volume IV: Industry Perspective on Development: Transcripts of Interviews with Central Appalachian Coal Executives

This volume presents transcripts of seventeen interviews with senior executives in the Central Appalachian coal industry. The interviews, which were unstructured, open-ended conversations in corporate offices, covered five broad categories: corporate responsibility to coal communities (both in the past and the present); the costs and benefits of coal production for communities; the role of the public sector in coal-field development; constraints and opportunities in the coal industry (including such areas as markets, transportation, environmental concerns and labor relations); and the public image of the coal industry.

Volume V: The Coal Industry After 1970: Cost Internalization, Good Works, and Planning for Future Development

This report reviews changes that have taken place in the coal industry since 1970 and assesses their potential to enhance coal-field development. Although there was growth in production, major shifts occurred in where and how America produced coal. Productivity dropped during the 1970s as operators simultaneously set up inefficient operations to take advantage of a price boom, coped with an unstable labor situation, and responded to new environmental and safety laws. When the price surge cooled, the industry resumed its trend of increasing productivity through investments in better mining systems, better management, more stable labor relations, and more efficient responses to regulations. Coal employment dropped from 246,000 in 1978 to 165,000 in 1984.

Federal legislation during the 1970s forced the coal industry to internalize environmental, health and safety costs which previously had been left to workers and communities. Public regulation transformed a laissez-faire industry into a system where public performance standards are incorporated into daily operating and investment decisions. Central Appalachian coal leaders accept and value these

changes in the industry as good for communities and for business. These leaders are unanimous in their belief that coal-field development is primarily the responsibility of local residents and their public officials, but they say that their social responsibility extends beyond what is required of them by law. Many companies undertake community "good works" to improve conditions in the coal fields, but, while commendable, these make little dent in development needs.

A developmental approach to coal would encourage predictability in production and stability in employment, and then impose a national severance tax on this more stable industry. To bring stability in employment, and help manage the social consequences of rising productivity, companies should be required to: 1) establish early warning on layoffs and mine closures; 2) establish multi-employer paneling; 3) participate in state and federal retraining, relocation and assistance programs; and 4) prepare annual community impact bulletins for each mine that would outline the likely consequences of expected short- and medium-term changes in markets, capital investment plans and new production technology.

Proposed national policy mechanisms for achieving the goals of predictable production and stable jobs include the development of a national energy policy, requiring more use of long-term supply contracts and consequently a smaller spot market; mandating greater consumer responsibility for buying coal produced in compliance with environmental and health and safety laws; modifying public utility commission policies that now encourage publicly regulated utilities to seek out the lowest-priced coal; accelerating development of commercial applications of systems to burn high sulfur coal cleanly; and then encouraging increased use of clean coal.

Volume VI: A Public Sector Income Statement for the Coal Industry in Kentucky, 1985-2000

This report estimates the public sector impacts of the coal industry on state and local governments in Kentucky -- a "public sector income statement" which considers revenue and expenditures related to coal over the fifteen year period, 1985-2000.

For 1985, this analysis found that the coal industry generated \$412.9 million in revenues and \$543.0 million in expenditures and, therefore, caused a net loss to Kentucky's public sector of \$130.1 million. For the year 2000, revenues are projected to rise to \$564.8 million while expenses increase to \$621.8 million, reducing the public sector's net loss to \$57.0 million. For the entire period from 1985 to 2000, the coal industry's total revenues to the state are expected to be \$7,788.7 million, while total public expenditures sum to \$9,259.1 million, resulting in a total net expenditure loss for the period of \$1,470.4 million.

As would be expected, the major revenue source from coal is the coal severance tax. This tax accounts for 45 percent of 1985's revenues and 85 percent of the 1985-2000 revenue increase. Coal haul road costs dominate expenditures. At \$243.8 million in 1985, coal haul costs account for 45 percent of all costs that year. This rises to 56.2 percent for 2000 and is 50.6 percent of the total costs for the whole study period.

**FORTHCOMING PUBLICATIONS IN MACED'S
COAL AND ECONOMIC DEVELOPMENT SERIES:**

**Volume VII: A Discussion of Policies and Projects for Greater
Coal-field Development**

Specific proposals for (1) higher national or multi-state severance tax in Central Appalachian coal counties; and a state regional authority to coordinate investment of the revenues in infrastructure; (2) a pilot project for youth training, involving local support from coal companies, banks, other businesses and schools; (3) a plan for appropriate displaced worker assistance in Kentucky coal fields; and (4) an assessment of current revenue options for coal counties in Kentucky.

**Volume VIII: The View from Letcher County:
Transcripts of Interviews with Independent Coal Operators,
Coal Haul Truckers, and Unemployed Coal Miners**

Edited transcripts of interviews with individuals who feel the brunt of the changing structure of the coal industry.

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COAL AND ECONOMIC DEVELOPMENT

Executive Summaries from Volumes I - VI

Prepared by:

**Mountain Association for Community Economic Development
210 Center Street
Berea, Kentucky 40403**

Project Director: Cynthia L. Duncan

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These studies were funded by a grant from the Ford Foundation

Volume I

Coal and Economic Development in Central Appalachia

A New Framework for Policy

by

Cynthia L. Duncan

Public policy toward the coal industry throughout Central Appalachia, and particularly in Kentucky, is based on the assumption that promoting wider markets and facilitating the production of coal will result in improvements in the quality of life in coal-field communities. However, coal-producing areas do not automatically capture the benefits of growth in coal production. Growth leads to economic development--the process of building a resilient local economy which provides a good quality of life for the entire community--only when there is public and private reinvestment to translate that growth into local improvements.

Private reinvestment of the benefits of economic growth is a matter of linkages and multipliers--the ways in which increased local expenditures stimulate local business activity and increased savings stimulate investments in new businesses, both contributing to further local business expansion. Public reinvestment entails taxation and investment of tax revenues in physical infrastructure such as roads, water, sewer and solid waste systems, and in social infrastructure such as schools, clinics, and libraries. Neither the public nor private reinvestment process has historically materialized in Central Appalachia. Consequently, the assumption of coal's boosters that growth in coal would lead to local development has never been borne out in experience.

After a discussion of the way coal-field citizens feel trapped because their resources for reinvestment are constrained by coal's competitive markets, this report reviews the history of coal's impact on Central Appalachia from 1870-1960. The industry's failure to be developmental appears to have been the result of income inequality and instability, low multipliers and weak inter-industry linkages in a fiercely competitive industry, and the obstacles posed by mountainous terrain. The legacies of this period were an underdeveloped social infrastructure, as well as deep distrust and uncertainty between coal management, workers, and communities. Both legacies have exacerbated development problems in Central Appalachia and have hindered efforts to formulate policies and programs to address them.

The report then examines the period from 1960 to 1980 in a detailed case study of Kentucky. Non-metropolitan Kentucky counties are classified by their economic bases: coal, farm, manufacturing, and government-mixed. Indices of quality of life are compared over time and across the bases. These indices summarize measures of poverty, educational attainment, and housing quality.

In Kentucky, per capita earned income in coal counties increased 164% from 1960-1980, compared to only 91%, 93%, and 88% respectively in farm, manufacturing, and government-mix counties. The improvement in conditions in coal counties from

1960-80 is striking, as it is for all counties in Kentucky, but the analysis suggests that economic growth in coal counties, by itself, can not overcome the historical legacy of poor conditions. Despite a far greater rate of growth, the improvement in quality of life was only 3-8% greater in coal counties compared to the other county groups. Thus, coal counties were not able to translate their more rapid growth into greater than average gains in the quality of life.

Several explanations for the lack of development in coal counties are explored. First, demographic characteristics, such as the proportion of the population which is dependent (older people or children), were not unfavorable in coal counties or were similar across the bases; and factors affecting all counties, such as expanded government programs, also did not explain the results. Measures of income inequality were found to be significantly different between bases: coal had the highest levels of average annual earnings and average weekly pay but also the highest proportion of low income families. Furthermore, four indicators of employment and work distribution show that work opportunities in coal counties are distributed narrowly compared to the other bases. Private reinvestment in Kentucky coal counties probably was limited by a narrow distribution of jobs, greater inequality of incomes, and few linkages and low multipliers in the coal industry. Public reinvestment has been constrained by political attitudes as much as by economic conditions.

In order for improvement in the quality of life to reflect the growth of the coal industry, a greater share of the benefits of coal production must be reinvested in the communities where coal is mined. Coal companies, however, constrained as they are by regional and inter-fuel competition, cannot be expected to make the necessary direct contribution to reinvestment voluntarily. Coal growth, which historically generates greater levels of inequality in the distribution of income and employment, does not stimulate the needed indirect private sector reinvestment. In coal-based mountain areas, state and local governments must initiate and coordinate reinvestment.

This study of coal-field development points to a new policy framework with three dimensions:

- 1) A developmental approach to taxation of coal with a regional plan for public investment, including:
 - o Raising severance taxes, preferably on a national or multi-state compact basis, and using them as a resource to invest in the present infrastructure needs of coal producing regions.
 - o Stabilizing demand for coal at a price that is high enough to include adequate taxation of the resource. Possible approaches to such stability include long-term contracts within the context of a national energy plan and internalizing in the price of coal all the social costs generated in the coal production process.
 - o Establishing a regional plan and a regional planning agency to coordinate the implementation of development policy.
- 2) A commitment on the part of state governments to strict enforcement of environmental and road regulations.

- o Large companies must be held responsible for their subcontractors' adherence to laws.
 - o The abuse of the two-acre permit must be eliminated.
- 3) Acceptance of public and private responsibility to workers both when employed and unemployed, and both at work and in their communities.
- o Establish a comprehensive plan to train young people in the mountains who have not worked, to retrain structurally unemployed miners and other workers, and to retrain small operators and independent truckers who lose their jobs due to stricter enforcement of environmental laws and continued changes in industry structure.
 - o Develop mechanisms for and acceptance of the idea of sharing available coal employment among workers as coal employment decreases.

Volume II

Coal Employment: Trends and Forecasts 1975-1995

by

Curtis Seltzer
with
Stephen Robinson

One of the major factors determining the future of the communities in coal-mining regions is the level of employment in the mines. Coal employment is dependent on both industry-wide and local factors. Understanding these factors and their implications for future coal employment levels is essential to economic development efforts in coal-producing regions. This report analyzes the factors which determined coal employment in the past decade and forecasts coal employment for 1990 and 1995.

The first section of this report examines coal production, productivity, and employment trends in the United States, Appalachia, and eastern and western Kentucky between 1975 and 1984, identifying patterns in the industry which affect the level and stability of coal-mine employment. Among the findings are the following:

- 1) The most important trend is the rise in mining productivity, particularly in the period from 1979 to 1984, when productivity rose 57 percent on an industry-wide basis.
- 2) Overall, U.S. coal production increased by 37 percent between 1975 and 1984. However, 25,000 jobs were lost, as productivity gains outstripped production.
- 3) The most substantial job loss occurred in underground mining.
- 4) Although surface-mine employment increased during the first part of the decade, the trend reversed and a 20 percent decline in surface-mine employment was recorded between 1979 and 1984.
- 5) Eastern Kentucky coal increasingly dominated the state's coal production, providing 60 percent of Kentucky's 1975 production and 75 percent of the 1984 production, due to electric utilities shifting from western Kentucky's high sulfur coal toward eastern Kentucky's lower sulfur coal.
- 6) Productivity in eastern Kentucky underground mines has been narrowing the gap with surface-mining productivity in the area. While eastern Kentucky underground productivity was 58 percent of surface-mine productivity in 1975, it had risen to 83 percent by 1984.
- 7) Both surface and underground mines in Western Kentucky registered less improvement in productivity than their eastern Kentucky counterparts during the 1975-1984 period.

The second half of the report uses base-case production forecasts from the U.S. Department of Energy/Energy Information Administration and productivity analyses

from Energy Venture Analysis to forecast coal employment figures for the United States, Appalachia and Kentucky for 1990 and 1995. The production and productivity rates are based on the continuation of present trends and do not take into account possible regulatory or market changes. If these assumptions hold true, the following would result:

- 1) Employment in the U.S. coal industry would drop by 10 percent (17,800 jobs) from 1983 to 1995 even though overall production is predicted to grow by 57 percent. This job loss would be uneven, with some areas experiencing small employment gains while other areas declined sharply.
- 2) Appalachian coal employment would bear the brunt of the industry's job loss--a total of 19,800 jobs.
- 3) Eastern Kentucky would lose about 4,500 jobs from 1983 to 1995, half in surface mines and half in underground mines.
- 4) Western Kentucky would lose about 1,900 surface mine jobs but gain about 1,700 deep mine jobs, for a net loss of 200 jobs.

In sum, production is not likely to go up fast enough to add new jobs in the majority of coal states, and substantial job losses are predicted for some areas. The most common expectation is job loss despite rising output. Coal-producing regions will have to look beyond promoting increased coal production if they are to achieve economic development.

Volume III

Labor Productivity Changes in Appalachian Coal Mining

by Energy Ventures Analysis

Labor productivity in Appalachian coal mining is a measure of critical importance to the Appalachian economy. Defined as the tons of coal produced by each employee in an hour or a day, labor productivity is used by coal companies as an important indicator of their costs, by miners as a measure of their potential earnings and the challenge and difficulty of their work day, and by economists as an indicator of the ability of the coal industry in Appalachia to employ and pay workers.

This report is limited to an investigation of the current and recent labor productivity circumstances in Appalachian coal mining and what they portend for labor productivity and overall employment in coal mining through 1995. (It does not address the economic consequences of labor productivity improvements or the market conditions which are forcing these improvements.)

The predicted rate of improvement in labor productivity is greater than the rate of expected growth in demand for coal in Appalachia through 1995. The net result is an overall decline in manpower requirements or employment levels for coal mining in the region:

- o Appalachian labor productivity is predicted to increase from 1.74 tons per man-hour (tpmh) in 1984 to 2.15 tpmh in 1990 and 2.75 tpmh in 1995 (see Figure 1-1).
- o The predicted rate of labor productivity improvement between 1984 and 1995 is 3.6 percent per year for all Appalachian coal mining.
- o The U.S. Department of Energy has projected that coal production in Appalachia will rise from 441 million tons in 1984 to 496 million tons in 1990 and 561 million tons in 1995 as shown in Figure 1-2.
- o The predicted coal production increase for Appalachia averages 2.2 percent per year between 1984 and 1995.
- o The manpower requirements were 253.1 million man-hours in Appalachia for 1984. This report predicts that the 1984 manpower requirement will decline by 8.8 percent to 230.9 million man-hours in 1990 and by 13.6 percent to 218.7 million man-hours in 1995 (see Figure 1-3).

- o The average number of miners working daily would be 135,000 in 1990 and 128,000 in 1995, if the 1983 ratio of mining man-hours to the average number of miners working daily (1,712 man-hours per worker) prevails in the future.

The reduction in manpower requirements in Appalachian mining will not be as dramatic as the loss that occurred between 1979 and 1984. In this period, production grew by only 0.74 percent per year whereas productivity grew by 5.9 percent per year. This resulted in a 22.2 percent reduction in manpower in a 5-year period.

One overall 1979 to 1984 trend was the reduction in the number of small mines in Appalachia. In 1979, there were 3,276 small-producing mines with 1,529 underground and 1,747 surface mines. By 1984, there were only 2,370 small-producing mines with 1,142 underground and 1,288 surface mines. This is a 28 percent reduction. The number of small underground and small surface mines declined in all sub-regions except eastern Kentucky. Across Appalachia, the number of large mines remained the same between 1979 and 1984. But this aggregate stability masks important regional changes: in Central Appalachia, there was an 18 percent increase in large mines from 504 in 1979 to 597 in 1984 as the demand for lower sulfur coals increased; while in northern Appalachia, there was a 14 percent decrease in large mines as demand for higher sulfur coals decreased.

On a regional basis, northern Appalachia coal production is predicted to increase to 223 million tons in 1995 from 185 million tons in 1984. This amounts to an average increase of only 1.71 percent per year. The northern Appalachia region includes Pennsylvania, Ohio, Maryland and northern West Virginia. Central Appalachia coal production is predicted to increase to 300 million tons in 1995 from 230 million tons per year in 1984 representing a 2.44 percent growth rate. Central Appalachia includes Tennessee, eastern Kentucky, Virginia and southern West Virginia. Southern Appalachia, essentially Alabama, is expected to grow from 26 million tons production in 1984 to 38 million tons in 1995 for a 3.51 percent annual production growth rate.

Recently, northern Appalachia suffered a 23.9 percent loss in coal mining labor requirements between 1979 and 1984. In the future, northern Appalachia will be the most severely affected of all Appalachian regions with another 17.0 percent reduction in coal mining employment between 1984 and 1995. Central Appalachia suffered a 22.1 percent loss of employment between 1979 and 1984. Central Appalachia employment is expected to drop another 12.9 percent between 1984 and 1995. Southern Appalachia labor requirements dropped only 10.4 percent between 1979 and 1984 making that region the least affected in Appalachia. Southern Appalachia will continue to be the least affected region as its labor requirements will decline by 1990 but recover to above 1984 levels by 1995.

These predictions are based on the U.S. Department of Energy coal production predictions; stable safety, health, and environmental regulations; stable energy prices and policies; and no acid rain legislation which would increase coal demand predictions for some of Appalachia while decreasing production in others.

FIGURE 1-1

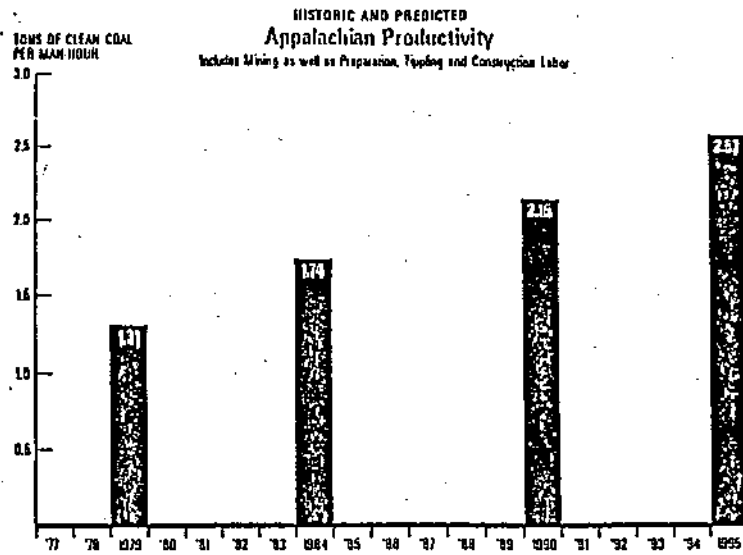


FIGURE 1-2

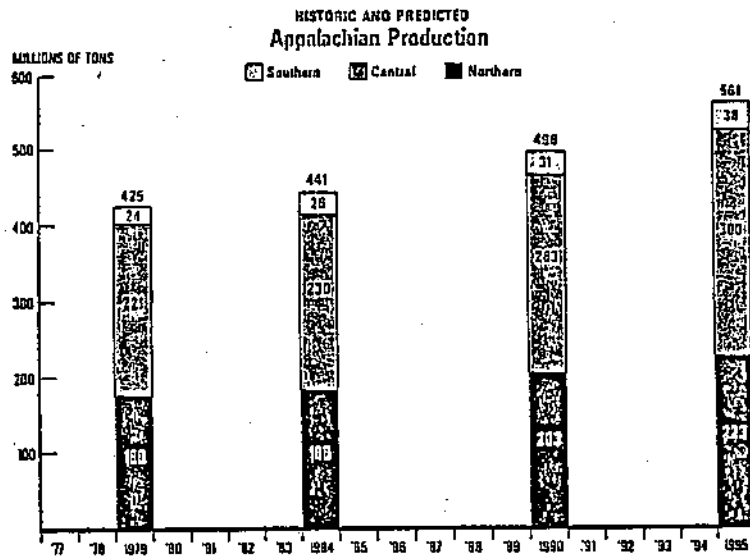
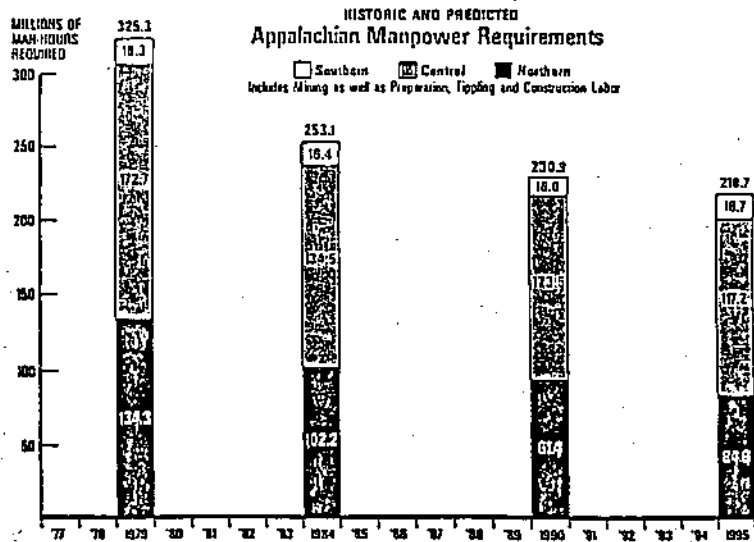


FIGURE 1-3



Volume IV

Industry Perspective on Development:

Transcripts of Interviews with Central Appalachian Coal Executives

The Mountain Association for Community Economic Development (MACED) is exploring ways in which coal production might contribute more to development in Central Appalachia. We are asking whether there are changes in public policy or private management practices of the industry which could benefit coal-field communities without jeopardizing the viability of the industry itself. As part of this effort, MACED is interviewing coal company management to better understand their perspective on the industry and economic development in the coal fields. This report presents transcripts of seventeen interviews.

MACED has requested interviews with senior executives throughout the Central Appalachian coal industry. Several denied our request, and others were unable to schedule interviews within the time frame available. It has been particularly difficult to interview operators of smaller companies. However, we are continuing the interview process, and will publish additional transcripts as they become available. Nonetheless, the companies interviewed here represent America's largest and oldest coal companies.

The interviews, which are unstructured, open-ended conversations, cover five broad categories: corporate responsibility to coal communities (both in the past and in the present); the costs and benefits of coal production for communities; the role of the public sector in coal-field development; constraints and opportunities in the coal industry, including such areas as markets, transportation, environmental concerns and labor relations; and the public image of the coal industry.

These transcripts present verbatim conversations between coal industry executives and MACED staff. Curtis Seltzer and Cynthia Duncan edited the transcripts for clarity, and four interviewees made additional clarifications in their own transcripts. An interpretation of the corporate perspective and its implications for coal-field development is presented in The Coal Industry After 1970: Cost Internalization, Good Works, and Planning for Future Development, another report in this series on coal and economic development.

Volume V

The Coal Industry After 1970:

Cost Internalization, Good Works and Planning for Future Development

by

Curtis Seltzer
and
Cynthia L. Duncan

Throughout the 1950s and early 1960s, the coal industry grappled with weak demand, stagnant production and low coal prices. Following the 1950 Bituminous Coal Wage Agreement and facing declining demand, the industry began a long period of rationalization which included mechanization, cooperation with the United Mine Workers of America, and long-term contracts with electric utilities; many smaller marginal mines were closed. Coal companies also survived this tough period in the industry's history by continuing to externalize environmental, worker safety and health, and community development costs.

This report reviews changes that have taken place in the coal industry since 1970 and assesses their potential to enhance coal-field development. Despite growth in national coal production after 1970, major shifts in how and where America produced coal were taking place. Surface mines, particularly those in the western U.S., claimed a larger proportion of total production. Productivity took a nosedive in the first half of the 1970s as coal producers simultaneously set up marginally efficient operations to take advantage of a price boom; coped with an unstable labor situation; adjusted to shifts in high- and low-sulfur coal markets due to the 1970 Clean Air Act; and responded to new federal mine safety and environmental laws. When the short-lived price surge cooled in the latter 1970s, the industry returned to its trend of increasing productivity through investments in better mining systems, improved production strategies, more stable labor relations, and more efficient responses to regulation. Coal employment dropped from 246,000 in 1978 to about 165,000 in 1984.

The extensive government intervention which forced the industry to internalize social costs previously absorbed by workers and communities is examined in this report. Corporate perspectives on coal companies' responsibilities to coal-field communities, based on interviews with chief executive officers at 17 major Appalachian coal companies, are discussed to assess the impact of these changes on the organization of the industry, on the strategy of the companies and on coal executives' attitudes. The report concludes by proposing recommendations for better harnessing the coal industry for long-term economic development of coal-field communities.

The 1970s brought increased government control to the coal industry.

Before 1970, coal mining operated in essentially a laissez-faire business environment that routinely and without penalty "socialized" many costs; the costs of work place safety, environmental protection and community development were absorbed by miners and mining communities. By the late 1960s, however, growing social and environmental

awareness had highlighted the sharp contrast between the improved health of the coal business and mounting social and environmental problems in the coal fields. Due to rising prices and the increased productivity of the previous decade, the industry was in a better position to meet these rising expectations than it would have been in any previous period. The 1969 Federal Mine Health and Safety Act was the first of a number of federal laws forcing the coal industry to internalize costs previously borne by miners or coal-field communities. Among the other laws reflecting new standards for the industry's behavior, the most important was the 1977 Surface Mining Control and Reclamation Act.

The 1977 Surface Mining Act, in particular, had the effect of dividing the surface-mining industry in two. On the one side are the operators who have internalized the responsibility as well as the costs of proper mining; on the other side are hundreds of marginal and willful operators who simply do not obey the law.

The extensive damage sustained to the coal-field environment was a large subsidy extended to coal consumers over many decades. Mining communities were expected to assume the developmental penalty from mining's environmental damage as the "natural" price for sharing in coal's economic benefits. It took several years for coal companies to adjust to the new regulatory environment.

The government also intervened in coal's market to some extent. At the federal level, the Power Plant and Industrial Fuel Use Act of 1978 stipulated that all new electric power plants must be constructed with the capability of using coal or other alternative fuels rather than oil and natural gas as a primary energy source; a 1980 proposed bill would have provided financing incentives for conversion to coal. An array of production-enhancing measures to accelerate commercialization of synthetic fuels was made available through the U.S. Synthetic Fuels Corporation and the Department of Energy. State public utility commissions also influence coal markets because they are empowered to approve or disapprove electric utility requests for rate increases. However, they only evaluate fuel costs and do not weigh the standard of social responsibility to which each local supplier adheres.

Taken together, this body of public policy developed during the 1970s establishes certain precedents and an important framework for addressing the developmental needs of mining communities. Public regulation transformed a *laissez-faire* industry into a system where public performance standards are incorporated into the calculations of private investment decisions. Nonetheless, there are still significant gaps in public policy toward coal. For example, the public sector's failure to establish an energy policy has contributed to instability within the producing sector in mining communities, hindering coal-field development.

Executives of large coal companies consider some level of corporate responsibility for host communities to be a matter of good business.

Although the cost internalization changes of the late 1960s and 1970s were resisted by the coal industry at the time, the coal executives interviewed now accept the basic thrust of the changes as necessary for the benefit of miners, coal-field communities, and society in general. At the same time, they reject the rationale behind vigorous proposed acid rain legislation, although some of them consider it to be inevitable.

The executives interviewed attribute the underdevelopment of coal-field communities to a number of factors: the mountainous topography, past coal company practices, present market constraints on the amount companies can afford to invest in local development, and the failure of residents of coal communities to invest adequately in coal-field development. Those MACED interviewed are unanimous in the view that development is primarily the responsibility of local and state leaders. Nonetheless, almost all said their companies felt a social responsibility that extended beyond what was required of them by law. Company "good works" currently take the form of monetary and in-kind contributions to local projects, preferential purchasing from local businesses, and, during the 1970s, a few attempts to invest in big housing projects which never reached their anticipated potential.

Companies which accepted the 1970s principle of cost internalization on safety and environmental issues have also accepted the idea that contributions to community development are part of the normal cost of doing business. Social regulation forced much of the change in management attitude, as managers learned to comply with regulations and appreciate their beneficial effect on community relations and public relations generally. Decentralization of corporate authority appears to encourage coal's leadership to accept new standards of social responsibility at the community level. Coal companies responsibility to their shareholders is not necessarily in conflict with obeying the law, taking care of their employees, and contributing to community well-being. In fact, coal production is facilitated by focused community investment. These companies also recognize the value of a stable work force, and community development is one means of encouraging such stability. Furthermore, large companies often need public support for their plans, and such support is more likely to be forthcoming when those companies are perceived as "good corporate citizens."

Corporate support of community development, although commendable, makes only a marginal contribution to the long-term process of economic development. Of necessity, contributions to community projects are short-term in nature, rather than part of an integrated local economic development strategy; the latter would promote job development, local capital accumulation or skill acquisition. Even the "most responsible" coal companies would not support higher severance taxes or more government intervention in the coal industry to channel resources into economic development.

Enhanced economic development in coal-field communities depends on predictability in production and stability in employment.

The developmental impact of coal is influenced by corporate strategy and philosophy, as well as by the magnitude and stability of coal's market, the nature of competition in the industry, and the extent and shape of regulation and taxes. Recent changes in conditions and attitudes raise the possibility that coal could take major steps forward as a contributor to greater economic development in the communities in which it operates.

Currently the primary obstacles to greater development benefit from coal are the unpredictability of the market and the instability of employment. A further, related, obstacle is competition among states to provide a "good climate" for coal, primarily through low taxes. (The only way a for-profit company can sustain substantial community investment is when such investment is required of all its

competitors as well; therefore when states act independently to attract coal business through cutting taxes, they end up promoting a situation in which both the "winner" and "loser" states achieve less than the maximum developmental benefit from the industry.)

A developmental approach to coal would encourage predictability in production and stability in employment, and then impose a national severance tax on this more stable industry. To bring stability in employment, and help manage the social consequences of rising productivity, companies should be required to: 1) establish early warning on layoffs and mine closures; 2) establish multi-employer paneling; 3) participate in state and federal retraining, relocation and assistance programs; and 4) prepare annual community impact bulletins for each mine that would outline the likely consequences of expected short- and medium-term changes in markets, capital investment plans and new production technology.

Proposed national policy mechanisms for achieving the goals of predictable production and stable jobs include the development of a national energy policy, requiring more use of long-term supply contracts and consequently a smaller spot market; mandating greater consumer responsibility for buying coal produced in compliance with environmental and health and safety laws; modifying public utility commission policies that now encourage publicly regulated utilities to seek out the lowest-priced coal; accelerating development of commercial applications of systems to burn high sulfur coal cleanly; and then encouraging increased use of clean coal.

Volume VI

A Public Sector Income Statement

for the Coal Industry in Kentucky, 1985-2000

by

Richard Sims

The coal industry plays a large role in Kentucky's economy, providing around four percent of nonagricultural employment in the state, seven percent of earned income, and seven percent of state revenue. Despite its prominence in the state economy, the coal industry has not provided a resilient base for economic development and a good quality of life in Kentucky's eastern coal counties. Nonetheless, Kentucky policy primarily has focussed on promotion of coal, assuming that facilitating coal production will benefit both the coal producing counties and the state as a whole. In Coal and Economic Development: A New Framework Policy, MACED argues that coal-field development requires greater governmental reinvestment in the region.

As a useful first step toward developing a program to increase government reinvestment, this report estimates the public sector impacts of the coal industry on state and local governments in Kentucky--a "public sector income statement." We believe this to be the most thorough study of the fiscal impact of the coal industry in Kentucky to date. It includes both costs and revenues and includes indirect as well as direct costs. It should be remembered, however, that computation of these estimates depends on a number of assumptions. The methodology employed is discussed at length throughout the report.

Just as coal tax revenues serve to make more funds available to provide public services for the citizens of the state, coal-related costs serve to reduce the funds available for noncoal public services. Addressing the financial well-being of the public sector requires consideration of these related costs, as well as the revenues. The presence of the coal industry requires certain public expenditures that relate directly to that industry, such as mining safety and enforcement, coal haul road damage, and coal promotional activities--government expenditures that would not occur in the absence of coal industry. Other indirect costs are incurred simply because of the support government provides its citizens as residents of the state. Education, highways, the courts, and human service activities are examples of indirect, or population-induced, expenditures. Most expenditures of government are not related to either the level or the source of income of these who benefit from such expenditures.

The scope of this analysis is restricted to the financial impacts of the coal industry on state and local governments in Kentucky. Impacts on the federal government are beyond the scope of this study. Impacts that effect the general public, but not the "public sector" in Kentucky, also are not included. Thus environmental damages, social costs due to the cyclical nature of the coal industry, and any consideration of a public "right" to coal that is depleted, are not included as public sector costs. Only those impacts that materialize as measurable revenues or expenses under current policies are included.

Many of the public revenues and costs attributable to the coal industry must be estimated. The method employed here assumes these costs or revenues are proportional to coal activity, measured either by coal income, production or employment. Accurate projections of these variables are quite important.

Previously published estimates have been relied upon to the greatest extent possible. The underlying projections are summarized in the following table:

Projections Underlying This Study of Coal in Kentucky

	<u>1985</u>	<u>2000</u>	<u>1985-2000</u>
Production (million tons)	140.5	22.7	2,949.5
Employment, direct (thousands)	39.1	32.8	
Employment, total (thousands)	78.2	65.6	
Total Income (millions, 1985 \$)	2,089.0	1,754.0	30,773.0

Under fairly optimistic assumptions about the outlook for acid rain legislation and about the national economy in general, Kentucky coal production is projected to rise 58.5 percent between 1985 and 2000 to 222.7 million tons a year. Because of increasing labor productivity, however, the number of workers employed in the coal industry, and indirectly by coal's economic stimulation, will decline 16.1 percent, to 32,800 directly employed and 65,600 total employment. Assuming that both income directly generated by the industry and income from its spin-off activities keep pace with inflation for each of the next 15 years, total income from coal will also decline 16.1 percent in terms of 1985 buying power, to \$1,750.0 million. The public sector income statement results are summarized on the next page:

The Kentucky Coal
Industry's Public Sector
Income Statement
(million 1985 dollars)

	1985	2000	1985-2000
REVENUES			
Severance Tax	198.8	365.8	4,528.6
Corporate Income Tax	14.1	22.3	295.1
Personal Income Tax	66.8	56.1	984.6
Sales and Use Tax	50.1	42.1	738.1
Corporate License Tax	2.8	4.3	55.0
Unmined Coal Tax	50.0	43.4	700.0
General Property Tax	5.6	4.7	82.8
Transportation Taxes	20.7	22.7	345.1
Local Revenues	4.0	3.4	59.4
TOTAL REVENUES	412.9	564.8	7,788.7
EXPENDITURES			
State Agencies	91.8	98.9	1,525.1
Coal Haul Roads	243.8	348.7	4,692.8
Indirect State Expend.	192.2	161.4	2,832.1
Local Expenditures	15.2	12.8	209.1
TOTAL EXPENDITURES	543.06	19.9	9,259.1
Net Impact	-130.1	-57.0	-1,470.4

For 1985, this analysis found that the coal industry generated \$412.9 million in revenues and \$543.0 million in expenditures, and therefore caused a net loss to Kentucky's public sector of \$130.1 million. For the year 2000, revenues are projected to rise to \$564.8 million while expenses increase to \$621.8 million, reducing the public sector's net loss to \$57.0 million. For the entire period from 1985 to 2000, the coal industry's total revenues to the state are expected to sum to \$7,788.7 million, while total public expenditures sum to \$9,259.1 million, resulting in a total net expenditure loss for the period of \$1,470.4 million.

As would be expected, the major revenue source from coal is the coal severance tax. This tax accounts for 45 percent of 1985's revenues and 85 percent of the 1985-2000 revenue increase. Coal haul road costs dominate expenditures. At \$243.8 million in 1985, coal haul costs account for 45 percent of all costs that year. This rises to 56.2 percent for 2000 and is 50.6 percent of the total costs for the whole study period. The estimate of the coal haul road costs are critical to the finding that the coal industry generates negative public income (see text for full explanation).

State agency expenditures represent the direct state involvement with coal of the following agencies: Energy; Natural Resources and Environment; Labor; Mine and Minerals; and Higher Education.

Indirect state expenditures are basically those costs attributable to the general state support of those people whose livelihood is associated with coal. Local governments have direct expenditures, which like indirect state expenditures, are necessary to support the coal-related population.

For each year of the 1985-2000 period, the total of the revenues minus the total of the expenses represents the net fiscal impact of the coal industry on the state and local governments in Kentucky.

Presented in this context, the coal industry shows a negative fifteen year net cost to the public treasury of \$1,522.2 million. However, these findings do not necessarily imply that tax revenues from coal should be raised to the level of the identified costs. First, there is no declared public policy, or principle of public finance, that each specific industry in an economy must pay its full costs. Secondly, an increase in tax revenues to the level of public sector cost might have other negative impacts. Therefore, the implications of different methods of raising coal-related revenues should be carefully evaluated.