REPORT OF THE

COAL AND ENERGY COMMISSION

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

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COMMONWEALTH OF VIRGINIA
RICHMOND
1988

Report of the
Coal and Energy Commission
to
The Governor and the General Assembly of Virginia
Richmond, Virginia
February, 1988

To: The Honorable Gerald L. Baliles
and
The General Assembly of Virginia

I. INTRODUCTION

Since 1979, it has been the charge of the Virginia Coal and Energy Commission to "study all aspects of coal as an energy resource and... to stimulate, encourage, promote, and assist in the development of renewable energy resources..." (§ 9-145.1 of the Code of Virginia). This document constitutes the Commission's report regarding its activities during 1987.

The full Commission held two meetings during 1987. Testimony was received at these meetings regarding the following topics: state/federal fossil research and development initiatives, liquid coal research and locomotive engine application, the purchase of Virginia coal by state facilities and the impact of Va. Code § 11-47.1, the purchase of Virginia coal by utilities in Virginia and the impact of the Virginia Coal Employment and Production Incentive Tax Credit Act, the impacts of the solar tax credits, economic development in Virginia coal counties and strategies for the future, and subsidence due to mining.

This report also discusses the deliberations of the Commission's subcommittees.

Members of Commission

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II. 1987 COMMISSION DELIBERATIONS

A. STATE/FEDERAL FOSSIL RESEARCH AND DEVELOPMENT INITIATIVES

On September 2, 1987, the Commission received testimony from Donald L. Bauer, Principal Deputy Assistant Secretary for Fossil Energy at the United States Department of Energy, regarding state/federal fossil research and development initiatives. Mr. Bauer stressed the need to coordinate future efforts in this area and requested federal/state partnership, citing President Reagan's commitment to support recommendations of the special envoys on acid rain and the President's pledge of $2.5 billion for innovative clean coal technologies, programs which must proceed "in partnership with the states" according to the President.

Mr. Bauer discussed the Clean Coal Technology Demonstration Program in detail. He stressed the necessity for federal/state partnership in cost-sharing and in the introduction of new technologies into widespread commercial practices. He encouraged states to take an active role in first-of-a-kind demonstration of these new technologies and in their subsequent replication and deployment. He emphasized that hardware performance and reliability are only one part of a commercial formula. State and federal regulations must give emerging coal technologies a chance to succeed in the marketplace.

Mr. Bauer stated that public acceptance will greatly influence the prospects of coal use in the United States. He suggested that government and industry need to increase their efforts to remove the coal pollution stigma from the public's mind. Even with the increased use of coal by electric utilities between 1973 and 1985, there has been a decrease in pollution due to coal as coal-burning utilities have spent $60 billion on sulfur dioxide capture over the ten-year period from 1975-1985. This expenditure resulted in a twenty-three percent reduction in emissions since 1973. These facts have not reached the public, many of whom believe that pollution due to coal is not being remedied quickly enough.

According to Mr. Bauer, the answer to the acid rain problem is technological advancement and not the "patch" legislation pending in Congress with a price tag of $100 - $200 billion over the next twenty years. Although such legislation would accomplish an immediate reduction in sulfur emissions, he stated that emission levels by the year 2030 would be no different than under the current provisions of the Clean Air Act because utilities would stop funding the research and development of more effective pollution control equipment and would opt to continue installing expensive scrubbers in order to meet legally mandated deadlines. Gains made by those expenditures would dissipate by 2030, the state-of-the-art would be unchanged from the present, and sulfur emissions would be at the same level as today, or higher, due to increased power demands.

Mr. Bauer proclaimed the need for $2.5 billion in federal matching funds to be made available for award over the next five years for clean coal demonstration projects proposed and co-financed by industry. The importance of setting aside this amount is that it would give private developers the incentive to complete advanced but currently less mature technologies, thereby ensuring that the highest quality proposals are received in the future.

These federal matching funds would also enable utilities to face two major delimmas: (1) what to do about their older plants and (2) when, if necessary, to build for new capacity. With over one-half of the fossil-fired electric capacity in the United States being thirty years old or older by the year 2000, and with the demand for electricity projected to continue increasing, utilities will be forced to decide what to do with these facilities (e.g. retire, patch or repair them with new technology). By installing clean coal technologies in these facilities as part of an overall refurbishing, Mr. Bauer stated, twenty to thirty additional years of life could be given to these facilities. Without a commitment to this five-year program now, utilities making these decisions in the early 1990's will face the large financial burden of adding new capacity and significantly upgrading existing equipment at the same time.

B. LIQUID COAL RESEARCH AND LOCOMOTIVE ENGINE APPLICATION

Information provided to the Commission indicated that 45% of the oil used by the United States today is imported. This dependency on foreign sources for oil impacts upon national security and makes liquid coal an attractive alternative. Liquid coal could be burned for electricity or used for fuel for transportation.

Liquid coal is created by removing all the liquids from the raw material. There is virtually no waste and only two products are left: liquid coal and char. Liquid coal is a higher energy fuel than gasoline and char is a material which burns at a higher B.T.U. than oil and creates virtually no smoke. Currently, there is a one ton facility operating in Virginia which creates liquid coal and char.

Testimony indicated that a proposal entitled "Development of a Coal Derived Fuel for Diesel Locomotive Engines" is currently under review by the Division of Energy and the Secretary of Economic Development for possible state funding using oil overcharge funds. The necessity for state involvement in the initiation of this process was stressed. Funding for this proposed project would be provided on a matching basis, with the federal government contributing approximately $200,000, the coal industry providing approximately $400,000, and the Commonwealth of Virginia providing $600,000.

It was predicted that were the locomotive industry to "come back" to Virginia, it would increase the coal market by 20-30%. Such a program would give an important boost to the economy of Southwest Virginia by creating new jobs and facilities.

The Commission voted unanimously to recommend that the Commonwealth of Virginia participate in this cooperative project and a letter of support was forwarded to Governor Baliles (see Appendix A).

C. PURCHASE OF VIRGINIA COAL FOR STATE FACILITIES AND THE IMPACT OF VA. CODE § 11-47.1

In its 1987 Session, the General Assembly enacted Va. Code § 11-47.1, which states "{i}n determining the award of any contract for coal to be purchased for use in state facilities with state funds, the Department of General Services shall procure, using competitive sealed bidding and shall award to the lowest responsive and responsible bidder offering coal mined in Virginia so long as its bid price is not more than four percent greater than the bid price of the low responsive and responsible bidder offering coal mined elsewhere."

There are twenty-seven state facilities which use coal as their primary heating energy. Information provided to the Commission indicated that in May of 1987, 202 invitations were put out for coal bids by the Division of Purchases and Supply, eighty-four of which were to Virginia-based firms. Twenty-two of the Virginia-based firms responded, and seven of nine awards were made to Virginia-based firms (78%). This was a considerable increase over 1986 (24% more coal purchased from Virginia suppliers) and saved the Commonwealth $25,000 more than in 1986. (See Appendix B for additional 1987-1988 Coal Award information.)

D. PURCHASE OF VIRGINIA COAL BY UTILITIES IN VIRGINIA AND THE IMPACT OF THE VIRGINIA COAL EMPLOYMENT AND PRODUCTION INCENTIVE TAX CREDIT

The Commission heard testimony regarding the impact of the Virginia Coal Employment and Production Incentive Tax Credit Act of 1986 at both of its meetings. At the September 1987 meeting, a spokesman for Virginia Power explained that production costs for coal mined in Virginia are higher than in Kentucky or West Virginia because of Virginia's difficult mining conditions. Additionally, transportation costs are also high in Virginia due to limited rail options, a limitation not encountered by coal suppliers in Kentucky or West Virginia. Due to the transportation and production costs, coal suppliers in Virginia currently are forced to charge $1 to $2 more per ton of coal than their counterparts in Kentucky or West Virginia. The Virginia Coal Employment and Production Incentive Tax Credit Act provides for a $1 tax credit in 1987 for each ton of Virginia coal purchased by a Virginia utility in excess of the total purchased by it in 1985, and in the years from 1988-1996 the same credit is available as in 1987 plus an additional $1 tax credit for each ton of Virginia coal

purchased by the Virginia utility company. According to a Virginia Power spokesman, this Act was very influential in causing his company to purchase more coal from Virginia suppliers. His opinion was that the tax revenue loss to the Commonwealth is a small price to pay for the predicted overall positive impact of the Act.

At the request of the Commission at its September 2, 1987 meeting, the Virginia Center for Coal and Energy Research (VCCER) located at VPI&SU, prepared an analysis of the impact of the Act. John Randolph, Director of VCCER, presented the results of the analysis to the Commission at its January meeting. A copy of VCCER's analysis is attached as Appendix C.

According to VCCER's analysis, the overall inpact of the Act is "quite positive." The positive effects of increased coal production due to the Act include increased employment and income of miners, railroad workers, and support workers in Southwest Virginia, increased corporate income by coal companies and railroads, increased local coal severance taxes and increased state revenues (which act to offset revenue losses from the tax credit). Although the projected effects of the Act include a revenue loss of approximately $1 million by the Commonwealth in 1987 due to the tax credit, the Commonwealth would realize $1.42 million in additional 1987 tax revenue. It is also projected that Southwest Virginia would receive $20.2 million in economic benefits (payroll and profits) for 1987. The analysis for 1988 predicts little coal production increase above the 1987 level, thereby providing similar beneficial effects as occurred in 1987. However, the cost/benefit ratios are predicted to be significantly lower than in 1987 due to the increase in state revenue loss caused by the additional credit (state revenue loss for 1988 estimated at $4.55 million).

E. IMPACT OF THE SOLAR ENERGY TAX CREDIT

The Commission also received information from John Randolph regarding the impact of the solar energy tax credit. He indicated that while federal and state tax credits were available, the solar energy industry in Virginia grew considerably. However, in 1986 a large number of these businesses disappeared when the federal tax credit was eliminated and the state tax credit was lowered. (See Appendix D for a summary of federal and state tax claims made in Virginia during 1978-86) The state tax credit will no longer be available in 1988. Mr. Randolph indicated that while it was desirable to maintain a skeletal solar energy industry in Virginia, he was unsure as to the amount of a state tax credit which would be necessary to support such an industry.

F. ECONOMIC DEVELOPMENT IN VIRGINIA'S COAL COUNTIES AND STRATEGIES FOR THE FUTURE

The Commission received testimony from Dr. Curtis Seltzer, Senior Research Associate for the Virginia Center for Coal and Energy Research, regarding economic development in Virginia's coal counties and strategies for future development. According to Dr. Seltzer, the real unemployment percentage for Southwest Virginia is probably twice the recorded rate. The coal industry is producing more coal with fewer mining employees. Southwest Virginia is being increasingly split off from the economic growth

of the Commonwealth. Between one-fifth and one-quarter of Southwest Virginia's residents depend almost exclusively on a government check that provides a pension, disability compensation or income maintenance. Dr. Seltzer expressed concern that this downward socio-economic spiral pattern will continue unless corrective steps are taken now.

Dr. Seltzer encouraged the Commission to reject the idea that the coal market, left to itself, will eventually rectify inequities and promote economic development in Southwest Virginia. He believes this is false optimism. He also discouraged cutting coal wages as a strategy for coal operators to increase market share, boost profits and stay competitive on the international market. Likewise, Dr. Seltzer believes that a softening of regulations affecting the coal industry will not solve the economic woes of Southwest Virginia, as coal mining today is a "far, far better industry for producing coal within this {regulatory} framework." Finally, although Dr. Seltzer called upon legislators to continue adopting coal-enhancing policies, he stressed that these policies would not by themselves be a quick fix for the complex problems of economic development in Southwest Virginia.

According to Dr. Seltzer, the economic development of Southwest Virginia depends on the combined efforts of local government, state government and the private sector. Each of these institutions must take responsibility for performing four development-related tasks: planning, organization, commitment and investment. A detailed description of how Dr. Seltzer recommends that these tasks be achieved is attached as Appendix E.

G. SUBSIDENCE DUE TO MINING

The Commission heard testimony regarding subsidence related to mining in Virginia from Dr. Michael Karmis, Head of the Mining and Minerals Engineering Department at VPI&SU. According to Dr. Karmis, subsidence due to mining is a predictable phenomenon.

It is necessary to look at three sets of factors to determine the amount of subsidence, where the subsidence will occur and the probable effects of the subsidence upon surface structures. The first set is the mining factors. These include the mining method used and the amount of material to be extracted, the width of the mining tunnel(s), the depth of the mining operation, the method of roof support, etc. Subsidence may occur when any type of mining method is used. The second set is the site factors, which include the geology of the land to be mined and the type of overburden which exists. The final set is the structural factors, which are related to the type of structures existing on the surface of the area likely to be effected by subsidence. These factors include the size and construction of the structures, their foundations, etc. This final set of factors is extremely important when attempting to determine the type and amount of damage which may occur to surface structures as a result of subsidence.

Dr. Karmis emphasized that subsidence not only occurs vertically, but it may also occur horizontally. Consequently, subsidence may effect or damage surface structures in the area which are not located directly over the mining operation.

According to Dr. Karmis, no acceptable standardized damage criteria exist in the United States, nor, in fact, is there enough information available to develop such criteria. Without these criteria, it is difficult to predict the amount of damage which will occur to a particular structure as a result of subsidence.

III. SUBCOMMITTEE ACTIVITIES

A. COAL SUBCOMMITTEE

The Coal Subcommittee met twice during 1987. At its first meeting on July 27, 1987, the Subcommittee received information concerning the impact of Virginia Code § 11-47.1 (preferred bidding requirement) on the purchase of Virginia coal for use at state facilities and on the impact of the Virginia Coal Employment and Production Incentive Tax Credit Act. This information was also received by the full Commission and has been discussed earlier in this report.

The Subcommittee also heard testimony on July 27, 1987, from a spokesperson for the Department of Mines, Minerals and Energy regarding mined land reclamation. The Department has been looking at ways to encourage the remining of abandoned land as there is not enough funding available to reclaim all of the abandoned mined land. Currently Virginia mine operators pay approximately $7.5 million per year in federal taxes for reclamation. This money comes back to the Commonwealth in the form of grants which are then contracted out. The Department is now reclaiming the most hazardous areas. To date approximately 500 acres of these hazardous areas have been reclaimed. It is estimated that by 1992, this federal grant program will have reclaimed approximately twenty percent of the nation's abandoned mined lands.

The Coal Subcommittee met again on December 8, 1987, to consider the issue of subsidence due to long wall mining in Virginia. Representatives of the Department of Mines, Minerals and Energy and Virginia coal companies described coal mining methods currently used, recent Virginia coal production figures, and how subsidence is regulated.

According to the Department's spokesman, there are two methods of deep mining in the Commonwealth: long-wall and continuous. As long-wall mining is highly capital intensive, most but not all areas of the Commonwealth containing coal can be mined through this method. Seams of coal susceptible to being mined through the long wall mining process need to be deep and highly consistent. A long-wall mining process will extract up to 100% of the coal in the panel. Continuous mining (room and pillar) will extract only up to 50% of the coal in the panel. This is because coal pillars are left to provide roof support.

Testimony indicated that while 3,500 tons of coal could be mined in eight hours using approximately sixty people and the long-wall mining method, the continuous method would require the use of 100 people to mine the same amount of coal in eight hours. The spokesman indicated that subsidence will occur after the use of either method because the coal pillars which are left after continuous mining operations will eventually disintegrate from the weight of the material above them.

The Department spokesman explained that Virginia coal produced through the long-wall method of mining has increased from 2.9 million tons in 1984 to 6.6 million tons in 1986 while Virginia coal production from surface and continuous (room and pillar) mining operations has remained fairly consistent.

The Department developed a comprehensive program for subsidence regulation in the summer of 1986. The Department worked with the coal industry in the development of these regulations. It was acknowledged that misunderstanding still exists regarding subsidence and that a public information campaign is necessary to explain the phenomenon to the public. The Department's spokesman emphasized that the amount of subsidence that will occur due to a mining operation depends on how much coal is removed and not the method used to remove the coal (e.g. long-wall or conventional). The Department's current regulations regarding subsidence are based on Public Law 95-87. Federal law allows for the occurrence of some planned subsidence. The spokesman explained that maximum subsidence from a specified coal mining operation is mathematically predictable.

The Department regulates subsidence under the Reclamation Act. Prior to commencing coal mining operations in an area, the coal company must submit a subsidence control plan which evidences either that subsidence damage will be prevented or that subsidence will be planned and controlled. Coal companies are not allowed to indiscriminately mine under homes. They are required to either (i) perform their coal mining operation so that surface structures are not affected by a loss of support due to subsidence or (ii) minimize the damage to surface structures from planned subsidence through various methods (e.g. adjust foundations of homes so that they remain level). The Department's regulations differentiate between two types of subsidence: planned and unplanned. Should unplanned subsidence occur which damages surface structures or land, the mining company must perform the repair work required under law and modify its control plan accordingly.

The majority of subsidence-related complaints received by the Department are from homeowners. The spokesmen indicated that well water loss due to subsidence is generally not a problem because research shows that water in the coal fields does not flow down to the coal seams and generally remains unaffected by subsidence.

A spokesman for the coal industry emphasized the need to balance the rights of individual property owners while still allowing coal companies to be economically successful. He stated that the coal companies agree with the Department that it is important to educate the public regarding all of the factors involved in the issue of subsidence. He stressed that the coal companies were willing to take responsibility for damages to property caused by subsidence and that the companies were attempting to work with the owners of these properties. A map showing the location of current Virginia long wall mining operations is attached as Appendix F.

B. ENERGY PREPAREDNESS SUBCOMMITTEE

The Energy Preparedness Subcommittee met twice in 1987 to review the status of oil overcharge funds ("Exxon", "Stripper Well" and "Diamond Shamrock") in the Commonwealth and to obtain updates regarding the efforts of the Commonwealth's Energy Conservation Team.

At the Subcommittee's first meeting, a member of the Governor's staff testified that the United States Department of Energy is very strict regarding the purposes for which oil overcharge funds, especially "Exxon" funds, may be expended. He stated that the expenditure of these funds must be made through programs which are designed to conserve energy.

A spokesman for the Commonwealth's Department of Planning and Budget reported that "Exxon" funds are restricted to use in one of the five following state programs:

1. State Energy Conservation Program (SECP);
2. Energy Extension Service (EES);
3. Institutional Conservation Program (ICP);
4. Low Income Energy Assistance Program (LIEAP); and
5. Low Income Weatherization Program (WAP).

SECP, EES and ICP are administered by the Department of Mines, Minerals and Energy while LIEAP and WAP are administered by the Department of Social Services. The spokesman also indicated that federal funding for these five programs had been reduced in recent years and that the first planned use of the oil overcharge funds would be to supplement the federal funding of these programs.

Testimony received by the subcommittee at its second 1987 meeting provided updated totals for the oil overcharge funds. The Commonwealth has received $53,376,861 in Exxon overcharge funds, plus $5,982,448 in interest accrued through June, 1987. In 1987, $6.3 million from this fund was committed for the WAP, $1.7 million for the ICP, $198,000 for the SECP and $85,000 for the EES. The Commonwealth has received $19,384,788 in Stripper Well funds, plus $3,318,301 in interest accrued through June, 1987. Approximately $4.4 million from this fund has been spent or committed on two projects, including $600,000 for a project whereby diesel fuel is produced from coal. No funds have been spent or committed from the $1,191,883 in Diamond Shamrock funds received by the Commonwealth or from the interest earned on these funds as of June 30, 1987, which totaled $186,000.

The manager of the Commonwealth's Energy Conservation Team provided status reports to the subcommittee at both of the 1987 meetings. According to the manager, the purpose of this team, which was created and funded through oil overcharge funds, is to reduce energy consumption at state facilities.

At the subcommittee's first meeting, he presented figures on statewide energy expenditures which evidenced a cost avoidance sum for fiscal year 1986 of $2,371,912 due to lower fuel costs. He indicated that electricity represents 72% of the energy usage of state facilities.

At the Subcommittee's last 1987 meeting, the manager of the team provided the Subcommittee with an update on (i) the new demand rate for state facilities negotiated with Virginia Power, (ii) the tracking of energy use in state facilities and (iii) the C-7 special appropriation for energy conservation projects.

The Commonwealth currently spends $46 million for electricity at state facilities. Governor Robb instituted an agreement with Virginia Power which placed the State on a demand and energy rate similar to that of a commercial customer. The rate is designed to provide an incentive for the conservation of energy. Should the Commonwealth change its operating procedures for using electricity, this agreement could result in an increase in the State's electricity bill. Testimony indicated that the Commonwealth is spending a substantial amount of money on late fees, due in large measure to bills being sent to outdated addresses. The team is in the process of correcting this problem through an automated monitoring procedure and is developing a program whereby any new electrical service added to state billing will be done through a centralized agency. The team has also established a procedure whereby there is an energy conservation manager at each state facility who monitors the monthly electric bill and takes any action needed to control the facility's energy use. According to Virginia Power, the Commonwealth, through little or no effort, could reduce its electricity usage by 10%, which would result in an overall 5% reduction in electrical costs. Recent information received by the team indicates that while electrical costs incurred by the Commonwealth have decreased by 4%, consumption has increased by 25%.

Additionally, the team's manager informed the Subcommittee that $2.5 million has been allocated for C-7 energy conservation projects at state facilities, over 90% of which have already been completed. An estimated 50% return on these expended funds is anticipated. Emphasis was placed on the importance of this appropriation because it is an incentive for facility managers to conserve energy.

A representative of the Virginia Association of Community Action Agencies described the current status of the Commonwealth's low-income weatherization program to the Subcommittee. In 1987, the program received $2,785,000 from the Department of Energy and $5 million from oil overcharge funds (now used to maintain level funding of the program). The program

expects to weatherize up to 5,000 homes during fiscal year 1987-88 and has initiated several new techniques/strategies to increase the program's effectiveness, including the use of "blower doors" which identify leakages, increased consumer education and crew competitions among weatherization programs.

IV. RECOMMENDATIONS

The Virginia Coal and Energy Commission recommends that the Virginia Department of Corrections be requested to burn coal for the energy needs of all its correctional facilities, both existing and future (see Appendix G).

Respectfully submitted,
Daniel W. Bird, Jr., Chairman
A. Victor Thomas, Vice-Chairman
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COMMONWEALTH of VIRGINIA

COAL AND ENERGY COMMISSION
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RICHMOND, VIRGINIA 23208

IN RESPONSE TO
THIS LETTER TELEPHONE
(804) 786-3591

September 9, 1987

The Honorable Gerald L. Baliles
Governor of Virginia
Governor's Office
P. O. Box 1475
Richmond, Virginia 23212

Re: Recommendations of the Virginia Coal and Energy Commission

Dear Governor Baliles:

I am writing you on behalf of the Virginia Coal and Energy Commission to inform you that the Commission, at its September 2, 1987, meeting, voted unanimously to recommend that the Commonwealth of Virginia participate in the cooperative project entitled "Development of a Coal Derived Fuel for Diesel Locomotive Engines."

Funding, as proposed for this project, would be provided on a matching basis, with the federal government contributing approximately $200,000, the coal industry providing approximately $400,000 and the Commonwealth of Virginia providing $600,000. It is our understanding that this proposed project is currently being reviewed by the Division of Energy and the Secretary of Economic Development for possible state funding using oil overcharge funds.

Knowing of your interest in economic development, especially in Southwest Virginia, the Commission sees the new coal based locomotive fuel technology as a particularly appealing incentive. A copy of the proposal is enclosed for your convenience.

Thank you for your consideration.

Sincerely,

Daniel W. Bird, Jr., Chairman
Virginia Coal and Energy Commission

DWB/sms
Enclosure

COMMONWEALTH of VIRGINIA

Department of General Services
Division of Purchases and Supply
805 East Broad Street

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ION DIRECTOR

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COAL AWARDS 1987-1988

Two hundred & two Invitation for Bids were issued for the 1987-1988 coal requirements. Eighty four (84) Virginia based firms were solicited with twenty-two (22) firms responding (26%). Of the twenty two (22) responses, seven (7) of nine (9) awards have been made to Virginia firms (78%).

Based on these awards, seven locations will be serviced by Virginia based trucking firms for 35,640 tons or 28% of the total coal purchases. CSX and Norfolk Southern Railway (Virginia based firms) will deliver 69,300 tons or 55%.

In accord with the 1987 legislative action, which allowed a four (4) percent advantage to Virginia mined coal over non-Virginia mines, the total awards will be 59,800 tons of 125,800 tons estimated or 47.5%. The actual 4% advantage resulted in six different locations being awarded Virginia mined coal or a total of 29,800 tons (24%) which would have been awarded to out of state mines.

The product specification were relaxed from previous years but did not effect the award process for Virginia mined coals.

IMPACT OF UTILITY VIRGINIA COAL INCENTIVE ACT

Walter R. Hibbard, Director, VCCER
John Randolph, Assistant Director, VCCER

Assessing the impacts of the 1986 Quillen Act requires addressing two key questions: (a) what are utility Virginia coal purchases now compared to what they would have been without the law, and (b) what are the effects of any increase in Virginia coal production on state revenues and local revenues, employment and income. The following analysis concludes that the net increase in Virginia coal purchases during 1987 compared to 1985 due to the $1/ton incentive will be about 450,000 tons (turning a potential loss of 100,000 tons into a gain of 350,000 tons). This increase in Virginia coal production will likely increase employment in Southwest Virginia by 300 jobs, increase worker income by $7.5 million, increase corporate profit by $860,000, increase local severance tax receipts by $220,000, and increase state tax revenues by $578,000. This means the net state tax revenue increase (new revenue minus tax credit claims) may be about $225,000 in 1987. In 1988, with the additional $1 per ton credit on all Virginia coal used, the credit claims will increase from $350,000 in 1987 to over $3 million, with about the same benefits as 1986.

Effect of Tax Incentive on Utility Purchases of Virginia Coal

The first question focuses on the purchasing decisions of Virginia Power Company. Though Appalachian Power Company operates two coal burning plants in Virginia, historically the utility has used Virginia coal exclusively, so the incentive has no effect. Potomac Electric and Power Company (PEPCO) operates the Potomac River Plant in Alexandria, which has been an important market for Virginia coal (52 percent of the plant's coal [or 500,000 tons] came from Virginia in 1985). However, because the law provides a credit to the tax bill on company revenues earned in Virginia, and because PEPCO sold its Virginia service area to Virginia Power in late 1986 and thus has no Virginia revenues, the credit has no effect on the utility's coal purchases.[1]

The effect of the incentive on Virginia Power focuses on the power plants to which Virginia coal deliveries are practical. These include its facilities at Chesapeake, Chesterfield, Possum Point, and possible Yorktown. The Chesapeake plant has traditionally used a large percentage of Virginia coal since it is served directly by Norfolk & Western Railroad which serves 88 percent of Virginia's mines. The Chesterfield, Possum Point and Yorktown plants are served by CSX and require either a long but direct CSX haul from the few mines it serves in Dickenson and Wise Counties or a combined N&W/CSX haul. Chesterfield can be reached from the N&W system with a very short transfer on CSX tracks. The development of barge facilities at the Possum Point and Yorktown plants may offer Virginia Power more coal transport options.

Studies of Virginia Power coal receipts during 1985-1987 show that the proportion of Virginia-mined coal purchased dropped from 30 percent to 16 percent between the first and fourth quarters of 1985 (Table 1), as spot purchases dropped from 25 percent to less than 5 percent and contract purchases dropped from nearly 30 percent to under 20 percent. 1985 purchases were 853,073 tons of Virginia coal. During 1986 Virginia coal purchases rose slightly to 23 percent of total purchases for the first two quarters, then dropped back to 16 percent in the fourth quarter.

TABLE 1 PROPORTION OF VIRGINIA COAL PURCHASED IN VIRGINIA POWER PLANTS
(Percent)

	1985				1986				1987		
	1 Qtr	2 Qtr	3 Qtr	4 Qtr	1 Qtr	2 Qtr	3 Qtr	4 Qtr	1 Qtr	2 Qtr	3 Qtr
Chesapeake	71	89	62	60	81	64	80	59	79	86	63
Chesterfield	29	18	14	13	18	25	11	11	24	26	44
Possum Point	0	0	6	0	0	0	4	3	18	18	24
Total VA Power	30	19	17	16	23	24	19	16	30	32	35

Data Source: Nat'l Coal Assoc., Power Plant Deliveries, Monthly Reports January 1985-June 1987.

[1] Personal communication with Larry O'Callahan, PEPCO Manager of Fuels, October 14, 1987.

This study projects that, if the 1985 and 1986 trends were followed and there were no tax credit, Virginia Power purchases of Virginia coal would have dropped to about 750,000 tons in 1987.[2] Even though the utility's purchases of Virginia coal actually increased to nearly one million tons in 1986, there are strong indications that 1987 would have brought a significant decline without the credit. Ninety percent of 1986 tonnage was contract purchases. Many of these contracts were due to expire in late 1986 or early 1987. Virginia coal performed miserably on the spot market in 1986 because of its higher delivered price; CSX, which hauls mostly West Virginia and Kentucky coal increased its competitiveness by lowering rates in 1986. There were only 17 spot deliveries of Virginia coal to the Chesterfield and Chesapeake plants in 1986, totaling 111,000 tons.

Influenced by the state tax credit for Virginia coal burned by Virginia Power, the utility has awarded two 3-year contracts and four 7-8 month orders for Virginia coal. Spot purchases have rebounded dramatically in 1987. During the first nine months, there were 115 spot purchase deliveries totalling 700,000 tons to Chesterfield and Chesapeake. This is more than six times the spot purchases for **all of 1986.** Total deliveries for the first nine months of 1987 indicate a Virginia coal market share of 32 percent (see Table 1), compared to 20 percent for 1985 and 1986. In late summer 1987 Virginia Power estimated its 1987 purchases of Virginia coal would be 1.2-1.3 million tons and a similar amount for 1988. Through September, however, its 1987 Virginia coal purchases had already totaled 1.39 million tons. Assuming fourth quarter 1987 purchases amount to the average of the first three, total 1987 Virginia coal sales to Virginia Power would be 1.85 million tons.

Thus, the state tax rebate on utility coal purchases appears to have turned a 1987 potential loss of about 100,000 tons (850,000 minus 750,000) compared to 1985, into a 1987 gain of 1 million tons (1.85 million minus 850,000). Put another way, while there will likely be a 1 million ton gross increase in Virginia coal use over 1985 (and thus amounting to a tax credit [or state revenue loss] of $1 million), the total net effect is estimated to be a production increase of about 1.1 million tons.

Effect of Increased Coal Production on State Revenues and the Economy of Southwest Virginia

The payoff of the utility coal purchase from tax incentive comes from the positive effects created by increased coal production. These effects include increased employment and income of miners, railroad workers, and support workers in Southwest Virginia; increased corporate income by coal companies and railroads; increased local coal severance taxes; and increased state revenues (which act to offset revenue losses from the tax credit).

An assessment of effects requires determining a number of multipliers and assumptions. Those used in this study are given in Table 2. Most are computed from existing conditions in the industry, some are assumed.[3]

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[2] This figure of 750,000 tons was confirmed during discussions with Henry Barbour, Virginia Power, September 1987.

[3] Those assumed include support employment (of 1 support job for each mine job), taxable income of one-half worker income, and taxable sales on one-half of worker income. Support income multiplier of 1.0 is supported by the literature (C. B. Garrison, "The Impact of New Industry: An Application of the Economic Base Multiplier to Small Rural Areas" in *Land Economics*).

TABLE 2 MULTIPLIERS USED IN ANALYSIS

	Effect of One Million Tons
• **Mine employment**: 298 miners/million tons	298 miners
• **Railroad employment**: 65 workers/million tons	65 workers
• **Support employment**: 1 support/1 miner	298 workers
• **Miner income**: $23,722/miner	$ 7.1 million
• **Railroad worker income**: $34,840/railroad worker	$2.3 million
• **Support income**: $1 indirect income/$1 direct (miner) income	$ 7.1 million
• **Coal revenue**: $24.40/ton	$24.4 million
• **Coal company profit**: 5% of revenue	$ 1.2 million
• **Railroad revenue**: $14.40/ton	$14.4 million
• **Railroad profit**: 5% of revenue	$720,000
• **Local severance tax rate**: 2% of coal revenues	$488,000
• **State corporate profit tax**: 6% tax on corporate profit	$116,000
• **State income tax**: 6% tax on 1/2 of worker income	$495,000
• **State sales tax**: 4 1/2% tax on 1/2 of worker income	$371,000
• **State unemployment tax**: $460/employee*	$304,000
• **Total state tax revenue**	$1.29 million

*In addition to payments by companies to the state unemployment fund as a result of new jobs, the fund would incur savings if some of the new jobs went to unemployed who were receiving compensation; this savings is difficult to estimate and is not included.

Based on these multipliers, the effects of a million ton increase in coal production are also given in Table 2. Applying these figures to the net increase of 450,000 tons expected in 1987 as a result of the tax incentive, results in the effects given in Table 3.

TABLE 3 ESTIMATED EFFECTS OF NET INCREASE OF 1.1 MILLION TONS VIRGINIA COAL PRODUCTION

328 mine jobs
71 railroad jobs
328 support jobs
$7.8 million miner income
$2.5 million railroad worker income
$7.8 million support worker income
$26.8 million coal revenue
$1.32 Million coal profit
$15.8 million railroad revenue
$792,000 railroad profit
$537,000 local severance taxes
$128,000 state corporate taxes
$544,000 state income taxes
$408,000 state sales taxes
$334,000 state unemployment taxes
$1.42 million total state tax revenue

The effects of the Quillen Act are quite positive. For a tax loss of $1 million the state may realize $1.42 million in tax income, in addition to economic effects benefiting Southwest Virginia. A summary of effects for 1987 includes:

$1 million state revenue loss
$1.42 million state revenue gain
$420,000 net state revenue gain
727 jobs
$42.6 million corporate revenues
$18.1 million payroll
$2.1 million corporate profit
$20.2 million Southwest Virginia economic income benefits (payroll + profits)

A crude benefit-cost analysis can be used to compare the program's state revenue costs to state revenue benefits and to economic benefits for Southwest Virginia:

$$\frac{\text{1987 State Revenue Benefits}}{\text{1987 State Revenue Costs}} = \frac{\$1.42 \text{ million}}{\$1 \text{ million}} = 1.4/1$$

$$\frac{\text{1987 SW Virginia Economic Benefits}}{\text{1987 State Revenue Costs}} = \frac{\$20.2 \text{ million}}{\$1 \text{ million}} = 20/1$$

Effects of Additional $1 Credit For All Virginia Coal Used in 1988

During 1988, in addition to the $1 per ton tax credit for Virginia coal used above 1985 levels, utilities may claim another $1 per ton for all Virginia coal used. In effect, this gives them $1 per ton for amounts up to the 1985 level and $2 per ton for amounts in excess of that level.

It is difficult to predict the amount of state coal that utilities will purchase in 1988. Appalachian Power has been purchasing less coal in 1987 than in 1985. In late summer 1987, Virginia Power predicted it would purchase about the same amount in 1988 as 1987, although this was based on a figure of 1.2-1.3 million tons, a figure that has been surpassed in the first nine months of 1987. One would think that an added dollar per ton incentive would increase purchases. In fact, it appears that some 1987 Virginia Power long term contracts for Virginia coal anticipated the incentive increase in 1988. Assuming that Virginia Power uses the same amount of Virginia coal in 1988 as in 1987 (about 1.85 million tons) and Appalachian Power uses the same tonnage of Virginia coal in 1988 as it did in 1985 (1.7 million tons), the following gives the expected state revenue loss:

TABLE 4 STATE REVENUE LOSS FOR 1988 UTILITY COAL TAX CREDIT

Virginia Power:	
$1/ton for all Virginia coal used:	$1,850,000
$1/ton for all Virginia coal used above 1985 levels:	1,000,000
APCO:	
$1/ton for all Virginia coal used:	1,700,000
$1/ton for all Virginia coal used above 1985 levels:	0
Total State Revenue Loss	$4,550,000

With this assumption, the state will likely see little coal production increase above 1987 levels, as a result of the additional credit in 1988. Thus, the beneficial effects in 1988 would be the same as in 1987. The benefit-cost ratios, however, will be far lower because of the increase in state revenue loss.

$$\frac{\text{1988 State Revenue Benefits}}{\text{1988 State Revenue Costs}} = \frac{\$1.42 \text{ million}}{\$4.55 \text{ million}} = 0.3/1$$

$$\frac{\text{1988 SW Virginia Economic Income Benefits}}{\text{1988 State Revenue Cost}} = \frac{\$20.2 \text{ million}}{\$4.55 \text{ million}} = 4.4/1$$

However, this is not to say that the 1988 credit increase will be ineffective. As mentioned above, some of the 1987 increase in purchases may be attributed to the 1988 incentive, and 1988 purchases may turn out to be above the levels assumed. The proof will come with data on actual 1988 deliveries of Virginia coal.

Utility Coal Tax Credit Compared to Other State Energy Incentives

To view the utility coal tax credit in a proper perspective, it is helpful to compare the utility coal tax credit program to other Virginia energy incentives -- principally the residential solar tax credit and the ethanol grants program. Table 5 compares the revenue losses and the respective benefits of the three incentive programs.

TABLE 5 COMPARISON OF UTILITY COAL TAX CREDITS TO OTHER STATE ENERGY INCENTIVES PROGRAMS

Program	State Revenue Losses	Benefits
Solar tax credit	$10 million (1983-86)	Increased solar development; temporary increase in solar industry
Ethanol tax exemption grant program	$80 million (1984-87)	Increased ethanol distillation; recent increase in fermentation capacity and potential market for agriculture crops.
Utility coal tax credit	$5.55 million (1987-88)	Increased Southwest Virginia employment, (727 jobs) payroll ($18.1 million/yr), corporate profits ($2.1 million/yr), local severance tax ($537,000/yr), and state revenues ($1.42 million/yr)

(Revised by John Randolph 1/5/1988)

TABLE 15 SOLAR ENERGY TAX CREDIT CLAIMS, VIRGINIA

Year	# Claims*	Estimated Expenditure	Federal Credit	Federal $ Claimed	State Credit	State $ Claimed
1978	3,804	$1.3 Mill.	25%	$0.4 Mill.	-	-
1979	347	4.1	25%	0.6	-	-
1980	494	4.3	40%	1.1	-	-
1981	4,925	12.2	40%	4.9	-	-
1982	389	3.3	40%	1.2	-	-
1983	1,415	5.8	40%	2.0	25%	$1.1 Mill
1984	3,811	13.3	40%	5.0	25%	3.1
1985	4,707	24.2	40%	9.1	20%	5.7
1986	976**	2.4	0%	-	15%	0.36
Totals	**20,868**	**$70.9 Mill**		**$24.3 Mill**		**$10.3 Mill**

*Numbers for 1978-82 from U.S. IRS, numbers for 1983-86 from VA Dept. Taxation. Figures for 1979, 1980 and 1982 may be statistically suspect because of small national totals from which they were determined.

**Claims on returns received through October 2, 1987

Data Sources: U.S. IRS 1987, Virginia Dept of Taxation 1987.

(The following recommendations are taken directly from Seltzer's research report, *Economic Development in Virginia's Coal Counties: Strategies for the Future*, VCCER, September 1987).

ACTIONS IN THE PUBLIC SECTOR: LOCAL GOVERNMENTS

Planning and Coordination

Officials and political leaders in Southwest Virginia must commit themselves to formulating and implementing **local economic development plans based on economic diversification.** Local plans should be formulated through a process that builds a wide base of support and is adaptable to current resources and facilities. Plan drafters should consult with appropriate private-sector actors and public officials at the state and federal levels. The business-development capacity of local planning districts should be assessed and augmented where needed.

The Southwest Virginia plan should be a strategy document with consensus objectives based on well-researched and thoroughly discussed ideas concerning the most appropriate development tactics and goals. The document should include feedback and evaluation procedures, and it should be designed to adapt to new circumstances and needs. It should not be a "paint-by-the-numbers" document that transforms the development process into a series of mechanical steps. Rather, it should incorporate flexibility and be implemented so that emerging opportunities can be seized.

The process by which the strategy document is conceived and implemented is critically important to its long-term success. Local officials and political leaders must determine the operational goals of local residents (in terms of income needs, quality of life expectations etc.) and fashion a grass-roots consensus around economic development programs that achieve a reasonable fit between these goals and practical development objectives. Such a process will lay the foundation for an adaptive problem-solving base on which implementation can build. The process of economic development includes a planning document, which, in turn, helps to structure the continuing process. Local people must assume the major responsibility for developing the plan's goals. "Outside" resources should be tapped for particular tasks.

Local officials and political leaders must **upgrade individual and collective abilities to facilitate new, development-related investment.** Local political leaders must become familiar with the changing vocabulary, concepts, and practical techniques of business development. Continuing "in-service" training on economic development goal-setting, planning and implementation techniques should be arranged through Virginia Tech, the University of Virginia, and/or the state's Department of Economic Development. The Southwest Virginia Development Commission's proposal for seminars on leadership development offers a sound approach.

Central to a regional development process is the principle of efficient allocation of resources. Local officials and political leaders must be willing to **make investment decisions on the basis of county and regional efficiency.** While protection of local and parochial interests is understandable, major developmental decisions often require local officials to act within and on behalf of the larger region. In any event, Southwest Virginia's developmental resources are limited and must be employed where they will be most productive.

It is most important that local leaders begin to **see themselves as "developers"** -- initiators of actions that result in new investment, job growth, and improved community conditions. Southwest Virginia's leaders cannot afford to think passively or hypothetically about economic development. Development is not something external to a community; it starts from within.

A number of interviewees for this report suggested that the perception of labor "problems" discourages outside investment in Southwest Virginia. The perception that labor is unstable, highly unionized, and insistent on mine-level wages was repeatedly cited as the principal obstacle to branch plants locating in the region. Bruce Robinette, director of the LENOWISCO planning district, says this "union stigma" has several components: 1) Southwest Virginia has a tradition of unionization that potential investors seek to avoid; 2) a "pro-union" environment will lead to unionization campaigns, possible violence, inefficient work rules, and unrealistically high wage/benefit expectations; and 3) the labor force will be unstable if mine employment picks up in the future.

Much of this perception is outdated. No more than half of the working coal miners in Southwest Virginia are union members, and the unionization rate of non-coal businesses is not substantially higher. Virginia is a "right-to-work" state, and unionization campaigns are not easily won. During recent years, unions have been forced to be far more accommodating to management needs than in the 1960s and 1970s. While unions continue to seek higher wages and protective work rules, circumstances have forced them to tailor their needs to management capabilities. It is extremely doubtful whether high UMWA wage rates would inflate wage rates for new non-mining businesses. Given the region's protracted unemployment, it is also doubtful that a "reservation wage" (referring to laid off employees from a high-wage sector choosing to remain unemployed rather than accept a low-paying job) is operationally significant. Donald McCamey, then acting president of UMWA District 28, said:

> *They [coal miners] would not be willing to quit a [mining] job and take that [$6 or $7 per hour]. But if they are already laid off, I would certainly say there would be plenty of miners right now ready to work for $6 an hour.*
>
> *[Coal people who think that miners will not work at other jobs for less pay]...are crazy. They are crazy. I have guys come in here all the time. They would work for $6 an hour anywhere they could do it if they did not have to leave. They couldn't drive 60 or 70 miles one way for $6 an hour because all their money would be going to transportation. There is a multitude of labor out here that would take a job for $6 an hour right now.*

To minimize misperceptions surrounding Southwest Virginia labor, it is important for local officials and planners to involve labor representatives in formulating and implementing economic development strategies. Labor shares an interest in promoting investment that leads to jobs, and it should be possible -- albeit difficult at times -- to bring labor into the economic development process at the local level. Nothing is lost by making this effort, and much can be gained if it is successful.

Financial Investments

Local governments must **increase tax revenues derived from local sources** principally the property tax. The average effective real estate true tax in the coal counties of Southwest Virginia in 1984 was only 43 cents per $100 of value compared with a state-wide average of 88 cents. The property tax in the state's coal-producing counties was lower than in the non-coal areas of Southwest Virginia. Personal taxes in the coal counties, measured in terms of either per capita or adjusted gross income, were also below the state's average, but were higher than in non-coal areas of Southwest Virginia. A commitment to self-initiated economic development must begin with increased local effort. Outside assistance is not likely to materialize in sufficient quantity unless local government demonstrates a financial commitment to self help. New tax revenues should be strategically invested in building local infrastructures and services that leverage additional investment from private and public sources. New tax revenues should be deployed according to the **principle of "developmental productivity," such as investments ranked by the degree of expected developmental payoff each is likely to produce.**

Each county should reevaluate the adequacy of its own tax program. As part of a package of revenue-increasing measures to fund developmental investment, local governments should

consider adopting a differential-use tax for underdeveloped land that contains mineral reserves and for land that doesn't. Local governments should also **consider adopting a "user-pays" principle** to raise funds for new road construction and other additions to the localities' capital stock.

Taxation of coal land in Southwest Virginia and throughout Appalachia has been a source of public debate for many years. Property taxes on unmined coal have traditionally been very low, generally less than $1 per acre. Virginia's coal-producing counties vary in their methods of assigning value to undeveloped coal land. The assessed value for coal-bearing land is generally about $500 per acre, which is taxed at rates ranging from 28.5 cents per $100 of assessed value in Wise County to 65 cents in Russell County. Critics argue that Virginia's relatively high tax rates are "deceptive," because "...hundreds of thousands [of] mineral acres [are] not recorded at all, and no mapping program has been established by the state to help local assessors determine where these mineral reserves are." When the state's Division of Mineral Resources finishes its current mapping project in the coal counties, a more complete mineral inventory should be available.

VCCER has not undertaken an independent analysis of mineral taxation in Southwest Virginia. We understand how higher production taxes can discourage coal production; we also understand that unmined coal is an asset that deserves to be taxed fairly. We recommend that the Commonwealth support a comprehensive study of taxation policies, needs, and potentials in the coal-producing counties of Southwest Virginia. This study should evaluate tax options and determine their fiscal and economic impacts. Policy recommendations should be drafted for local and state officials where appropriate.

Development Capacity Investment Targets

Local institutional capacity to nurture business development is essential to diversifying the economies of Southwest Virginia. This capacity should be strengthened at the county level. Each county should have at least one **facility to incubate small, first-time local entrepreneurs.** (Such a facility can be a located in a retired school or abandoned commercial building.) Incubator services should be obtained from local lawyers and accountants. Other technical assistance can be accessed through local colleges and universities, the Department of Economic Development, and private vendors. Local business people -- both first-time entrepreneurs and existing firms -- should be eligible for incubator services and technical assistance on the basis of need and feasibility.

In addition, each county should:

- **obtain one standing facility and/or prepare at least one building site that is suited for batch-assembly manufacturing or data-processing work.** Counties should commit to improving the site to suit the investor's need;
- **establish a local development office,** whose full-time director would be responsible for encouraging local entrepreneurs, facilitating new investment by existing businesses, and serving as coordinator for non-local business prospects;
- **conduct an inventory of the county's human resources** for the purpose of identifying current employment patterns, educational achievement and existing skills, potential for upgrading skills and retraining, and entrepreneurial potential and needs;
- **establish a local development organization,** such as an Industrial Development Authority or a local development corporation, which is capable of coordinating and/or providing financing packages for prospective business investors;
- **evaluate the costs and benefits of making changes in zoning and land-use regulations** that will facilitate development.

Southwest Virginia counties can accelerate building their development capacity by **partnering" with more developed counties** elsewhere in Virginia. Institutional and agency partnerships can be structured to bring Southwest officials and business people into regular contact with their peers in more developed counties. Such partnerships and exchanges are a well-established vehicle for assisting less-developed institutions and areas.

Education

Southwest Virginia school systems have achieved significant improvements in student performance during the last two decades. Students in the region's coal counties, however, continue to lag behind the state norms for most measures of performance. These school systems should be encouraged and helped to continue their progress. It is equally important that Southwest Virginia **develop mechanisms**, several of which are described below, **to retain its young people**. Otherwise, the benefits of local educational investment accrues to areas where Southwest Virginia residents have migrated.

Economic development requires **investment in several types of education.** Development requires a high degree of literacy, broadly defined* as competency in mathematics and analytical reasoning; oral and written communication; problem conceptualization and resolution; human relations skills; and ability to initiate projects and complete them. In a more limited sense, enhancing development potential demands that **local educational programs provide focused technical training to match available employment.** Low educational levels are generally associated with low-wage jobs, limited employment opportunities, unemployment, and other socio-economic ills. While investment in public education is no guarantee that economic development will follow, it is reasonably safe to assume that development will not occur without it.

This study did not undertake an in-depth analysis of educational performance in Southwest Virginia. It is apparent, however, that even though Buchanan, Dickenson, Lee, and Wise counties spend more per pupil than the state average, their student scores, drop-out rates, and education levels are generally far below average. While more educational is necessary, we also suggest that *educational programs be reformatted and teaching resources strengthened.* We support the Southwest Virginia Economic Development Commission's recommendations for an **increase in total funding for public education, an all-out assault on adult illiteracy, more opportunities for graduate education, and stronger adult job training and retraining programs.** Several other specific areas of improvement became apparent during our research, including:

- In-service upgrading of teaching and management competencies.
- Revision of curriculum designs.
- Cooperative education projects at the high school level.
- School-based enterprise projects.
- Partnerships that involve exchanges of faculty and students, consultation on curriculum, etc. with stronger schools in other parts of Virginia.
- Volunteer-based enrichment programs that tap local residents.
- Strengthened college-track programs through television courses, video cassettes, guest faculty in residence, etc.

Infrastructure

Investment in publicly funded infrastructure -- roads, schools, water, sewage and solid waste disposal, community facilities, and services -- is required to strengthen and reconstruct local economies. Infrastructure quality defines a community's appeal to many private-sector investors. While infrastructure may be less important to firms that are drawn to Southwest

Virginia's natural resources, infrastructure improvements are essential to developing a broader economic base in this region. The Southwest Virginia Economic Development Commission recently recommended the accelerated completion of "Jobs Corridor" highways and upgrading water and sewer/solid waste disposal systems to federal standards.

Building and maintaining infrastructure is expensive and subject to parochial politics; every community wants its road repaired first and a new school located nearby. Discipline in economic development requires that local officials place development needs above parochial needs until the county gains developmental momentum. Once local governments demonstrate their ability to exercise political discipline and make sound long-term infrastructure investments, local business will be receptive to requests for donations of materiel, equipment time, and technical assistance to advance infrastructure-building. In this fashion, economic development becomes a shared commitment and community project.

STATE POLICY

The Commonwealth of Virginia possesses resources and responsibilities that are uniquely suited to promoting economic development in Southwest Virginia. To focus the state's effort, **government policy should target economically distressed counties within the Commonwealth for special help in promoting economic development.** ("Economic distress" should be defined inclusively so that economically troubled counties in other parts of the state can be assisted.) A Department of Commerce Task Force has already been established to evaluate state policies on behalf of economically distressed communities. The ideas outlined below presume a state-level commitment to special development assistance for distressed counties and communities.

Planning and Coordination

An **Office of Special Economic Assistance (OSEA)** should be established in either the Department of Commerce or the Department of Economic Development. Legislative subcommittees should be created to provide funding and oversight. A member of the Governor's staff should be assigned as a liaison to OSEA. The purpose and functions of OSEA include:

- promote economic development in Virginia's economically distressed counties and communities;
- establish and manage financial and administrative mechanisms that promote economic development in these counties;
- provide distressed counties with technical assistance related to development;
- make recommendations to the Governor and the Legislature regarding changes in state policy that should be considered (e.g., locational tax incentives);
- support research and education projects;
- evaluate programs in other states that might be adapted to Virginia's needs;
- aid distressed counties in making use of state/federal programs;
- recruit and direct industrial prospects to distressed counties with special locational incentives;
- assess the impact of economic trends and state/federal policies on distressed counties;

- report annually to the Governor and Legislature on the status of economic development and make recommendations.

Within the framework of the OSEA, the State should **establish an Economically Distressed Area Authority (EDAA)** with the responsibility for promoting economic development through:

- issuing tax-exempt and general obligation bonds to finance land acquisition, facility construction or improvements, and the purchase of machinery and equipment;
- guaranteeing and providing loans;
- condemning land through eminent domain proceedings;
- purchasing, leasing, and accepting the donation of land, in addition to selling land and capital stock;
- establishing a small revolving loan fund ($20,000 maximum) for first-time entrepreneurs, home-based businesses, and the self-employed.

To preserve existing business in distressed counties, OSEA should establish an inter-agency team that responds quickly to impending plant shut downs. The team would provide technical and management assistance to troubled firms before they close; counseling to workers; research and planning of alternative uses of the facilities; and similar services.

Policies and Investments

The Commonwealth can fashion state policies and practices to encourage private-sector investment in distressed counties in general and Southwest Virginia in particular. Interviewees for this report suggested enhanced state involvement in many of the following areas:

1. **State Purchasing.** The Commonwealth should establish a policy of **preferential purchasing from vendors located in distressed counties.** The policy could be implemented through either a bonus system on all state contracts or a system of "set-aside" contracts for these vendors that are excluded from normal bidding procedures.

2. **State Facility Siting.** The Commonwealth should **site state-built facilities in distressed counties whenever feasible.** The scheduled construction of a 500-bed, medium-security prison in Buchanan County is a welcome illustration of this assistance.

3. **State Service Contracts.** State government requires operations, research and analysis, graphic design, and printing. Vendors of these services should be **encouraged to locate in distressed counties** through the use of set-aside provisions and/or preferential purchasing rules.

4. **Locational Incentives.** Virginia has been particularly successful in attracting industrial investment. Virginia ranked tenth in the nation in 1986 for the rate of job growth, rate of new business formation, and increase in rapid-growth businesses between February 1982 and February 1986. Since Southwest Virginia and other distressed communities do not share in the state's overall growth trend, "special packages" of tax incentives, financing, infrastructure development, training, wage subsidies, state purchasing commitments, and other support **should be offered to businesses willing to expand or locate in distressed areas.** Bruce Robinette and Ron Flanary, LENOWISCO officials who are actively involved in industrial recruitment, suggest that an "economic development incentive bond" replace existing industrial revenue bonds. The incentive bond (low- or zero-interest) would be available to industries willing to site job-generating facilities in counties with high unemployment.

5. **Education Funding.** If local governments in distressed counties meet state-set tax and funding commitments to their school systems, the state could **provide bonus funds and technical assistance to strengthen local education.** The amount of the bonus would be determined by the degree of local spending.

6. **Tri-State University.** Universities are significant promoters of economic development in their immediate environments. Virginia, West Virginia, and Kentucky share the same developmental needs within their Central Appalachian areas. These needs could be partially addressed by the **establishment of Tri-State University, a joint effort to build a university whose unique mission would be to promote the economic reconstruction of Central Appalachia** through the education and retention of the region's human resources, research and analysis, enterprise development, and related activities. Tri-State University should be located at a site close to where the three states' borders meet.

7. **Infrastructure.** Southwest Virginia needs major investment in infrastructure, especially **four-lane road access.** User fees and the coal severance tax are two options for helping to finance such projects. State and local officials should evaluate financing options then adopt an appropriate package. The state should also set up a **local assistance program through OSEA to review, approve, and market local bonds for infrastructure development.**

8. **Leadership Development.** Southwest Virginia would benefit from a larger core of private- and public-sector leaders who are knowledgeable of current business trends, opportunities from new technologies, management techniques, marketing strategies, and public policy. With the cooperation of various state agencies, **development-oriented workshops to train these individuals can be organized** through Virginia Tech and the University of Virginia.

9. **Entrepreneur Recruitment.** With the exception of those in the coal business, Southwest Virginia has not nurtured local entrepreneurs (a common problem in economies that depend on a single natural resource). Local entrepreneurs, consequently, have not had many opportunities to enter sectors of the national economy that promise future growth. OSEA should **develop incentive-based, state-wide programs to attract fledgling entrepreneurs, recent graduates of Virginia business schools and graduate programs to locate in distressed counties.** These incentives could include financing, training, marketing, and other services.

10. **Brain Claim.** Distressed rural areas have great difficulty retaining many of their high school and college graduates. "Brain Claim" would be an **OSEA program to reverse the brain drain from these counties.** Once talented youngsters were identified and recruited, they would be assisted and encouraged to acquire professional educations and provided with the wherewithal to return to their sponsoring communities. "Brain Claim" could be specifically designed with the University of Virginia and Virginia Tech as sponsoring institutions, because of the breadth of their graduate schools. The program would provide counseling, mentors, scholarships, and access to start-up capital on the students' return to the coal counties.

11. **Community Partnerships.** OSEA should **sponsor partnerships between distressed counties and high-growth counties within the Commonwealth,** involving exchanges of personnel, technical assistance, joint ventures, summer youth programs/exchanges and transfer of information. OSEA could subsidize certain costs of this program. Counties that are experiencing a labor shortage should recruit in the labor-surplus, distressed counties.

12. **Enterprise Financing.** State governments have adopted a multitude of financing mechanisms to stimulate private investment during the last decade. Virginia, as a whole, has been very successful in promoting investment and economic growth, but techniques that have proved sufficient in northern Virginia and along the Interstate corridors have not worked well in Southwest Virginia and other distressed communities. **Special financial packages should be adopted,** including the Economically Distressed Area Authority (EDAA)

described above. State recruiters should give priority to financing investment in distressed areas. Other promising ideas techniques that OSEA should evaluate include:

- investment of state funds in distressed counties with lenders paying 3 points below current rates, enabling them to lower interest charges on local commercial and industrial loans that preserve or create employment;
- venture capital fund for promising high-risk borrowers;
- package of state tax incentives to businesses that locate or expand in distressed counties.

13. **Recruitment of Foreign Investment.** Virginia's distressed counties tend to be in more remote, rural areas of the state -- areas unfamiliar to foreign investors. OSEA should **develop mechanisms and incentives for recruiting foreign investment to distressed counties.** The Department of Economic Development currently maintains foreign trade missions and foreign-investor programs, which can be used to encourage recruitment to Southwest Virginia.

14. **Federal Procurement Assistance.** OSEA should **set up an information and assistance program to help vendors in distressed counties qualify for and secure federal contracts.**

15. **Federal Program Assistance.** Even though federal programs have been reduced, federal support continues to be available for an array of programs and services that are appropriate for distressed communities. These include:

    - **HUD's** single-family housing programs (S 203b, Title I and S 207); multi-family housing (S 207, S 223m, S 221 d 3/4); Section 8, which aids low-income renters; Section 202, which provides direct loans to non-profits to build housing for the elderly and handicapped; S 231, which insures financing of rehabilitation and construction of rental housing for the elderly and handicapped, among others;
    - **Farmers Home Administration's** single-family residence loans, community infrastructure loans, and business and industry loans;
    - **Soil Conservation Service** programs on flood control, abandoned mine projects, and resource conservation;
    - **Economic Development Administration** loans, grants, and technical assistance;
    - **Appalachian Regional Commission's** enterprise development program; and
    - **Small Business Administration's** retired executive program, together with its other well-known programs.

16. **State Certification.** Several counties in Southwest Virginia cannot meet the requirements for certification under the state's economic development program. Most do not have sites or facilities that meet the program's criteria. If a county is not certified, it does not receive the maximum amount of state assistance in securing industry. This creates a situation in which the most needy counties are denied the help that they need. If Southwest Virginia counties implement the recommendations outlined above, they should qualify for certification. We also recommend in the interim that the state reexamine its certification program with the objective of aiding distressed counties in qualifying for certification.

17. **Migration.** Government at the federal and state levels has been reluctant to become involved in encouraging the relocation of displaced workers and their families. Our mixed national economy generally leaves such decisions to individuals, on the assumption that market forces will eventually produce an efficient redistribution of human resources. Persistently high unemployment and poverty rates in Southwest Virginia and Central

Appalachia raise doubts, however, that the market is redistributing population as the theory predicts. Although the total population of Southwest Virginia's coal-producing counties was about the same in 1980 and 1985, the trend has been downward after a peak in 1983. These counties experienced a net loss of about 4,000 persons in the migrants/immigrants exchange.

We believe Southwest Virginians should have the economic opportunities to reside in the communities of their choice. We also believe these opportunities are going to be even more limited in the near-term future than at present. While we do not feel comfortable with recommending that government "tell" people to leave Southwest Virginia, it is clear to us that the current economic carrying capacity of this region is saturated. We recommend that public agencies, civic organizations and the news media sponsor community discussions on this issue throughout Southwest Virginia. Employment opportunities may increase in the future, and migrants could return with new skills and capital.

18. **Coal Policy.** Virginia coal production has grown during recent years and should continue to grow at a moderate rate for another decade or two if current trends continue. Competition and eroding prices have now weeded out the least efficient operators. Large coal companies that produce, lease, and market their product dominate the state's mining industry as smaller independents shut down or shift to contract mining. State policy can have some positive impact on coal production, although it appears more common for states to enact policies that discourage production (through regulation and taxation) than devise ways to increase demand for locally mined coal. Virginia's medium-term interest lies in conserving its coal market share now held by local operators and in protecting coal counties from sharp fluctuations in production and employment. In the longer term, the Commonwealth must adopt policies that promote economic diversification in the coal economies while preserving the existing coal employment base.

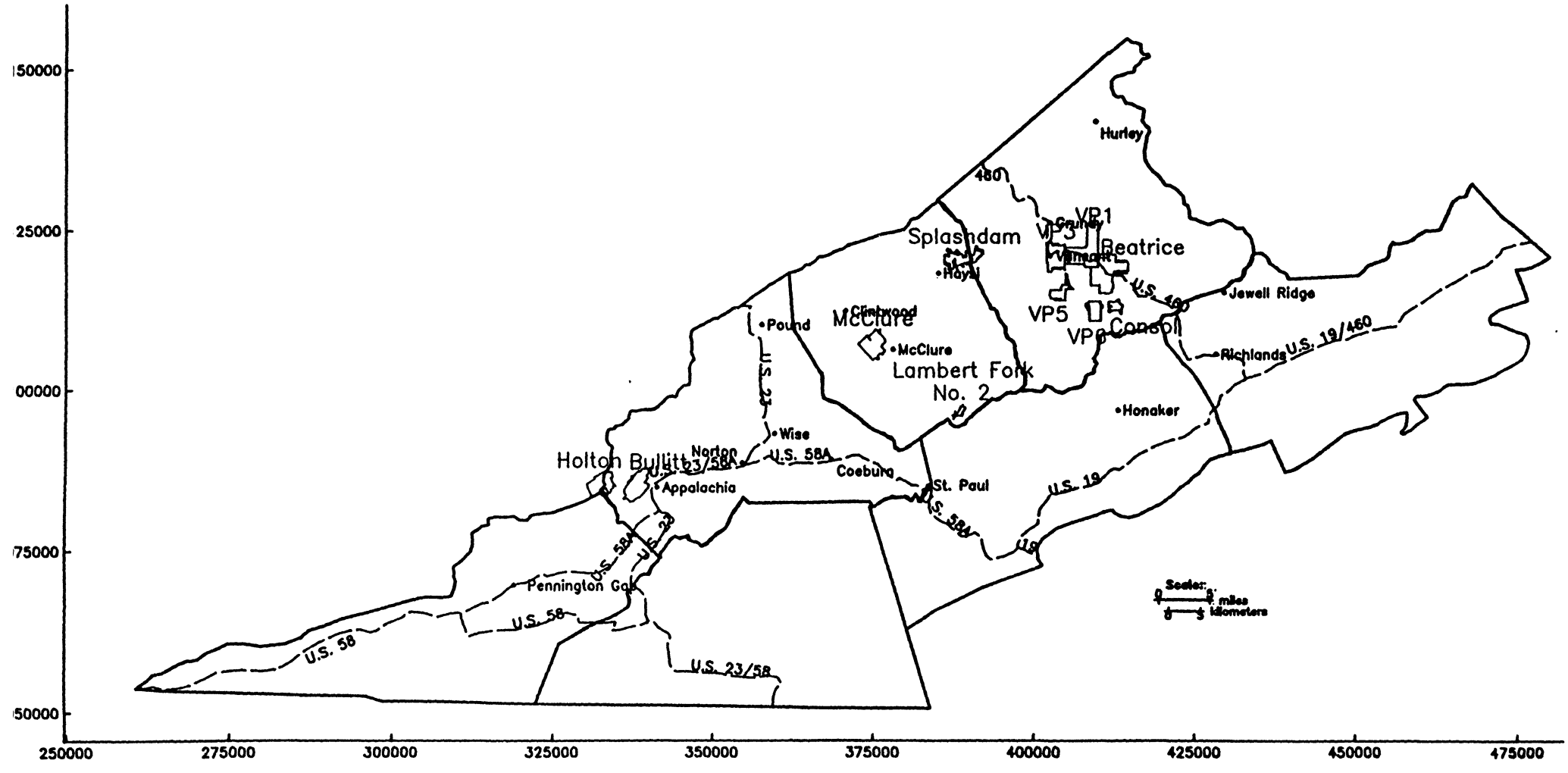
Production of Virginia coal is determined mainly by market factors and federal policy, but state policies do play a marginal role. State government should develop positions on coal imports, acid rain legislation, slurry pipelines, rail rates, and so forth, and make these known to Congress and the Administration.

The Commonwealth can also help its coal operators by:

- purchasing coal mined in Virginia for state facilities where feasible;
- retrofitting state facilities with clean- burning, coal-fired heating and electricity-generating systems that would burn Virginia coal;
- require all new state facilities to burn Virginia coal;
- provide tax incentives to large energy consumers to switch to coal- based systems;
- provide tax credits incentives (similar to 1986 Quillen Act) to Virginia industrial and commercial consumers to burn Virginia coal;
- provide tax incentives for coal-fired cogeneration projects;
- adopt open-track legislation that would promote competition in coal haulage;
- conduct a study of utility coal- purchasing policies to determine ways that Virginia electric powerplants can use in-state coal with no penalty to ratepayers;
- establish the capability within state government to assess the likely impacts of federal legislative and regulatory actions, emerging technologies, and market trends on Virginia coal counties;

- negotiate a **multi-state tax compact** with West Virginia, Kentucky, and Tennessee to equalize state-imposed coal taxes, which would remove the tax burden as a factor in market success;
- stipulate that at least 25 percent of the coal severance tax revenues that counties collect be used for economic development investment in coal counties;
- determine the market impact of a small increase in the severance tax to fund development in coal counties, and, if market impacts are small, enact legislation to that end within the framework of the multi-state compact described above;
- provide a forum in which coal interests, unionized labor, and public-sector representatives can discuss Virginia coal policy and economic development.

Virginia Mines Currently Longwall Mining



SENATE JOINT RESOLUTION NO.....

Requesting the Department of Corrections to use coal at all of its correctional facilities.

WHEREAS, the economy of Southwest Virginia is very dependent upon the sale of coal extracted from mines located in that area; and

WHEREAS, § 11-47 of the Code of Virginia provides that in the case of a tie bid, a preference be given to those goods produced in Virginia; and

WHEREAS, the Virginia Coal and Energy Commission recommended in its 1987 report that only Virginia coal be purchased for use in state facilities; and

WHEREAS, many of the Commonwealth's correctional facilities are already burning coal for their energy needs; and

WHEREAS, the Coal and Energy Commission recommends that the Department of Corrections exclusively burn coal for the energy needs of all its correctional facilities, both existing and future; now, therefore, be it

RESOLVED, by the House of Delegates, the Senate concurring, That, the Department of Corrections is requested to burn coal for the energy needs of all its correctional facilities, both existing and future.

RESOLVED FURTHER, That the Clerk of the House of Delegates shall transmit a copy of this resolution to the Director of the Department of Corrections.