REPORT OF THE SOUTHWEST VIRGINIA OFFICE OF THE UNIVERSITY OF VIRGINIA'S WELDON COOPER CENTER FOR PUBLIC SERVICE

THE ECONOMIC IMPACT OF COAL TAX CREDITS ON SOUTHWEST VIRGINIA AND THE COMMONWEALTH

TO THE GOVERNOR AND THE GENERAL ASSEMBLY OF VIRGINIA



# **HOUSE DOCUMENT NO. 7**

COMMONWEALTH OF VIRGINIA RICHMOND 1996



### WELDON COOPER **CENTER FOR PUBLIC SERVICE**

University of Virginia

#### MEMORANDUM

TO: The Honorable George Allen, Members of the Virginia General Assembly

Simeon E. Ewing, Director FROM: 1.6.23 Southwest Virginia Office

November 9, 1995 DATE:

SUBJECT: House Bill 2575 - 1995

The 1995 General Assembly, by House Bill 2575, requested the Southwest Virginia Office of the University of Virginia's Weldon Cooper Center for Public Service to examine the economic impacts of coal tax credits. Enclosed for your review and consideration is the document that has been prepared in response to this bill.

Enclosure

. .

#### PREFACE

House Bill Number 2575 passed by the 1995 General Assembly requested two studies. The first is that the Virginia Port Authority undertake a study of the effect the Coalfield Enhancement Tax Credit has on the Ports of Hampton Roads, with second report being this report by the University of Virginia Cooper Center for Public Center to examine policy, legal, and economic impacts of credits authorized in the Code.

In order to accomplish the tasks set forth by the Legislation, the Southwest Virginia Office of the Cooper Center for Public Service worked with the Virginia Center for Coal and Energy Research for their assistance in determining the effects coal tax credits have on production in Virginia's coalfields. This foundation provided by the Center for Coal and Energy Research also enabled the other studies outlined in HB 2575 to have a common basis, should further comparison deemed to be necessary.

The Center would like to thank those individuals who provided assistance in the preparation of this report; Dr. Carl Zipper, Center for Coal and Energy Research; Ms. Mary Morris, Office of the Attorney General; Mr. Steve Walz, Department of Mines, Minerals and Energy; and Ms. Stuart Carter, Department of Taxation. Additionally, the numerous individuals who provided insight in the study and reviewed draft documents.

For additional information or questions concerning this report please contact:

Mr. Simeon E. Ewing Director, SWVA Office Cooper Center for Public Service 1 College Avenue Wise, VA 24293-4400 540/328-0133 Voice 540/328-0233 Fax see4r@pluto.clinch.edu E-Mail

Weldon Cooper Center for Public Service -- Southwest Virginia Office University of Virginia Wise, Virginia 24293-4400 November 8, 1995

•

•

#### Table of Contents

Executive Summary	. i
Introduction	1
Methodology	
Economic Impacts of Coal Tax Credits	. 3
Virginia Coalfield Employment Enhancement Tax Credit	3
Coal Cogeneration Tax Credit	6
Virginia Coal Employment and Production Incentive Tax Credit	7
Legal Aspects	8
Coal Tax Credits in Other States	8
Economic Policy 1	16
Conclusions1	7
Charts 1	9
Appendix A Legislation	36

#### Weldon Cooper Center for Public Service -- Southwest Virginia Office University of Virginia Wise, Virginia 24293-4400 November 8, 1995

#### EXECUTIVE SUMMARY

#### BACKGROUND

Coal mining has long been one of Virginia's leading industries. Providing economic stimulation throughout the Commonwealth while historically being one of the cornerstones of Virginia's export market. Since 1990, production has been steadily decreasing from its peak of 46.5 million tons, to a 1994 production level of 38.8 million tons. Modeling of production strongly suggests that Virginia's coalfields have passed the midway point of available reserves. Prompting the need to examine the effects declining production will have on Virginia's economy.

Historically, Virginia's coalfields have experienced economic ebb and flows. This cyclical economic pattern has led to a region that has not diversified, lagging behind the Commonwealth in many key economic indicators. During periods of economic ebb, the citizenry held out for the eventual upturn in the economy. Now with evidence showing coal reserves having gone past the mid-point, while coal prices per ton have continued to decline in current dollars since 1990's average price of \$28.05 per ton, the prospect of stabilized or increased levels of production and employment are marginal.

Since 1991 direct employment in coal mining has declined from 10,797, to the current level of 7,860. Mining represents 18 percent of the coalfields work force, the highest single sector with a direct payroll of \$331 million dollars per year. Declines in mining employment have pushed the seven counties and one city that comprise the coalfields to the highest rates of unemployment and lowest levels of work force participation in the Commonwealth. Dramatized by the recent closing of Westmoreland Coal Company's Virginia Operation, Wise County unemployment levels have rapidly increased so that they now experience a rate of unemployment four times Virginia's.

To remedy declines in the industry, the Commonwealth has provided tax incentives to boost the Virginia coal industry. The first such incentive was the Virginia Coal Employment and Production Incentive Tax Credit, which was passed to provide incentives to producers of electricity, gas or steam in the form of a tax credit against their annual state license tax for each ton of Virginia coal purchased for production. The second incentive program for Virginia coal was the Qualifying cogenerators and small power producers credit. This credit established a credit against a cogenerators corporate income tax based on the tonnage of coal mined in Virginia purchased by a cogenerator that sells power to a public service corporation in Virginia.

During the 1995 Session of the General Assembly, HB 2575 was approved providing additional incentives in an effort to improve the economic climate for coal mining. The **Coalfield Employment Enhancement Tax Credit** set forth tax credits for coal produced based on seam thickness. In addition, a tax credit was provided for coal mined by surface mining methods.

÷

#### FINDINGS

The coal industry is facing increased competition from other coal producing areas. Virginia's poor geological conditions create difficult mining. Continued operation in today's environment will reduce Virginia's production to 32.44 million tons by the year 2000 and 25.78 million tons by the year 2005. Corresponding reductions in direct mining employment equates to 7,039 miners in the year 2000 and 5,594 miners in 2005. A reduction in direct employment by year 2005 of 48.19 percent from 1991, resulting in yearly lost wages from 1996 to 2005 of \$182.16 million.

Continuing with the single credit rate without the three year waiting period and caveat on the Commonwealth's financial health will increase production by 400,000 tons per year. Statewide this would save 315 jobs through 2000 and 482 jobs through 2005, at an average net cost, credit costs less additional revenue, to the Commonwealth of \$12.49 million per year.

Doubling the tax rate creates a stabilized economic environment. The rate increases employment statewide through the year 2000 by 3,704 jobs compared to no tax credit, and by 3,389 jobs over the single tax credit. During this five year period, the average net cost per year would be \$ 21.47 million.

Tripling the coal tax credit provides the greatest impact on production and employment levels. This rate provides 5,400 more jobs by the year 2000 than with no tax credits statewide. Through the year 2000, the average net cost per year would be \$33.96 million.

Currently, Virginia has two other forms of coal tax credits in place. The first provides credits for coal used in cogeneration. Based on the number of users, information from the Department of Taxation was suppressed and not broken out by industry sources or the Department of Mines, Minerals and Energy. However, its usage was stated to be "minimal". The Virginia Coal Employment and Production Incentive Tax Credit during the past three years created a positive return of ten million dollars in state and local tax revenues. Credits were given for 11.626 million tons, although it cannot be assumed that none of this coal would have been utilized without the credit.

While this study did not examine every coal producing state and their exemptions, it does give a representative sample of major coal producing states. This comparison does demonstrate that throughout the country, considerable exemptions are granted to the coal industry, especially for increased utilization of in-state coal for electrical generation. West Virginia being one of the more aggressive states toward providing tax incentives for coal production.

As an economic policy, Virginia has considerable allowances for credits against state taxes. These fall mainly in the traditional area of agricultural industries. As with neighboring states, Virginia has authorized new tax credits for businesses which will create significant opportunities for employment. Authorization of new credits such as the **Major Business** Facility Job Tax Credit have been developed in order to aid in the promotion of the Commonwealth in the economic development arena.

The scale of incentives has become a question mark. Kentucky, a prominent player in economic incentives for economic development, has begun to question the financial liability associated with incentives now requiring state economic development officials to provide to the Finance Cabinet details on incentives to determine the credits cost versus enhanced revenue to the Commonwealth.

Tax incentive programs send a signal to business and industry that a state from an economic development stand point is proactive, professional, and appreciates business and

industry operating in the state. Adoption of this type of approach as a policy statement should be fulfilled by more than an appetite for new locations, but should also include the position of keeping existing businesses. A second factor involved with determining incentive policy should be an industry's ability to provide value added capabilities -- does the industry provide additional employment opportunities resulting from their operation.

As a policy decision, economic incentives must be reviewed on a continual basis to correspond with changing policy and economic environmental conditions. Failing to take an aggressive review policy promotes obsolescence and burdensome tax policy administration.

#### CONCLUSIONS

The coalfields of Southwest Virginia are facing a difficult economic climate due to declines in the coal industry. During the period 1990 to 1994, production of Virginia coal declined by 16.56 percent. The region's economy is built around the coal industry providing 18 percent of the work force, and the highest single sector direct payroll. Compounding the effect of coal on the regions' economy, the second largest employment sector, retail, is directly linked to the health of the coal industry.

Virginia coal faces numerous competitive problems. The first is the decline of coal reserves; secondly, geological conditions which are not as conducive to mining as neighboring states; and, third, global competition forcing marketing conditions to change. These conditions have provided the seven counties and one city which comprise the coalfields to have the highest rate of unemployment and lowest levels of work force participation in the Commonwealth.

Maintaining coal production and employment levels at a fairly constant state over the next five years requires a projected net expenditure of \$106.96 million. Projecting an additional 13.78 million tons of coal being mined over the five year period in excess of production based at the zero credit level. Much of the coal mined because of financial incentives brought about by these tax credits is coal that normally would be lost to Virginia. The survey indicated that the ability to mine coal at the effective levels brought out by the incentive would allow some mines to remain open, and other reserves not recoverable due to geological conditions would become recoverable. In effect, extending Virginia reserves by an amount somewhere below the 13.78 million ton level provided by the credit.

This question is as much a social as an economic issue. Continued loss of coal production and direct employment has significant ramifications on Southwest Virginia and the Commonwealth as a whole. The industry has far reaching direct and indirect employment and fiscal benefits through out the Commonwealth as has been demonstrated. From a social perspective, the issue becomes what should the disposition of the southwest region be? A region that contains rates among the highest in the state for transfer payments, and further decline in the industry will accent these levels, creating costs to the taxpayers in areas such as health, welfare and education.

Virginia is not alone in looking to make industries competitive. Neighboring states have initiated tax incentives, with West Virginia one of the leading direct competitors to Virginia coal among the most ambitious.

Previous Virginia legislation providing coal incentives has increased production and generated tax revenues greater than the amount of incentive paid by the Commonwealth. Tax incentives under the Coalfield Employment Enhancement Tax Credit will increase production levels. Employment levels under the tax credit will exceed employment levels without a credit, but must reach the double incentive level to maintain existing levels of employment or increased employment.

Credits should not be seen as a long term cure to a problem. If utilized, credits provide an opportunity for the region to invest in itself during the credit period to enhance their opportunity for economic diversification. Investment of revenue received above the projected base level of funding would allow for additional local opportunities to be developed. Coal will continue to be a significant portion of Southwest Virginia's economic future. However, for long term economic health, the only solution is to continue to aggressively seek economic diversification. For this to happen, the region and Commonwealth must begin to fully understand the economic conditions facing the coal industry and effect necessary policy changes.

#### INTRODUCTION

Coal mining has long been one of Virginia's leading industries. Providing economic stimulation throughout the Commonwealth while historically being one of the cornerstones of Virginia's export market. Since 1990, production has been steadily decreasing from its peak of 46.5 million tons, to a 1994 production level of 38.8 million tons.<sup>1</sup> Examination of Virginia's long-term coal production forecast is expected to follow a normal curve for non-renewable natural resources. This in correlation to modeling of production on the curve strongly suggests that Virginia's coalfields have passed the midway point of available reserves.<sup>2</sup> Prompting the need to examine the effects this will have on Virginia's economy.

Historically, Virginia's coalfields have experienced economic ebb and flows. This cyclical economic pattern has led to a region that has not diversified, lagging behind the Commonwealth in many key economic indicators. During periods of economic ebb, the citizenry has held out for the eventual upturn in the economy. Now with evidence showing coal reserves having gone past the mid-point, the prospect of stabilized or increased levels of production and employment are marginal. While coal prices per ton have continued to decline in current dollars since 1990's average price of \$28.05 per ton.<sup>3</sup>

Since 1991 direct employment in coal mining has declined from 10,797, to the current level of 7,860.<sup>4</sup> Mining represents 18 percent of the coalfields work force, the highest single sector with a direct payroll of \$331 million dollars per year.<sup>5</sup> The retail sector being the second largest employment market, where mining has been heavily relied upon for the growth in the retail market over the past decade. Retail's impact is seen with the strength shown by the City of Norton, seventh per capita in Virginia, and the comparative situations shown by the counties when compared with Virginia's counties. This in a retail arena which in the early 1980's was virtually non-existent.

Declines in mining employment has pushed the seven counties and one city that comprise the coalfields to the highest rates of unemployment and lowest levels of work force participation in the Commonwealth. Dramatized by the shut down of Westmoreland Coal Company's Virginia Operation in 1995, Wise County unemployment levels are now four times Virginia's rate of unemployment.

To remedy declines in the industry, the Commonwealth has provided tax incentives to boost the Virginia coal industry. The first such incentive was the Virginia Coal Employment and Production Incentive Tax Credit, which was passed to provide incentives to producers of electricity, gas or steam in the form of a tax credit against their

Center for Coal and Energy Research, Virginia Tech.

<sup>&</sup>lt;sup>1</sup> Virginia Department of Nines, Minerals and Energy, Division of Mines, Big Stone Gap, Virginia.

 <sup>&</sup>lt;sup>2</sup> "Forecast of Virginia Coal Production and Estimated Severance Tax Revenue," Walter
Crabtree and E. Topuz. 1995 Powell River Project Research and Education Program Reports.
<sup>3</sup> <u>1995</u> Virginia Coal -- Complete 1994 Data Reference for all Licensed Mines. Virginia

<sup>&</sup>lt;sup>4</sup> Data from the Virginia Employment Commission.

<sup>&</sup>lt;sup>5</sup> Data from the U.S. Bureau of Census and the Virginia Employment Commission.

annual state license tax for each ton of Virginia coal purchased for production.<sup>6</sup> The second incentive program for Virginia coal was the **Qualifying cogenerators and small power producers credit**. This credit established a credit against a cogenerators corporate income tax based on the tonnage of coal mined in Virginia purchased by a cogenerator that sells power to a public service corporation in Virginia.<sup>7</sup>

During the 1995 Session of the General Assembly, HB 2575 was approved to provide additional incentives in an effort to improve the economic climate for coal mining. This bill entitled the **Coalfield Employment Enhancement Tax Credit** set forth tax credits for coal produced based on seam thickness. In addition, a tax credit was provided for coal mined by surface mining methods (see Attachment A). Set forth in this legislation were requirements that two studies be undertaken. The first requests the Virginia Port Authority to examine the impact this tax credit will have on the export coal business at the Ports of Hampton Roads. This report, the second required by the legislation shall examine the policy, legal, and economic impacts of these credits, as well as coal tax credits authorized by previous legislation.

#### METHODOLOGY

The legislation requested that this report look at the economic impact of: the Coalfield Employment Enhancement Tax Credit, The Virginia Coal Employment and Production Incentive Tax Credit (§ 58.1-2626.1), and the credit for qualifying cogenerators and small power producers (§ 58.1-433); as well as the policy and legal impacts of the credits. These components were broken down into individual objectives in order to handle the scope of the project given the short time frame available, May to November.

A key aspect of the economic impact was to determine for this report and the study of coal exports on the Virginia Port Authority the future production rates for Virginia Coal. Additionally, it was deemed to be important that both studies have a common foundation for the Governor and General Assembly to accurately assess the total impact coal mining and related tax policy would have on the Commonwealth. To meet this need, the Virginia Center for Coal and Energy Research at Virginia Tech was contracted by the Virginia Port Authority to study the potential for Virginia coal production based on the availability of coal tax credits. Data from the study by the Virginia Center for Coal and Energy Research is used in this report as a foundation for production estimates.

The survey conducted by the VCCER was done with input by the Cooper Center for Public Service in order to assure that the data gathered provided the base level of data needed to address the economic impacts. In addition, the Coal Subcommittee, of the Coal and Energy Commission provided direction to the types of potential tax credits needed for review.

The Attorney General's Office was asked to review and provide an opinion on the legalities associated with the tax credit. The Department of Mines, Minerals and Energy and the Department of Taxation provided assistance in reviewing the effects of existing tax credits.

A review was done by the Southwest Virginia Office of the Cooper Center for Public Service to examine the level of coal tax credits provided by other coal producing states in the nation. Included in this document is a summary of coal tax credits available by state.

Together these issues have been combined to provide a synopsis of the effect coal tax credits have on the coal industry, Southwest Virginia and the Commonwealth as a whole. Taking

<sup>&</sup>lt;sup>6</sup> §58.1-2626.1 of the <u>Code of Virginia</u> as Amended.

<sup>&</sup>lt;sup>7</sup> §58.1-433 of the <u>Code of Virginia</u> as Amended.

the question out of the realm of black and white, this report also provides insight into the grayer side of any economic question such as, the social ramifications.

#### ECONOMIC IMPACTS OF COAL TAX CREDITS

The need for discussions of coal tax credits is due to the decline in coal production and mining employment. The severity of these declines are magnified in the coalfield region due to its dominance in the region's economy. Almost one in five jobs in the coalfields are directly related to mining, while other segments of the local economy are implicitly linked to the economic health and well being of the region. Another factor directly effecting the impact of the industry in the region, is the area's very low work force participation rate. This is partly due to the extremely low percentage of women in the labor force, 62 percent of the women age 18 and older are not in the labor force, compared to only 40 percent state-wide.<sup>8</sup> This factor in conjunction with the number of miners who have been unemployed longer than the period covered under unemployment programs, and the lack of other employment opportunities, have given cause to the need to explore ways the mining industry could enhance its employment and production potential.

#### Virginia Coalfield Employment Enhancement Tax Credit

House Bill 2575 set forth a coal tax credit that based the amount of credit on the type of mining activity underground or surface, with the underground credit being further delineated by the height of the seam. A crucial piece to the economic viability of this legislation's impact, states: "no credit authorized by subsections A and B shall be taken by any taxpayer in 1999 unless general fund revenue in fiscal year 1997 - 98 exceeds the official estimate of general fund revenue by at least the cost of the credits authorized by subsections A and B as estimated by the Department of Taxation."<sup>9</sup> During discussions with coal companies, it was brought out that this amendment to the tax credit placed them in a situation where they could not factor in the potential effects of the tax credits in contract negotiations with potential buyers. All the companies stated that this portion of the bill must be taken out in order to have any effect in the market place.<sup>10</sup> Due to this and at the direction of the Coal Sub-Committee of the Coal and Energy Commission the economic impact of coal tax credits under consideration for HB 2575 are calculated on the basis of having no requirement for a three year delay nor a surplus of state general fund revenue. To further the examination of the potential impacts, the effects of tax credits were examined at double and triple the initially proposed rates:

Credit Per Ton
\$.60
\$.50
\$.25
Credit Per Ton
\$1.20
\$1.00
\$.50

<sup>&</sup>lt;sup>8</sup> Data from the U.S. Bureau of Census.

<sup>&</sup>lt;sup>9</sup> HB 2575

<sup>&</sup>lt;sup>10</sup> Coal company conversations by VCCER and UVA CCPS staff members.

Triple Rate of Tax Credit Seam Thickness	Credit Per Ton
Under 33"	\$1.80
Above 33"	\$1.50
Surface	\$.75

The premise of tax credits for the industry is correlated with the desire to increase employment in the coalfields. The 1991 production of 42 million tons of coal directly employed 10,797 miners. By 1994, production had decreased to 35,44 million tons, with direct employment reduced to 8,153. These reductions relate to a 24.49% decrease in employment and 15.62% decrease in tonnage. This discrepancy in the percent of production decline in relation to declining tonnage is accounted for through increased efficiencies in production abilities throughout the industry. On the basis of projections made through the industry survey, with no effective tax credit and assuming that a major international occurrence does not take place, Virginia production is projected to decline to 32.44 million tons by the year 2000, and 25.78 million tons by 2005.<sup>11</sup> Corresponding reductions in direct mining employment equate to 7,039 miners by 2000, and 5,594 miners in 2005. By 2005, under current conditions, mining employment in Virginia would be reduced by 48.19% from the base period of 1991. While direct mining industry wages lost from 1996 to 2005, the effective period of proposed tax credits are \$182.16 million dollars per year.

Total ramification on statewide employment is a decline of 2,778 jobs by 2000, and 8,945 jobs by 2005. Statewide direct and indirect wages lost by 2000 is projected at \$343 million, with a total reduction by 2005 of \$504 million. This has resulted in a corresponding loss of various state and local tax revenues. With no effective tax credit there is not a cost to the Commonwealth, however the Commonwealth will see an increased cost in social services costs approximating \$600,000 per year to individuals directly employed in the mining industry. Due to the numerous variables involved, it is difficult to determine the statewide impact on social service costs.<sup>12</sup> Other areas of costs to the Commonwealth include funding centers such as education, which will be reflected by the composite index.

A criteria for review of these numbers must be the time period being examined. When the survey was being conducted, companies had planning underway which would bring them through the year 2000. Due to this, the forecasts for the period 1996 - 2000 have a higher degree of accuracy due to data available, while the remaining period is more forecast in nature.

To examine the impacts on the region, the first analysis of tax credits focused on existing rates in the legislation without the implementation delay and criteria for excess forcasted revenue. As shown in Chart A, production at the enacted rate of tax credit virtually mirrors production with no credits. The rate on average increases production by 400,000 tons per year, with the similar trends in employment. Statewide, a single tax credit would save 315 jobs through 2000, and 482 jobs through 2005. The cost per year for a single tax credit is estimated to be \$15.2 million during 1996, falling to \$13.98 million in 2000, and \$11.18 million by 2005. The mean gross cost to the Commonwealth over ten years would be \$13.54 million per vear(Chart D).

Cost is calculated by determining the net cost of the tax credit based on the level production within the designated seem thickness, minus taxes received due to increased tax revenues received at the local and state level.

<sup>&</sup>lt;sup>11</sup> Coal surveys and analysis conducted by VCCER.

<sup>&</sup>lt;sup>12</sup> Estimates made by CCPS from VDSS, VEC and Census data.

Factoring employment changes and social service costs into the equation changes the cost of the tax credit as actually seen by the Commonwealth to \$13.21 million in 2000, and \$10.49 million in 2005. The average net cost to the Commonwealth over the ten year target period is \$12.49 million. Social service costs were determined using figures provided by the Virginia Department of Social Services for Medicaid costs per client and AFDC per family as a base line point. Using labor force participation rates, family size data, overall regional employment characteristics and direct mining employment data, an estimation was calculated to anticipate social service costs due to a reduction in direct mining employment. The coalfield region has specific demographic traits making this estimation possible. These assumptions cannot and do not anticipate funding changes in social service programs that may or may not occur in Congress.

Doubling the coal tax credit provides the first indication of a stabilized production period. A modest increase in production occurs over levels seen in 1994 through the year 2000. After which production declines begin down toward a level in 2005 in the range of year 2002 without credits. The steep decline in the outlying years of the double and triple tax credits can be associated with: the lack of production planning incurred by coal companies for that period in the future, and declining Virginia coal reserves.

The cost of doubling the tax credit in 1996 is \$31.07 million. As seen in Chart D, this rate remains relatively constant through the year 2000, \$30.45 million per year. After this period as production begins to fall, the cost declines until year 2005 where the cost is projected to be \$25.32 million. The average cost for the period is \$29.4 million. Direct mining jobs remain relatively constant with the 1994 level of employment through 1999, when we begin to see a reduction in direct employment (Chart B). Statewide employment is projected to increase by 3,704 jobs compared with no tax credit, and by 3,389 jobs with a single tax credit in 2000. With social service cost considered, the cost to the Commonwealth ranges from \$26.92 million in 1996 to \$12.56 million in 2005, (Chart J). The average net cost to the Commonwealth of the double coal tax credit during the ten year target period would be \$17.62 million, or \$ 21.47 million over the five year period to year 2000.

Tripling the coal tax credit provides the most substantial effects on employment and production. Production levels jump over those currently seen back to 39 million tons per year (Chart A). To achieve this impact the average cost to the Commonwealth over the ten year period will average \$46.2 million per year. By the year 2000, statewide employment attributed to coal mining would be over 5,400 employees greater than the no tax credit level. Direct employment would remain in the area of 8,000 employees through 2001 (Chart B).

Based on estimated 1995 base levels, increased tonnage over the ten year period would increase by 4.27 million tons with a single tax credit, 31.3 million tons with a double tax credit and 44.46 million tons at the triple level (Chart C). Direct mining employment payrolls will decrease over the ten year period at any of the levels of credit (Chart H). Based on these levels the highest levels of productivity to investment occur at the double tax credit level. However, over the five year period direct mining employment and payrolls will increase at the double and triple levels.

Production and employment decline at the various levels of taxation have multiple effects on the coalfields. Overall the value of taxable property and its improvements on a per capita basis are half those seen in the Commonwealth. The range within the coalfields is from \$1.56 in Scott County to \$2.91 in Buchanan County, while the Commonwealth has a per capita figure of \$4.80.<sup>13</sup> Significant portions of the developed taxable property are directly based on coal industry property they have developed for operations and mining, and indirectly thorough the effects their employees have in terms of housing and commercial establishments to satisfy the retail and service sector needs of the industry and employees. Taxable per capita retail sales would be significantly reduced in the coalfields and surrounding areas both in Virginia and neighboring states due to declines in mining income. This effect would directly impact local operational funding throughout the coalfields which compared to state per capita figures are currently below state averages except in the City of Norton.<sup>14</sup>

Chart K outlines the reduction which would take place in local coal severance revenue. This revenue, based on one percent of coal sales provides revenue to the general fund of the county where the coal is mined.<sup>15</sup> Education funding as the major component of the budget of coalfield counties is directly affected by declining revenues from coal severance, placing an additional burden on the composite index.

Decline in coal production impacts the coalfields ability to diversify its economic base. A second local tax on coal is the local coal and gas road improvement and Virginia Coalfield Economic Development Authority tax.<sup>16</sup> This one percent tax provides that seventy-five percent of the revenue generated goes toward road repair caused by heavy loads involved with the transportation of coal, and allows for up to twenty-five percent of this portion of the funding to assist in the development or replacement of water systems. The remaining twenty-five percent goes to the Virginia Coalfield Economic Development Authority for use in diversifying the regional economically. These funds provide infrastructure for specific or speculative industrial sites which allow the region to lessen its reliance upon the coal industry. Chart M shows the impact tax credit at various levels would have on the Coalfield Economic Development Authority's revenue. The focus of the VCEDA has been development of the region's economy, but additionally formulation of a regional identity, bringing this group of jurisdictions together and consistently working toward common goals. Since its founding in 1988, the Coalfield Authority has been directly involved in the creation of 4,102 manufacturing jobs through 1994.<sup>17</sup>

#### Coal Cogeneration Tax Credit

House Bill 2575 outlined that the impact of the Coal Cogeneration Tax Credit, § 58.1-433 of the <u>Code of Virginia</u> be examined. This credit allows a cogeneration facility a credit against state corporate income tax at a rate of: "one dollar per ton for each ton of coal mined in Virginia, purchased by any cogenerator which sells electric power to a public service corporation in Virginia."<sup>18</sup> The section further states that after tax year 1989, an additional one dollar credit shall be granted to cogeneration facilities that purchase coal mined in Virginia and sell to a public service corporation in Virginia.<sup>19</sup>

<sup>&</sup>lt;sup>13</sup> Based on numbers from the Virginia Department of Taxation and population figures the U.S. Census, calculated by the CCPS-SWVA.

<sup>&</sup>lt;sup>14</sup> Ibid.

<sup>&</sup>lt;sup>15</sup> <u>Code of Virginia</u> § 58.1-3712 as Amended.

<sup>&</sup>lt;sup>16</sup> <u>Code of Virginia</u> § 58.1-3713 as Amended.

<sup>&</sup>lt;sup>17</sup> Data provided by VCEDA.

<sup>&</sup>lt;sup>18</sup> <u>Code of Virginia</u> § 58.1-433 as Amended.

<sup>&</sup>lt;sup>19</sup> <u>Code of Virginia</u> § 58.1-433 as Amended.

The impacts of this tax credit were not able to be examined due to confidentiality of taxpayer requirements, as stipulated in § 58.1-3 of the <u>Code of Virginia as Amended</u>. The Department of Taxation did state that, "the coal cogeneration credit claimed in each of the last five years was 'minimal'."<sup>20</sup>

In addition to the data from the Department of Taxation being suppressed, information was not available from regulatory or industry sources to analyze the effects this tax credit has on production for this report.

#### Virginia Coal Employment and Production Incentive Tax Credit

The third coal tax credit to be reviewed was the Virginia Coal Employment and Production Incentive Tax Credit, § 58.1-2626.1 of the <u>Code of Virginia</u>. Beginning in tax year 1988, a one dollar per ton credit was established for: "every corporation in the Commonwealth doing the business of furnishing water, heat, light or power ... against the tax imposed by § 58.1-2626... ."<sup>21</sup> For each of the tax years beginning in 1989 and 1991, an additional dollar per ton was added bringing the total tax credit to three dollars per ton.<sup>22</sup>

Coal tonnage affected by this tax credit held at a fairly consistent level. Three companies have utilized this credit; Virginia Electric & Power Company, Appalachian Power Company, and Delmarva Power & Light.<sup>23</sup>

#### **Tax Credits**

	<u>Tax Year 94</u>	<u>Tax Year 93</u>	<u>Tax Year 92</u>
APCO	\$6,149,499	\$6,462,822	\$4,974,476
DELMARVA	\$ 504,672	\$ 553,452	\$ 388,608
VEPCO	\$5,777,832	\$5.906.799	\$4,159,722
TOTAL	\$12,432,003	\$12,923,073	\$ 9,522,806

This credit generated utilization of Virginia coal at facilities operated by these companies of 11.626 million tons over the three year period. This accounted for 10.36 percent of Virginia's production in 1993, 10.14 percent of 1992 production, and 7.56 percent of 1991 production.

Virginia coal production provides a variety of taxing opportunities. As a basis for calculation, coal utilized in these facilities that accessed this credit paid \$15.996 million in taxes during tax year 1994, \$16.628 million during 1993, and \$12.253 million during 1992,<sup>24</sup> accounting for a positive return of ten million dollars over the three year period. Although it cannot be assumed none of this coal would have been produced and sold without the tax credit. It does provide a basis that this tax credit has had a positive impact on the coal industry and the Commonwealth.

<sup>20</sup> Memorandum from the Virginia Department of Taxation

<sup>&</sup>lt;sup>21</sup> <u>Code of Virginia</u> § 58,1-2626.1 as Amended.

<sup>&</sup>lt;sup>22</sup> Code of Virginia § 58.1-2626.1 as Amended.

<sup>&</sup>lt;sup>23</sup> Statement Showing the Equalized Assessed Value of the Property of Electric Light and Power Corporations. State Taxes Extended on Electric Light and Power Corporation. Tax Years 1994, 1993 & 1992. Virginia Department of Taxation. Richmond, VA.

<sup>&</sup>lt;sup>24</sup> In-State Economic Impacts of the Virginia Coal Industry and Potential Coal Production <u>Declines</u>. Dr. Carl Zipper. VCCER Report No. 95-1.

#### LEGAL ASPECTS

As prescribed in the legislation, the Attorney General's Office was asked to provide insight into the legal aspects of the Coal Employment Enhancement Tax Credit. The concern which was brought forth concerned the tax credits and their potential interpretation as a Subsidies Agreement. The Subsidies Agreement arises out of the Multilateral Agreement on Trade in Goods Agreement on Subsidies and Countervailing Measures which is a part of the Uruguay Round multilateral trade negotiations of the World Trade Organization.<sup>25</sup> The interpretation further went on to state that if a subsidy were determined to cause injury, the recourse would be to remove the component causing injury or to withdraw the subsidy.

The United States having only officially joined the World Trade Organization on January 1, 1995, has not had significant time to detail implementation and the effects these agreements will have to the states. Due to this, and upon reviewing the Coal Employment Enhancement Tax Credit, the Attorney General's Office felt that currently there is not an impediment under the Subsidies Agreement.<sup>26</sup> It should be noted that this agreement entered into by the United States potentially may place into question all tax credits provided by the states and the federal government.

#### COAL TAX CREDITS IN OTHER STATES

To provide better insight into the issue of coal tax credits, it was determined that it would be beneficial to know what other coal producing states are doing with this question. Each coal producing state was requested to provide information on tax credits they currently have in place. Credits are outlined on a state by state basis.

#### <u>Credits</u>

#### Wisconsin

Wisconsin provides for coal credits via their Manufacturing Sales Tax Credit --§71.47 of the Code of Wisconsin. Located within this section, subsection (3) (B)"The tax imposed upon or measured by corporation Wisconsin net income under §71.43 (1) or (2) shall be reduced by an amount equal to the sales and use tax under Chapter. 77 paid by the corporation in such taxable year on fuel and electricity consumed in manufacturing tangible personal property in this state."<sup>27</sup> Sections following allow for any unused balance to be carried forward and credited against Wisconsin income or franchise taxes for the following fifteen taxable years. To clarify manufacturing, it is defined in §77.54 (6m)(a) to include but not be limited to: "crushing, washing, grading and blending sand, rock, gravel and other minerals."<sup>28</sup>

#### Oklahoma

Oklahoma provides for a tax credit similar to that imposed by Virginia for users of Oklahoma coal in the manufacturing process, as well as for generating heat, light, water, or power. As seen in the following section, this credit allows for a combined two dollar per ton credit.

- 27 Wisconsin State Code.
- 28 <u>Ibid.</u>

<sup>&</sup>lt;sup>25</sup> August 21, 1995 Letter from the Office of the Attorney General.

<sup>26 &</sup>lt;u>Ibid.</u>

Section 2357.11 (A) -- "For tax years beginning on or after January 1, 1993, there shall be allowed a credit against the tax imposed by Section 1803 or Section 2355 of this title for every corporation in this state furnishing water, heat, light or power to the state or its citizens, or for every corporation in this state burning coal to generate heat, light, or power for use in manufacturing operations located in this state. The credit shall be in the amount of One Dollar (\$1.00) per ton for each ton of Oklahoma-mined coal purchased by such corporation. Except as otherwise provided by subsection C of this section, this credit shall be prorated equally against the corporation's estimated payments for the tax year in which the coal was purchased.

(B) For tax years beginning on or after January 1, 1995, and ending on or before December 31, 2004, there shall be allowed, in addition to the credit allowed pursuant to subsection A of this section, a credit against the tax imposed by Section 1803 or Section 2355 of this title for every corporation in this state furnishing water, heat, light or power to the state or its citizens, or for every corporation in this state burning coal to generate heat, light or power for use in manufacturing operations in this state. The additional credit shall be in the amount of One Dollar (\$1.00) per ton for each ton of Oklahoma-mined coal purchased by such corporation.

(C) Any credits allowed but not used in any tax year, may be carried over in order to each of the five (5) years following the year of qualification."<sup>29</sup>

#### New Mexico

New Mexico provides a production based tax incentive which exempts coal above base level production levels from severance taxes. The following outlines the provisions of the New Mexico exception.

"The following coal is exempt until July 1, 2009, from the surtax imposed on coal under the provisions of section 7-26-6 of the New Mexico State Amendments, 1978.

Coal sold and delivered pursuant to coal sales contracts that are entered into on or after July 1, 1990, under which deliveries start after July 1, 1990, and before June 30, 1997.

Coal sold and delivered pursuant to a contract in effect on July 1, 1990, that exceeds the average calendar year deliveries under the contract during production years 1987, 1988, and 1989 or the highest contract minimum during 1987, 1988, or 1989 whichever is greater.

If a contract existing on July 1, 1990 is re negotiated between a producer and a purchaser prior to June 30, 1997 and after May 20, 1992 and if that re negotiated contract requires the purchaser too take annual coal deliveries in excess of the greater of the average calendar year deliveries under the contract during production years 1987, 1988, and 1989 or the highest contract minimum during 1987, 1988, and 1989, the surtax imposed by Subsection B of Section 7-26-6 of the New Mexico State Amendments, 1978, shall not apply to such excess deliveries for the remaining term of the re negotiated contract or until July 1, 2009, whichever occurs first."<sup>30</sup>

<sup>&</sup>lt;sup>29</sup> Oklahoma State Code.

<sup>&</sup>lt;sup>30</sup> New Mexico State Code.

#### West Virginia

West Virginia provides an aggressive program of tax credits to boost the mining industry. Four programs create the foundation for coal tax credits in West Virginia. Two programs, the Coal Conversion Facility Credit and Coal Loading Facilities Credit provide assistance to keep West Virginia's coal industry competitive and allow for value added development. The remaining two programs have been established more generically for business and industry

#### **Coal Conversion Facility Credit**

The Coal Conversion Facility Credit is available to a qualified taxpayer making a qualified investment of at least \$40 million, over a period not exceeding 365 days, in a coal conversion facility. The creation and operation of a coal conversion facility must result in the creation of at least ten (10) new jobs. The credit is forfeited in circumstances where employment levels decrease below ten (10) jobs.

The qualified investment in property purchased or leased for use as a component part of a coal conversion facility is determined by multiplying the applicable percentage by the cost or fair market value of the property. The applicable percentage for any item of property is set by law according to the economic useful life of the asset or the applicable lease term for the asset, and is determined according to the following table:

#### USEFUL LIFE OF FACILITY

At Least	But Less Than	Percent Qualified
0	4 years	0
4	6 years	33-1/3
6	8 years	66-2/3
8 or more ye	ears	100

The Coal Conversion Facility Credit is equal to 100% of an eligible taxpayer's qualified investment (as determined above) with certain restrictions. The maximum credit available to all qualified taxpayers is limited to no more than \$10 million in the aggregate and to no more than 90% of an eligible taxpayer's gross tax liability before credits for West Virginia Business Franchise Tax and Corporation Net Income Tax. The credit is applicable only after all other investment tax credits are first exhausted.<sup>31</sup>

#### COAL LOADING FACILITIES CREDIT

The purpose of the Coal Loading Facilities Credit is to encourage the establishment of new or revitalized coal loading facilities in West Virginia. This credit allows loading facilities to stay current in technology so that West Virginia remains a viable competitor in the coal marketplace.

Eligibility for the Coal Loading Facilities Credit is limited to:

1. those who contract and operate a new coal loading facility, and

<sup>&</sup>lt;sup>31</sup> West Virginia Department of Taxation and Revenue. Charleston, WV.

2. those who revitalize and operate existing coal loading facilities.

The tax credit shall be limited to 10 percent (one percent for each of ten consecutive years) of the total qualified investment in a coal loading facility. The amount of credit employed in any given year shall not reduce the taxpayer's liability for each of the following by more than 50 percent: Severance Tax, Business Franchise Tax, and Business and Occupation Tax. Any unused credit for a particular year is forfeited.

To determine the amount of investment eligible for the Coal Loading Facilities Credit, the net cost of each property purchased is multiplied by the applicable percentage shown below according to the useful life of the property. In order to be eligible for the credit, the property must have been placed into use in West Virginia during the taxable year.

USEFUL LIFE OF FACILITY	THE APPLICABLE PERCENTAGE IS	
4 years or more but less than 6 years	33 1/3%	
6 years or more but less than 8 years	66 2/3%	
8 years or more	100% <sup>32</sup>	

#### BUSINESS INVESTMENT AND JOBS EXPANSION CREDIT

The purpose of the Business Investment and Jobs Expansion Credit is to promote net employment growth within West Virginia. In return for net employment growth through capital investment, the state provides tax credit to offset the additional taxes directly attributable to the qualified investment and new jobs.

The credit is available to any eligible taxpayer, or group of project participant taxpayers, making a qualified investment in a new or expanded business facility in this State. This investment must also result in new job creation.

The credit is determined by multiplying the amount of the taxpayer's qualified investment by the taxpayer's new jobs percentage and is generally applied over a ten (10) year period (at 1/10th per year) beginning in the taxable year in which the qualified investment is placed in service or use, or, at the taxpayer's option, in the next succeeding tax year.

The Business Investment and Jobs Expansion Credit is generally available for investment placed into service or use over a period of 365 days, beginning on the date when property purchased or leased for business expansion is first placed into service or use.

The Business Investment and Jobs Expansion Credit is claimed against that portion of the following taxes, in the order listed, that are attributable to the qualified investment: Business and Occupation, Telecommunications, Business Franchise, Corporation Net Income, and Personal Income. The credit is applied in four steps (the annual credit allowance, the rebate allowance, the deferred allowance, and a free up allowance for certain taxpayers subject to the minimum coal severance tax).<sup>33</sup>

<sup>&</sup>lt;sup>32</sup> Ibid.

<sup>33</sup> Ibid.

#### INDUSTRIAL EXPANSION OR REVITALIZATION CREDIT

The purpose of the Industrial Expansion or Revitalization Credit is to encourage the establishment of new industry, the expansion of existing industry, and the growth and revitalization of industrial facilities in West Virginia.

Eligibility for the Industrial Expansion or Revitalization Credit is limited to three types of taxpayers:

- 1. manufacturers who produce their own goods;
- 2. service manufacturers who produce manufactured goods which they do not own, and
- 3. firms which generate electric power.

The tax credit shall be limited to 10% (1% for each of ten consecutive years) of the total qualified investment for industrial expansion or revitalization. The amount of credit employed in any given year shall now reduce the taxpayer's liability for Business and Occupation Tax (11-13), Business Franchise Tax (11-23) and Severance Tax (11-13A) by more than 50%. Any unused credit accrued for a particular year is forfeited.<sup>34</sup>

#### Wyoming

Wyoming uses coal tax credits to increase the utilization of coal within the state, and at the same time to promote the sale of Wyoming coal to consumers outside Wyoming. Title 39-6-302 (m) provides with certain restrictions that taxes on a ton of coal shall not be in excess of eighty cents (\$.80). Coal which meets the following criteria will be exempt from any taxes which exceed eighty cents (\$.80) per ton.<sup>35</sup>

Under the provisions of this section, the following criteria shall set forth the criteria for coal tax credits.

(i) New agreements entered into between March 31, 1987 and March 31, 1999 if:

(A) The application of the taxes in this section results in a tax on a ton of coal in excess of eighty cents (\$.80) at the time the agreement is entered and the coal is first produced under the agreement;

(B) Production and delivery of coal actually commences pursuant to the agreement between March 31, 1987 and March 31, 1999;

(C) The coal is transported and consumed outside the borders of the state of Wyoming; and

(ii) New agreements entered into between January 1, 1987 and March 31, 1999 to supply coal to a facility in the planning stage or under construction at the time the new agreement is entered if:

#### <sup>34</sup> <u>Ibid.</u>

<sup>35</sup> Wyoming State Statutes, Title 39-6-302 (m).

(A) The application of the taxes in this section results in a tax on a ton of coal in excess of eighty cents (\$.80) at the time the agreement is entered and the coal is first produced under the agreement;

and

(B) The coal is transported and consumed outside the borders of the state of Wyoming;

(C) The new contract or agreement is not the result of the purchaser breaching a contract with another Wyoming producer; or

(iii) A contract or agreement which existed on January 1, 1987, or a modification to that contract or agreement occurring between March 31, 1987 and March 31, 1999, between a Wyoming coal producer and a purchaser for consumption in an electrical generating facility or coking facility located in Wyoming to the extent that the producer's annual production and deliveries under the contract exceeds the average annual tonnage of coal delivered during calendar years 1985 and 1986 under the same contract. The exemption applies to the amount of additional coal produced in each of calendar years 1987 through 1998 and thereafter, so long as the additional coal is produced and delivered annually. If the annual deliveries after calendar year 1998 fall below the average of the 1985 and 1986 production, the exemption will no longer apply even if subsequent production exceeds the average of the 1985 and 1986 production unless the annual deliveries after calendar year 1996 fall below the average of the 1985 and 1986 production by reason of fire, explosion, earthquake, windstorm, accident, flood, equipment failure, act of God, war, seizure or activities of the armed forces, or other casualty or act beyond the reasonable control of either party to the contract or agreement. The exemption applies to contracts or agreements described in this paragraph only if a facility's total annual purchase of Wyoming coal exceeds the average annual tonnage of Wyoming coal purchased by the facility during calendar years 1985 and 1986;

(iv) Coal consumed by any coking facility located in Wyoming if the producer demonstrates to the department of revenue that the Wyoming coal consumed at the coking facility has displaced an equivalent quantity of coal produced outside of Wyoming. The exemption applies to the amount of Wyoming coal delivered and consumed by the coking facility in calendar year 1989 and thereafter, so long as the Wyoming coal is produced and delivered annually. If annual deliveries after calendar year 1998 fall below the previous year's deliveries, the exemption will no longer apply unless shipments are curtailed as the result of conditions described under paragraph (m) (iii) of this section.

(n) If the cumulative taxes levied against coal in this section do not exceed eighty cents (\$.80) per ton, the tax proceeds shall be distributed in the manner provided in this section. If the cumulative taxes in this section exceed eighty cents (\$.80) per ton, so that the eighty cent (\$.80) per ton limit imposed by subsection (m) of this section becomes operative, an amount equal to one and one-half percent (1.5%) of the value of the gross product of coal extracted shall be deducted from the total tax proceeds for deposit in the permanent mineral trust fund and the remaining proceeds shall be distributed on a pro rata basis for the purposes specified in this section and any other applicable law.

(o) The limitation on excise taxation provided for in subsection (m) of this section shall be applicable to a contract or agreement for the duration of its term or any extension thereof executed prior to March 31, 1999. If a producer and purchaser of coal under a contract or agreement existing on January 1, 1995, mutually rescind that contract or agreement and execute a new contract or agreement under substantially similar terms or amend an existing contract to diminish the total revenue which would have accrued under that contract, the coal sold under the new or amended contract shall be taxed under the provisions of this section without regard to the eighty cent (\$.80) per ton limitation imposed by subsection (m) of this section."<sup>36</sup>

#### Utah

To improve the competitiveness of export coal, Utah provides a steam coal tax credit. Section 59-7-604 of the Utah Tax Code provides: "(2) For taxable years beginning on or after January 1, 1993, there is allowed, as a credit against any taxes imposed by this chapter or Chapter 8, an amount equal to \$1 per ton for each ton of Utah steam coal sold from a permitted mine by the taxpayer to a purchaser outside of the United States in excess of the number of tons of Utah steam coal sold from a permitted mine by the taxpayer to a purchaser outside of the United States in the taxable year beginning on or after January 1, 1992."<sup>37</sup>

#### South Dakota

Up until 1995 South Dakota provided for two coal tax credits. The first provided for an exemption from sales tax on the gross receipts from the sale of coal used for agricultural surposes. This exemption was repealed in 1995 by SL 1995, ch 68 § 26."<sup>38</sup> The second tax redit was also repealed in 1995. This exemption had provided for relief from the state's use ax on coal and wood products which were used in the process of creating energy for industrial purposes. This was repealed by SL 1995, ch 68 § 33".<sup>39</sup>

#### Ohio

Ohio provides for an exemption from the sales and use tax on coal which is used, "directly in the rendition of a public service."<sup>40</sup> This section states in its entirety: "To incorporate the thing transferred as a material or a part, into tangible personal property to be produced for sale by manufacturing, assembling, processing, or refining, or to use or consume the thing transferred directly in mining, including without limitation the extraction from the earth of all substances which are classed geological as minerals, production of crude oil and natural gas, farming, agriculture, horticulture, or floriculture, and persons engaged in rendering farming, agricultural, horticultural, or floriculture services, and services in the exploration for, and production of, crude oil and natural gas, for others are deemed engaged directly in farming, agriculture, horticulture, and floriculture, or exploration for, and production of, crude oil and natural gas; directly in the rendition of a public utility service, except that the sales tax levied by section 5739.02 of the Revised Code shall be collected upon all meals, drinks, and food for human consumption sold upon Pullman and railroad coaches. This paragraph does not exempt or except from "retail sale" or "sales at retail" the sale of tangible personal property that is to be incorporated into a structure or improvement to real property."

#### North Dakota

North Dakota provides for a coal severance tax exemption, a reduced coal severance exemption, and for local exceptions by county. The exemptions are outlined below.

<sup>36 &</sup>lt;u>Ibid.</u>

<sup>&</sup>lt;sup>37</sup> Utah Tax Code §59-7-604.

<sup>&</sup>lt;sup>38</sup> South Dakota Department of Revenue, <u>Sales and Service Tax Code</u>.

<sup>&</sup>lt;sup>39</sup> <u>Ibid.</u>

<sup>&</sup>lt;sup>40</sup> Ohio Revised Code, § 5739.01 (E)(2).

Coal which is tax exempt is interpreted as: "the coal mine owner or operator shall require the person purchasing coal for heating of buildings, for resale to consumers for heating of buildings, or for use by the state or any political subdivision of the state or for agricultural ocessing or sugar beet refining purposes within North Dakota or adjacent states to certify the amount of coal purchased that will be used for those purposes."<sup>41</sup> It must be noted that all coal severed except for that exempted by the above is subject to the \$0.02 tax dedicated to the lignite research fund.

Coal qualifying for reduced coal severance tax rate shall be: "the coal mine owner or operator must certify, or require the person purchasing the coal which is to be burned in a cogeneration facility which is designed to use renewable resources as fuel to generate ten percent or more of its energy output measured in British thermal units to certify that the coal will be used in the manner required to qualify for the reduced tax rate".<sup>42</sup>

Coal shipped out of state is exempt from the state's 50% share of the \$0.75 tax and may be exempted from the county's 35% share, but are not exempt from the 15% dedicated to the state's trust fund.<sup>43</sup>

Each county in North Dakota is allowed the opportunity to lower its individual county coal severance tax. When this takes place, the mining organization must provide evidence of the local exemption to the state with their monthly coal severance tax report.<sup>44</sup>

#### North Carolina

North Carolina does not provide for tax credits specifically relating to development of coal mining or the beneficial use of coal, but does allow the use of investment tax credits where applicable.<sup>45</sup>

#### Jouth Carolina

South Carolina does not provide for tax credits specifically relating to development of coal mining or the beneficial use of coal, but does allow the use of investment tax credits where applicable. Specifically addressing this issue, South Carolina tax guidelines state: "an income tax credit is allowed for each new job created in the state's 46 counties so long as a minimum number of new jobs are created. The new jobs credit applies to only manufacturing, tourism, processing, warehousing, distributing, and research and development industries and corporate office facilities." Further, the state allows for an exemption from the sales and use tax on fuel used by manufacturers, electric power companies and transportation companies, of which coal may be a commodity of .<sup>46</sup>

#### Nevada

Nevada provides for exemptions from the tax rolls land which is on the surface of a patented mine or mining claim, when at least \$100 has been expended on the claim during the

<sup>&</sup>lt;sup>41</sup> North Dakota Century Code, Chapter 57-61.

<sup>42 &</sup>lt;u>Ibid.</u>

<sup>&</sup>lt;sup>43</sup> Explanation provided by the Office of State Tax Commissioner by letter dated July 11, 1995.

<sup>44</sup> North Dakota Century Code, Chapter 57-61.

<sup>&</sup>lt;sup>45</sup> Individual Income Tax Bulletins, North Carolina Department of Revenue.

<sup>&</sup>lt;sup>46</sup> <u>South Carolina Business Tax Guide</u>, Department of Revenue.

calendar year. Deductions also are allowed for operating, electrical, loading and transportation costs.<sup>47</sup>

#### Kentucky

Two general observations can be made relating to the role of corporate tax credits in the Kentucky business tax structure. First, current Kentucky tax law allows significant economic development tax credits. These credits are, arguably, important economic development policy tools. Second, Kentucky's credits are the kind of large-scale development-related tax credits that are increasingly being offered by states, especially in the Southeast. In Kentucky coal mining does not fall under any of the categories which are applicable for incentives. At the same time, Kentucky has an overall rate of coal taxation which is the highest in the southeastern United States.<sup>48</sup>

While this does not examine the exemptions provided by every state, it does give a representative sample of major coal producing states. This comparison does demonstrate that throughout the country, considerable exemptions are granted to the coal industry, especially for increased utilization of in-state coal for electrical generation.

West Virginia is one of the more aggressive states towards providing tax incentives for coal production. This should be viewed carefully, given that many of the same markets, domestic and export which Virginia coal is competing, is directly against West Virginia coal.

#### ECONOMIC POLICY

Tax incentives are not new state or federal economic policy initiative. Numerous programs have directly affected Virginia business for years, two of note are subsidies to the tobacco and peanut industry. Examination of Title 58.1 of the <u>Code of Virginia</u> finds considerable allowances for credits from Virginia taxes. These fall mainly in the traditional area of agricultural industries.

As with neighboring states, Virginia has authorized new tax credits for businesses which will create significant opportunities for employment. Authorization of new credits such as the **Major Business Facility Job Tax Credit**<sup>49</sup> have been developed in order to aid in the promotion of the Commonwealth in the economic development arena. The scale of incentives become a question mark. Kentucky, a prominent player in economic incentives for economic development, has begun to question the financial liability associated with incentives now requiring state economic development officials to provide to the Finance Cabinet details on incentives in order to determine the credits cost versus enhanced revenue to the Commonwealth.

Tax incentive programs send a signal to business and industry that a state from an economic development stand point is proactive, professional, and appreciates business and industry operating in the state. Adoption of this type of approach as a policy statement should be fulfilled by more then an appetite for new locations, but should also include the position of keeping existing businesses. A second factor involved with determining incentive policy should be an industry's ability to provide value added capabilities -- does the industry provide additional employment opportunities resulting from their operation.

<sup>&</sup>lt;sup>47</sup> Nevada Revised Statutes, Chapter 362.

<sup>&</sup>lt;sup>48</sup> <u>Comparative Analysis of Kentucky's Tax Structure</u>, Office of Financial Management and Economic Analysis, Commonwealth of Kentucky.

<sup>&</sup>lt;sup>49</sup> §58.1-439 of the <u>Code of Virginia</u> as Amended.

Many times incentives are seen in a broader perspective than pure tax credits. This type of discussion was seen in the recent initiative and debate associated with Disney America. Items such as roads and infrastructure stir a debate to whether they are incentives, or are they part of the fundamental operating requirements government must provide.

The competitive nature of the economic development business has created an environment where credits are promoted as a recruitment tool. Credits received through one industry may have effects which cross into and affect other businesses. This type of situation is occurring within many of Virginia's neighboring states as they have begun to provide shipping credits to spur transportation through their sea terminals. Lowering the cost of transportation, provides industries using these facilities and credits with a competitive advantage in the market place. Yet, incentives which are tied to natural conditions may still have a hard time overcoming real world obstacles faced by an industry.<sup>50</sup>

As a policy decision, economic incentives must be reviewed on a continual basis to correspond with changing policy and economic environmental conditions. Failing to take an aggressive review policy promotes obsolescence and burdensome tax policy administration.

#### CONCLUSIONS

The coalfields of Southwest Virginia are facing a difficult economic climate due to declines in the coal industry. During the period 1990 to 1994, production of Virginia coal declined by 16.56 percent.<sup>51</sup> The region's economy is built around the coal industry, providing 18 percent of the work force, and the highest single sector direct payroll. Compounding the effect of coal on the regions' economy, the second largest employment sector, retail, is directly linked to the health of the coal industry.

Virginia coal faces numerous competitive problems. The first is the decline of coal reserves; secondly, geological conditions which are not as conducive to mining as neighboring states; and, third, global competition forcing marketing conditions to change. These conditions have provided the seven counties and one city which comprise the coalfields to have the highest rate of unemployment and lowest levels of work force participation in the Commonwealth.

Maintaining coal production and employment levels at a fairly constant state over the next five years requires a projected net expenditure of \$106.96 million (tax costs minus additional tax revenue), for an average projected cost to the Commonwealth of \$21.392 million (actual per year projected expenditure demonstrated in Chart E). Projecting an additional 13.78 million tons of coal being mined over the five year period in excess of production based at the zero credit level. Much of the coal mined because of financial incentives brought about due to these tax credits is coal that normally would be lost to Virginia. The survey indicated that the ability to mine coal at the effective levels brought out by the incentive would allow some mines to remain open, and other reserves not recoverable due to geological conditions would become recoverable.<sup>52</sup> In effect, extending Virginia reserves by an amount somewhere below the 13.78 million ton level provided by the credit.

<sup>&</sup>lt;sup>50</sup> "Ports Try Tax Breaks To Reel In Business" <u>The Journal of Commerce.</u>

<sup>&</sup>lt;sup>51</sup> Virginia Department of Nines, Minerals and Energy, Division of Mines, Big Stone Gap, Virginia.

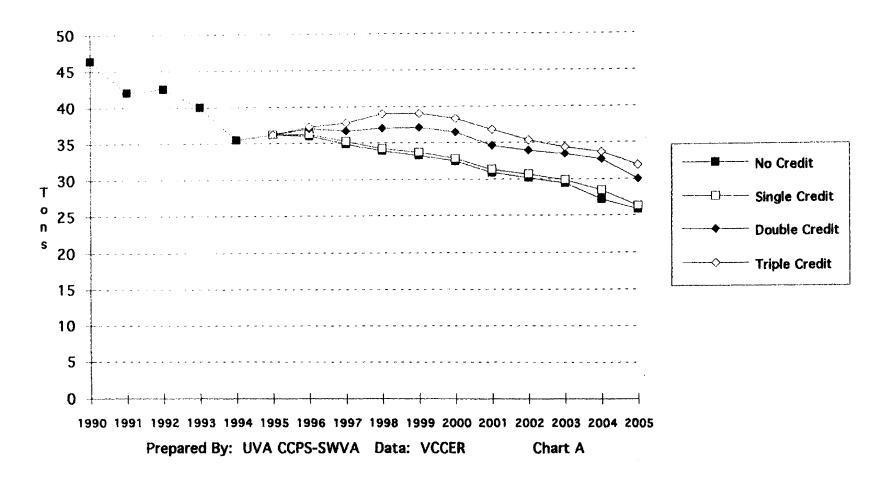
<sup>&</sup>lt;sup>52</sup> VCCER Survey, and UVA CCPS discussions with industry officials.

This question is as much a social as an economic issue. Continued loss of coal production and direct employment has significant ramifications on Southwest Virginia and the Commonwealth as a whole. The industry has far reaching direct and indirect employment and fiscal benefits through out the Commonwealth as has been demonstrated. From a social perspective, the issue becomes what should the disposition of the southwest region be? A region that contains rates amongst the highest in the state for transfer payments, and further decline in the industry will accent these levels, creating costs to the taxpayers in areas such as health, welfare and education.

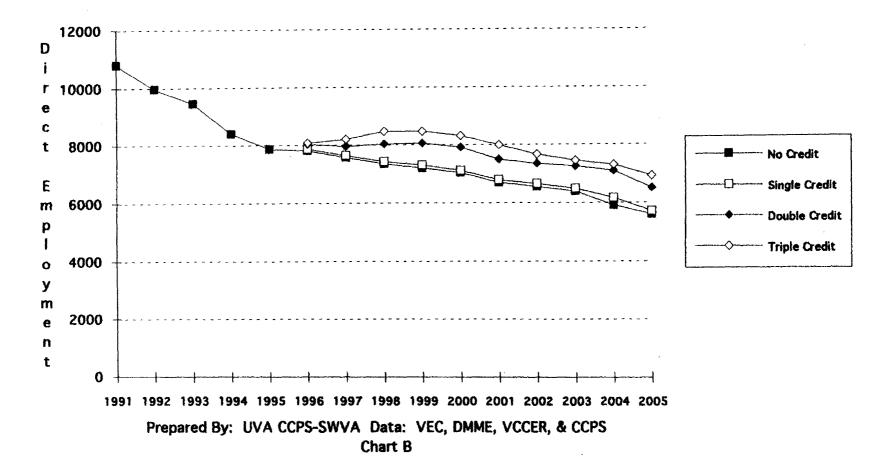
Virginia is not alone in looking to make industries competitive. Neighboring states have initiated tax incentives, with West Virginia one of the leading direct competitors to Virginia coal among the most ambitious.

Previous Virginia legislation providing coal incentives have increased production and generated tax revenues greater then the amount of incentive paid by the Commonwealth. Tax incentives under the Coalfield Employment Enhancement Tax Credit will increase production levels. Employment levels under the tax credit will exceed employment levels without a credit, but must reach the double incentive level to maintain existing levels of employment or increased employment.

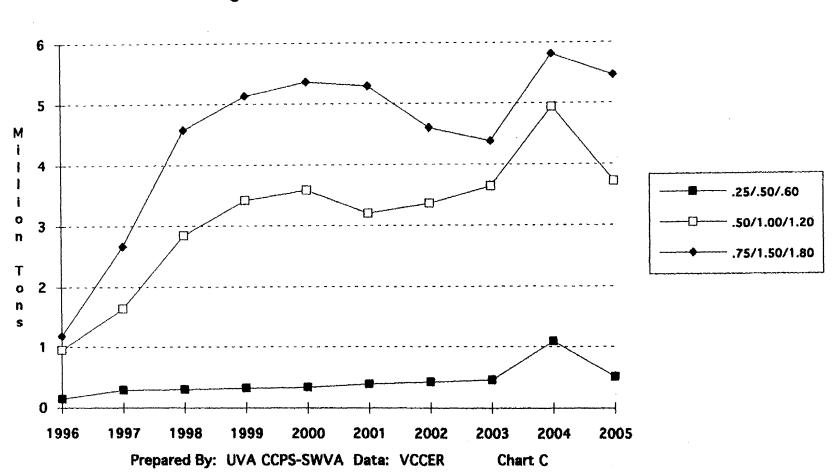
Credits should not be seen as a long term cure to a problem. If utilized, credits provide an opportunity for the region to invest in itself during the credit period to enhance their opportunity for economic diversification. Investment of revenue received above the projected base level of funding would allow for additional local opportunities to be developed. Coal will continue to be a significant portion of Southwest Virginia's economic future. However, for long term economic health the only solution is to continue to aggressively seek economic diversification. For this to happen, the region and Commonwealth must begin to fully understand the conditions facing the industry and effect necessary policy changes.



## **Projected Virginia Coal Production**



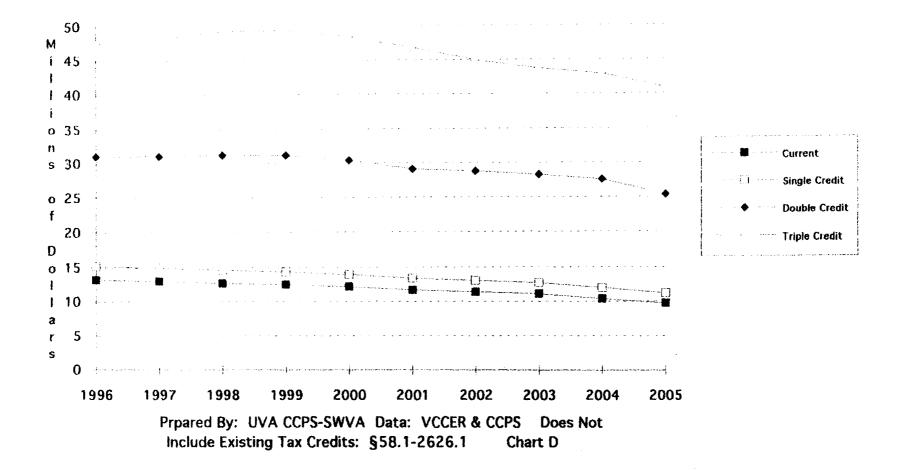
### **Projected Direct Mining Employment**

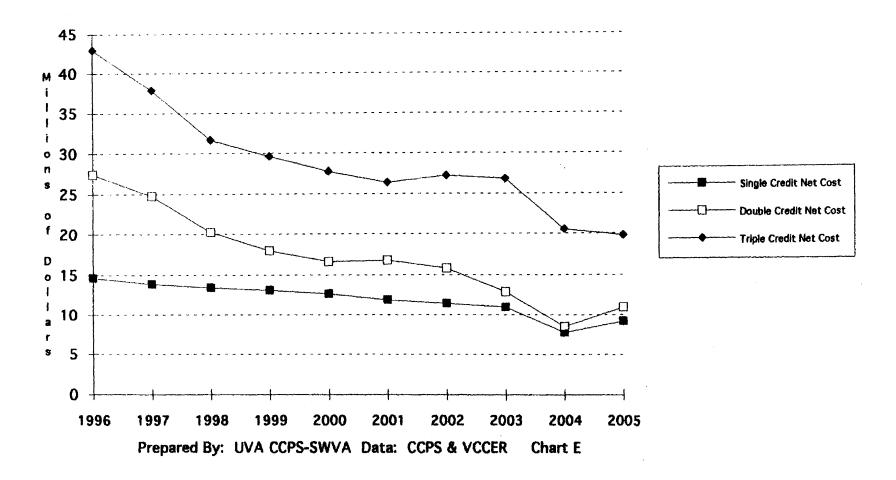


۲ ·

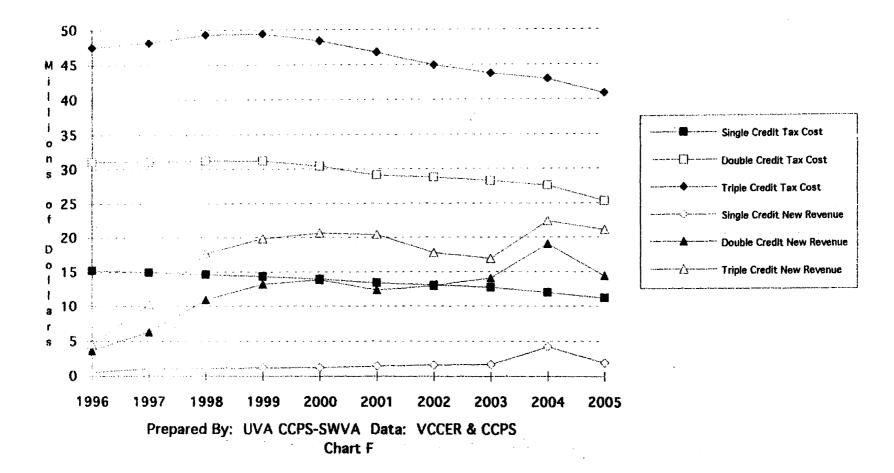


### Gross Tax Cost of Coal Tax Credits

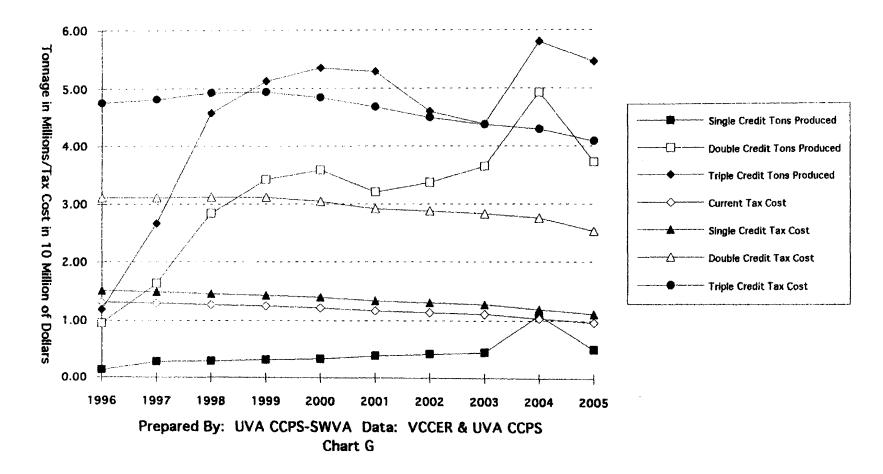




### Net Cost of Coal Tax Credits Without Social Costs

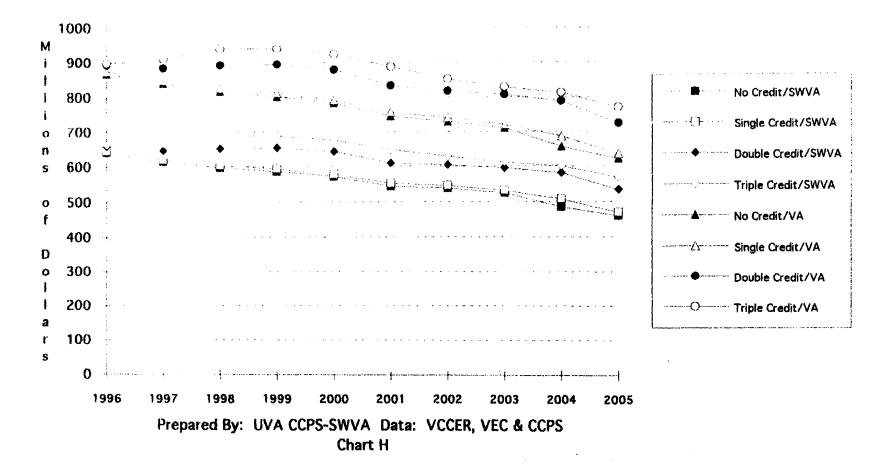


### Comparison of Tax Credit Costs to New Tax Revenue

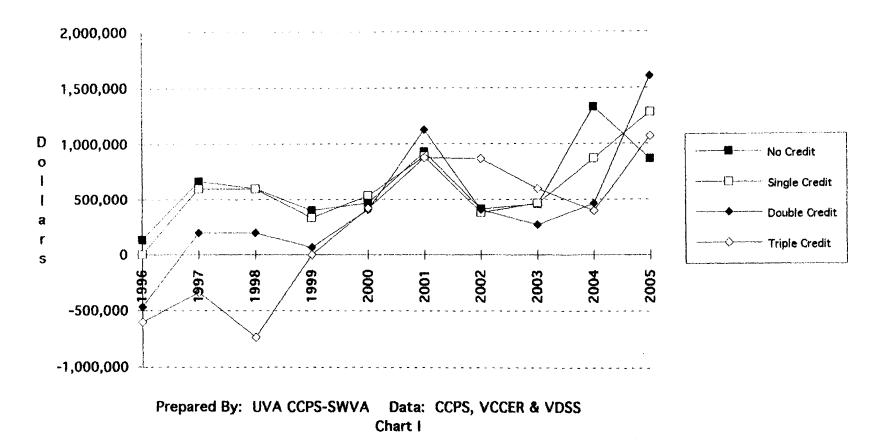


## Comparison of Tax Credit Costs to New Tax Revenue

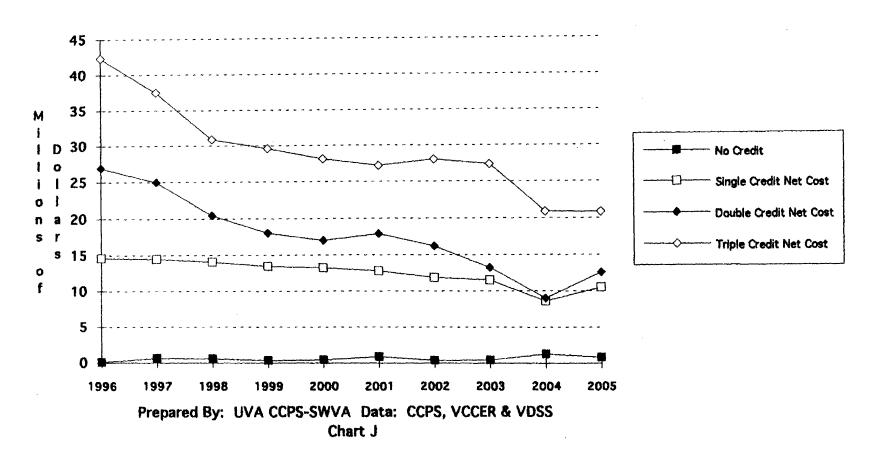
ស ភ



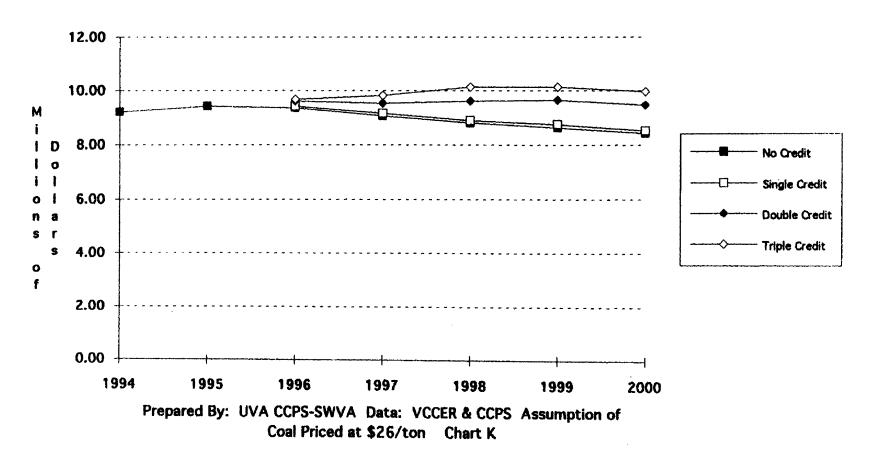
### Direct and Indirect Payroll Virginia and the Coalfield Region



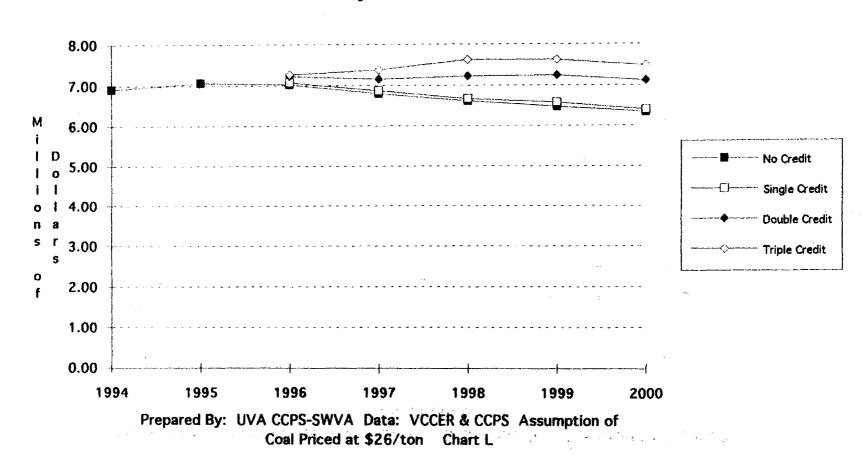
## Projected Social Costs Associated with Coal Tax Credits Based on Yearly Employment



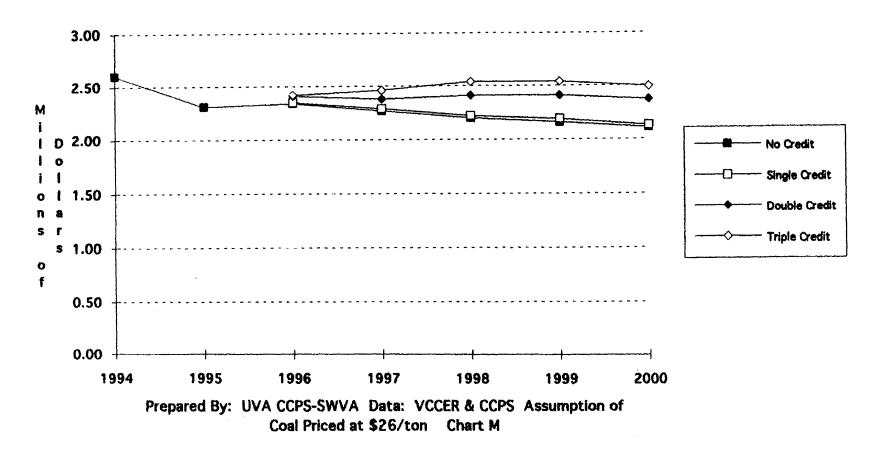
# Net Cost of Coal Tax Credits with Cumulative Social Costs Based on Yearly Changes in Employment



### Projected Local Coal Severance Revenue Based on Coal Tax Credit Production Projections



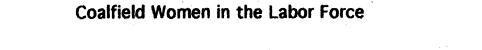
Projected Coal Road Tax Revenues Based on Coal Tax Credit Production Projections

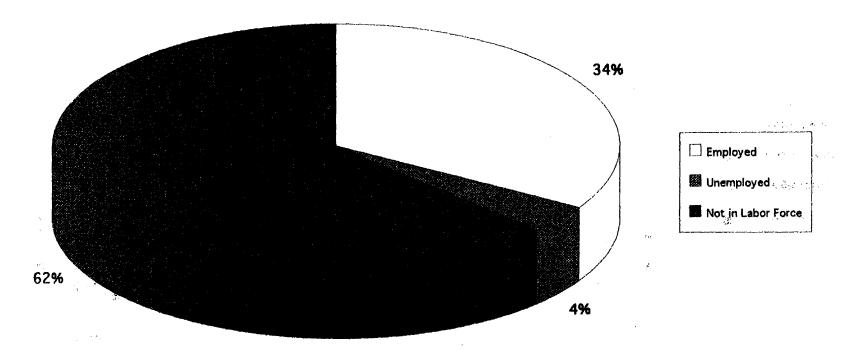


1

## Virginia Coalfield Economic Development Authority Projected Revenues Based on Coal Tax Credit Production Projections

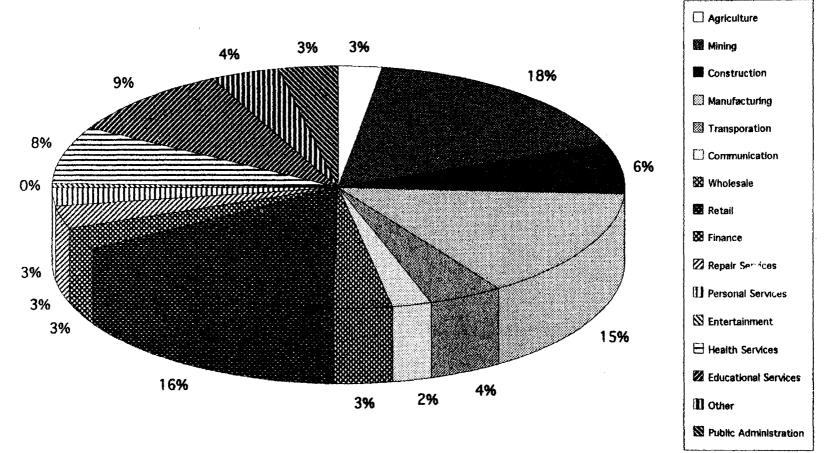
ω





an thais at the part of the second and the second and the second second and the second s

Prepared By: UVA CCPS-SWVA Data: U.S. Census Chart N



### **Coalfield Industrial Distributions for Employed Workers**

#### CHART DATA FOR COAL TAX CREDITS

Production Chart A											
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
No Credit	36	34.89	33.89	33.22	32.44	30.89	30.2	29.44	27.22	25.78	313.97
Single Credit	36.22	35.22	34.22	33.67	32.78	31.3	30.67	29.89	28.44	26.3	318.71
Double Credit	37	36.67	37	37.11	36.44	34.56	33.89	33.44	32.67	30	348.78
Triple Credit	37.22	37.78	39	39	36.3	36.78	35.33	34.33	33.67	31.89	363.3
Direct Mining Employme	ent Chart B										
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
No Credit	7812	7572	7354	7209	7039	6703	6553	6388	5907	5594	
Single Credit	7860	7643	7426	7306	7113	6792	6655	6486	6171	5707	
Double Credit	8029	7957	8029	8053	7907	7500	7354	7256	7089	6510	
Triple Credit	8077	8198	8463	8463	8311	7981	7667	7450	7306	6920	
Ton Benefits Chart C											
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Totai
Single Credit	0.145	0.289	0.299	0.32	0.338	0.39	0.423	0.457	1.093	0.511	4.265
Double Credit	0.953	1.64	2.844	3.421	3.585	3.204	3.364	3.648	4.932	3.722	31.313
Triple Credit	1.186	2,665	4.575	5.131	5.359	5.294	4.598	4.382	5.806	5.46	44.456
Gross Tax Cost Chart	D										
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
Current	13.20	13.02	12.70	12.48	12.16	11.65	11,38	11.09	10.40	9.73	117.81
Single Credit	15.17	14.97	14.60	14.34	13.98	13.39	13.08	12.75	11.96	11.18	135.4175
Double Credit	31.07	31.08	31.22	31.17	30.45	29.13	28.77	28.27	27.58	25.32	294.055
Triple Credit	47.53	48.16	49.30	49.40	48.42	46.77	44.94	43.71	42.93	40.84	462
Net Cost No Social Cost	s Chart E										
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Totai
Single Credit Net Cost	14.6103	13.8545	13.446	13.104B	12.675	11.885	11.447	10.986	7.741	9.208	118.9576
Double Credit Net Cost	27.391	24.7496	20.2422	17.965	16,612	16.763	15.785	12.919	8.542	10.953	171.9218
Triple Credit Net Cost	42.952	37.8731	31.64	29.594	27.734	26.335	27.192	26.795	20.519	19.764	290,3981
Payroll SWVA Chart								,			
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
No Credit	641.52	615.44	597.80	586.04	572.32	544.88	538.56	524.70	485.10	459.36	5565.72
Single Credit	645.48	621.32	603.68	593.88	578.20	552.72	546.48	532.62	506.88	469.26	5650.52
Double Credit	659.34	646.80	652.68	654.64	642.88	609.56	603.90	595.98	582.12	534.60	6182.5
Triple Credit	663.30	666.40	687.96	687.96	676.20	648.76	629.64	611.82	599.94	568.26	6440.24
SWVA Lost Payroll Cl											
	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total	
No Credit	-26.08	-17.64	-11.76	-13.72	-27.44	-6.32	13.86	-39.60	-25.74	-182.16	
Single Credit	-24.16	-17.64	-9.80	-15.68	-25,48	-6.24	-13.86	-25.74	-37.62	-176.22	
Double Credit	-12.54	5.88	1.96	-11.76	-33.32	-5.66	-7.92	-13.86	-47.52	-124.74	
Triple Credit	3.10	21.56	0.00	-11.76	-27.44	-19.12	-17.82	-11.88	-31.68	-95.04	

-

~

. .

Net Cost Social Service	s/Employment	Chart J									
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Total
No Credit	0.1329	0.6646	0.6037	0.4015	0.4707	0.9304	0.4154	0.4569	1.332	0.8667	6.2748
Single Credit Net Cost	14.6103	14.4554	14.0469	13.4371	13.2094	12.7739	11.8264	11.4539	8.6133	10.492	124.9186
Double Credit Net Cost	26.923	24.949	20.4416	18.0315	17.0163	17.89	16.1893	13.1904	9.0044	12.556	176.1915
Triple Credit Net Cost	42.3511	37.538	30.9062	29.594	28.1549	27.2119	28.0615	27.3959	20.9178	20.8329	292.9642
Coal Severance Chart	к									•	
	1994	1995	1996	1997	1998	1999	2000				
No Credit	9.21	9.42	9.36	9.07	8,81	8.63	8.43				
Single Credit			9.42	9.16	8.90	8.75	8.52				
Double Credit			9.62	9.53	9.62	9.65	9.47				
Triple Credit			9,68	9.82	10.14	10.14	9.96				
assummed cost \$26/ton											
Coal Road Chart L											
	1994	1995	1996	1997	1998	1999	2000				
No Credit	6.91	7.06	7.02	6.80	6.61	6.47	6.33				
Single Credit			7.07	6.87	6.67	6.57	6.39				
Double Credit			7.22	7.15	7.22	7.24	7.11				
Triple Credit			7.26	7.37	7.61	7.61	7.47				
assummed cost \$26/ton											
CEDA Funding Chart M	A										
	1994	1995	1996	1997	1998	1999	2000				
No Credit	2.60	2.31	2.34	2.27	2.20	2.16	2,11				
Single Credit			2.35	2.29	2.22	2.19	2.13				
Double Credit			2.41	2.38	2.41	2.41	2.37				
Triple Credit			2.42	2.46	2.54	2.54	2.49				
assummed cost \$26/ion											

~\*

ယ ဗ

#### Appendix A. Virginia Coalfield Employment Enhancement Tax Credit Legislation

#### CHAPTER 775

An Act to amend the Code of Virginia by adding in Article 13 of Chapter 3 of Title 58.1 sections numbered 58.1-439.1 and 58.1-439.2 and to amend and reenact the third enactment of Chapter 730 of the 1988 Acts of Assembly, relation to coal industry tax credits.

[H 2575]

#### Approved April 6, 1995

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding in Article 13 of Chapter 3 of Title 58.1 sections numbered 58.1-439.1 and 58.1-439.2 as follows:

§ 58.1-439.1. Coalfield employment enhancement tax credit.

A. For tax years beginning on and after January 1, 1996, but before January 1, 2001, any person who has an economic interest in coal mined in the Commonwealth shall be allowed a credit against the tax imposed by § 58.1-400 and any other tax imposed by the Commonwealth in accordance with the following:

1. For coal mined by underground methods, the credit amount shall be based on the seam thickness as follows:

Seam Thickness	Credit per Ton
Under 33"	\$.60
33" and Above	\$.50

The seam thickness shall be based on the weighted average isopach mapping of actual coal thickness by mine as certified by a professional engineer. Copies of such certification shall be maintained by the person qualifying for the credit under this section for a period of three years after the credit is applied for and received and shall be available for inspection by the Department of Taxation. The Department of Mines, Minerals and Energy is hereby authorized to audit all information upon which the isopach mapping is based.

2. For coal mined by surface mining methods, a credit in the amount of twenty-five cents per ton for coal sold in 1996, and each year thereafter.

B. In addition to the credit allowed in subsection A, for tax years beginning on and after January 1, 1996, any person who is a producer of coalbed methane shall be allowed a credit in the amount of one cent per million BTUs of coalbed methane produced in the Commonwealth against the tax imposed by § 58.1-400 and any other tax imposed by the Commonwealth on such person.

C. For purposes of this section, economic interest is the same as the economic ownership interest required by § 611 of the Internal Revenue Code which was in effect on December 31, 1977. A party who only receives an arm's length royalty shall not be considered as having an economic interest in coal mined in the Commonwealth.

D. If the credit exceeds the person's state liability for the tax year, the excess may be redeemable by the Tax Commissioner on behalf of the Commonwealth for ninety-five percent of the face value within ninety days after filing the return. If the Commonwealth does not redeem such excess amount, it shall be transferable by sale.

E. No person may utilize more than one of the credits on a given ton of coal described in subsection A. No person may claim a credit pursuant to this section for any tone of coal for which a credit has been claimed under § 58.1-433 or § 58.1-2626.1. Persons who qualify for the credit may not apply such credit to their tax returns prior to January 1, 1999, and only one year of credits shall be allowed annually beginning in 1999. No credit authorized by subsections A and B shall be taken by any taxpayer in 1999 unless general fund revenue in fiscal year 1997-98 exceeds the official estimate of general fund revenue by at least the cost of the credits authorized by subsections A and B as estimated by the Department of Taxation. In each following year no credit shall be taken by any taxpayer unless general fund revenue in the fiscal year ending the prior June 30 exceeds the official estimate of general fund revenue by at least the cost of the credits authorized by subsections A and B.

§ 58.1-439.2. Qualifying steam producers tax credit.

For tax years beginning on and after January 1, 1996, but before January 1, 2001, a steam producer shall be allowed a credit against the tax imposed by § 58.1-400 in the amount of three dollars per ton for each ton of coal mined in Virginia purchased by such steam producer. "Steam producer" means a person who sells steam energy to a manufacturing company in the Commonwealth or uses steam to produce manufactured goods. In order to receive the credit under this section, the steam producer shall include a certification from the coal producer that the coal was mined in Virginia. In no event shall the credit allowed hereunder exceed the total amount of tax liability of such steam producer. Any tax credit not usable for the taxable year may be carried over to the extent usable for the next five succeeding tax years or until the full credit is used, whichever is sooner.

2. That the third enactment of Chapter 730 of the 1988 Acts of Assembly is amended and reenacted as follows:

3. That the provisions of this act shall expire on December 31, 2001.

3. That the Virginia Port Authority shall undertake a study of the effect the Coalfield Enhancement Tax Credit has or will have on the export coal businesses at the Ports of Hampton Roads, and make its report to the chairmen of the Senate Finance and House Finance Committees by December 1, 1995.

4. That the Center for Public Service, in cooperation with the Virginia Port Authority, Department of Taxation, Department of Mine Minerals and Energy, Department of Economic Development, the Office of the Attorney General, shall undertake a study of the policy, legal, and economic impacts of the credits authorized by §§ 58.1-433 and 58.1-2626 and to be authorized under this act, as well as the efficiency of such credits, and make its report to the Governor and the chairmen of the Senate Finance and House Finance Committees by December 1, 1995.

#### SELECTED BIBLIOGRAPHY

- Burkhardt, D. C. Jessee. "Tax Credits on the Line." <u>Oregon Business</u>, July 1992, v15, n7, pp. 17-18.
- Comparative Analysis of Kentucky's Tax Structure. Prepared by: Policy Economics Practice of Barents Group LLC, a KPMG Peat Marwick Company, Washington, D.C. July 1995.
- Coffill, Eric J. "A Primer on the California Manufacturer's Investment Credit." <u>Tax Executive</u>, March-April 1995, v47, n2, pp. 125-128.
- Crabtree, Walter and E. Topuz. "Forecast of Virginia Coal Production and Estimated Severance Tax Revenue." *Powell River Project Research and Education Program Reports.* Department of Mining and Minerals Engineering, Virginia Polytechnic Institute and State University, Blacksburg, Virginia. 1995, pp. 64-83.
- Ellis, Lynn W. "The Effect of an Investment Tax Credit on R & D Spending." IEEE Transactions on Engineering Management, May 1994, v41, n2, pp. 208-210.
- Evans, Michael K. "Robbing Peter to Pay Peter." <u>Industry Week</u>, May 1, 1995, v244, n9, p. 84.
- Hill, F. E. and Watkins, J. A. *Coal Demand and Price Projections*. Volume 1. Gas Research Institute. Hill and Associates, Annapolis, Maryland. February 1995.
- Kanniainen, Vesa and Sodersten, Jan. "Costs of Monitoring and Corporate Taxation." <u>The Journal of Public Economics.</u> October 1994, v55, n2, pp.307-321.
- Krasney, Jeffrey L. "The Investment Tax Credit: A New--But Not-So-New--Idea." <u>The National Public Accountant</u>. February 1993, v38, n2, pp. 14-15.
- Lewis, Frank W. and Steger, Eric K. "Nonconventional Fuel Tax Credit Application Deadline Approaches." <u>The Oil & Gas Journal</u>, October 19, 1992, v90, n2, pp. 74-75.
- Mandelker, Philip. "Tax Credit, Bills May Expand EOR Opportunities in U. S." <u>The Oil & Gas Journal</u>, February 24, 1992, v90, n8, pp. 69-72.
- Mintz, Jack M. and Tsiopoulos, Thomas. "The Effectiveness of Corporate Tax Incentives for Foreign Investment in the Presence of Tax Crediting." <u>The Journal of Public Economics</u>, October 1994, v55, n2, pp. 233-255.

ĩ

٤.

- Pereria, Alfredo M. "On the Effects of Investment Tax Credits on Economic Efficiency and Growth." <u>The Journal of Public Economics</u>, July 1994, v54, n3, pp. 437-461.
- Remer, Donald W. and Song, Yong Ho. "Depreciation and Tax Policies in the Seven Countries with the Highest Direct Investment from the U. S." <u>The Engineering Economist</u>, Spring 1993, v38, n3, pp. 193-208.
- Velocci, Anthony L. Jr. "R& D Tax Credit Moves into Capitol Hill Spotlight." <u>Aviation Week & Space Technology</u>, April 3, 1995, v142, n14, pp. 76-77.
- Zipper, Carl E. 1995 Virginia Coal. Virginia Center for Coal and Energy Research (VCCER), Virginia Polytechnic Institute and State University, Blacksburg, Virginia. 1995.
- Zipper, Carl E. In-State Economic Impacts of the Virginia Coal Industry and Potential Coal Production Declines. Virginia Center for Coal and Energy Research (VCCER), Virginia Polytechnic Institute and State University, Blacksburg, Virginia. Report n95-1. May 1995.
- Zipper, Carl E. and Kambhampaty, S. Murthy. *Effects of Virginia Coalfield Employment Enhancement Tax Credit Legislation*. Virginia Center for Coal and Energy Research (VCCER), Virginia Polytechnic Institute and State University, Blacksburg, Virginia. September 1995.